



The Palgrave Handbook of Political Economy

Edited by

Ivano Cardinale · Roberto Scazzieri

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Preface

The aim of this *Handbook* is to outline the field of political economy as the domain of the interdependencies between the objectives of individuals and groups within the polity and the internally structured constraints, posed by the material sphere, to the attainment of those objectives. This *Handbook* transcends the received dichotomy between political economy as an application of rational choice theory or as the study of the causes of material welfare, outlining a broader field of study that encompasses those traditions.

The *Handbook* is divided into three parts. The first part ('Foundations') addresses the areas of social life underlying the provision of material needs through social coordination. The second part ('Research Themes') reassesses the fields of interaction between the economy and the polity on which political economy is built. The third part ('Ways Ahead') outlines a theory of political economy that brings together means-ends action and the interdependencies underlying the provision of needs.

The *Handbook* aims to provide new categories of analysis, which are grounded in the traditions of political economy and highlight its standing as a central component of social science.

London, UK
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Finally, and most importantly, we are grateful to the colleagues who have shared our objective to reassess the field of political economy and envision its future directions.

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Learning from European Experiences (London and New York, Routledge, 1998), *Industrial Policy After the Crisis: Seizing the Future*, co-authored with S. Labory (Cheltenham, UK and Northampton (MA), Elgar, 2011), *Towards a New Industrial Policy*, co-authored with S. Labory (Milano, McGraw Hill Education, 2016), *Il cammino e le orme. Industria e politica alle origini dell'Italia contemporanea* (Bologna, Il Mulino, 2017), and *4.0: La nuova rivoluzione industriale* (Bologna, Il Mulino 2018).

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1

Political Economy: Outlining a Field

Ivano Cardinale and Roberto Scazzieri

1 Between the Economy and the Polity

Political economy has regained a central position among the academic subjects dealing with the polity and the economy. This development is not a mere reclaiming of intellectual traditions. It is also the expression of increasing awareness that the linkage between the economy and the polity is fundamental to the understanding of contemporary societies.

The mutual relationship between economy and polity is rooted in the collective dimension of the provision and utilization of material resources. This collective dimension presupposes the coordination of human actions such as those entailed by the division of labour, which in turn requires multi-layered organizational arrangements and governance structures. The organization of this field depends on the way in which the objectives of different individuals and groups

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relate to one another, and on the constraints posed by the material sphere on the attainment of those objectives. Because the organization of the material sphere depends on the weights attached to the objectives (both economic and non-economic) of different individuals or groups, the provision and utilization of material resources are inherently political. At the same time, achievement of objectives requires complex arrangements concerning the material sphere, which poses internally structured constraints that also depend on the specific objectives being pursued. For example, the division of labour required for pursuing full employment may be different from that required for pursuing maximum growth.

The objectives and constraints relevant to the material needs of the polity belong to multiple levels of analysis (micro, meso and macro) and relate to multiple levels of agency (say, individuals, productive sectors and states). The aim of this *Handbook* is to outline the field of political economy as the domain of the objectives of individuals and groups within the polity and the internally structured constraints, posed by the material sphere, to the attainment of those objectives.

Political economy is both an object of study and a type of investigation. The foregoing characterization of political economy as an object of study is associated with a shifting concentration of attention between different aspects of the interface between the economy and the polity (Hicks 1976). Political economists have typically adopted a view of the economy as a set of coordinated exchanges (Destutt de Tracy 1823; Jevons 1871; Walras 1874–1877; Debreu 1959; Arrow and Hahn 1971; Arrow 1983 [1969]) or as a system of interdependent production activities coordinated through the division of labour (Quesnay 1972 [1759], 1766; Smith 1776; Leontief 1941, 1991 [1928]; Sraffa 1960; Pasinetti 1981). The emergence of economic theory as a specific realm of inquiry is a distinctive feature of political economy as a field of investigation as it developed in seventeenth- and eighteenth-century Europe. It is since that period that the structuring of economic theory shows a shifting concentration of attention between the sphere of exchange and that of production (Baranzini and Scazzieri 1986; Hutchison 1988; Groenewegen 2002). On the one hand, exchange relationships and the conditions for the equilibrium of a set of interdependent markets lead to emphasizing mechanisms of social coordination that are independent of the deliberate intervention of policy makers. On the other hand, production relationships and the conditions for the viable interdependence of a set of production activities lead to distinguishing between the requirements for the effective coordination of those activities (the so-called viability requirements) and the type of coordination that is actually feasible under existing institutional arrangements. The latter viewpoint is often conducive to the view that one should approximate requirements such as viability or full employment by means of policy measures taken by the State or

other public bodies to complement the activities of private actors (relevant examples include industrial policies justified in terms of the infant industry argument and Keynesian employment policies).

The objectives and constraints relevant to political economy span a plurality of levels of aggregation. In fact, economic actions involve the aims of decision-makers at a plurality of levels (such as micro- or macro-decision-makers), the means available to pursue those aims, and the ‘system of events’ (objective conditions) in which those actions must be carried out (Slutsky 2004 [1926]; Chipman 2004). Within the polity at large, systemic objectives are generated through the mutual weighing (by means of agreement or conflict) of the partial objectives expressed by the principal stakeholders, which may in turn reflect the mutual weighing (also by means of agreement or conflict) of other partial objectives belonging to lower levels of aggregation (Cardinale and Scazzieri 2018, final chapter, this Handbook). This means that the sphere of objectives has its own internal structure, and therefore the mutual determination of objectives and of their modes of attainment takes place both at any given level of aggregation and across different levels of aggregation. From this point of view, the polity looks like a complex and hierarchically ordered system of objectives, which determine each other at any given level and across the different levels (Cardinale 2017; 2018, Chapter 22, this Handbook). The sphere of material interdependencies and constraints also has a multi-layered, internally differentiated, structure (Quadrio Curzio 1986, 1990, 1996; Quadrio Curzio and Pellizzari 2018, Chapter 18, this Handbook). Any given level of aggregation shows a constellation of interdependent units that are subject to specific resource constraints and proportionality conditions. For example, individual productive establishments may be free from physical resource constraints if resource inputs are only limited to the industry or systemic level. On the other hand, establishments may be subject to a proportionality condition for utilization of task-specific inputs that does not allow them to take full advantage of division of labour at the scale at which they are individually operating. This may be due to Babbage’s law, by which ‘[w]hen the number of processes into which it is most advantageous to divide [the production process], and the number of individuals to be employed in it, are ascertained, then all factories which do not employ a direct multiple of this latter number, will produce the article at a greater cost’ (Babbage 1835, p. 211; see also Scazzieri 2014). However, at a higher level of aggregation, structural constraints and opportunities may take a different form. For example, scarcity constraints on the utilization of non-produced inputs, which may not be binding at the establishment level, could become binding as we move to the industry or systemic level (Scazzieri 1993). Also, a proportionality condition that

cannot be met at the level of individual establishments may be satisfied as we move to a higher level of aggregation such as the industrial sector or the whole productive system (Scazzieri 2014). The material sphere of the economy highlights a complex division of labour, in which different patterns of interdependence can be identified as we move from one level of aggregation to another. This means that opportunities and constraints may emerge, disappear and eventually emerge again as we move across different levels of aggregation.

Because of the internal differentiation of both objectives and constraints, political economy needs to investigate the distinction and mutual dependence between different levels of aggregation and the varying opportunities that are open to actors at each level. Accordingly, the *Palgrave Handbook of Political Economy* aims to outline the field of the objectives within the polity and of the structured conditions for their achievement.

2 The Field of Political Economy: Aims, Material Conditions and Levels of Aggregation

Political economy is a field of manifold overlaps and complementarities between aims, material conditions and the actions that may bring about desired outcomes. Already at the formative stage of political economy as a field of study, political economists focused upon the conditions ('causes') making certain political objectives feasible and others unfeasible. Giovanni Botero's *Treatise* on the 'causes' of the 'magnificence and greatness' of polities is a case in point (Botero 1606 [1558]). In a similar vein, Antonio Serra highlighted the 'causes that can make kingdoms abound in gold and silver even in the absence of mines' (Serra 2011 [1613], p. 99) while calling attention to the distinction between 'common factors' and 'specific factors' leading to national wealth, and thus also emphasizing the material conditions specific to the polity under consideration and the context dependence of any successful economic policy (Serra 2011 [1613], pp. 117–155). Shortly after the publication of Serra's work, Antoine de Montchrétien, to whom the earliest modern use of the term 'political economy' (*oeconomie politique*) is due, highlighted the role of multiple levels of decision making in the formation of national wealth: 'every society, in general, appears as consisting of government and commerce... [M]erchants are more than useful in the State. And their quest for profit, which materializes through their work

and industry, contributes a good deal to the public good' (de Montchréstien 1999 [1615], p. 285, as partially quoted and discussed in Hont 2005, p. 4). In a further development of this argument, James Steuart highlighted the interdependence between policy intervention, desired outcomes and the existence of self-directed decision-makers in the polity: 'The principal object [of political economy] is to secure a certain fund of subsistence for all the inhabitants, to obviate every circumstance which may render it precarious; to provide every thing necessary for supplying the wants of society, and to employ the inhabitants (supposing them to be free-men) in such a manner as *naturally to create reciprocal relations and dependencies between them*, so as to make their several interests lead them to supply one another with their reciprocal wants' (Steuart 1966 [1767], p. 17; added emphasis).

In Steuart's case, the causal mechanism through which political decisions can be implemented includes making interdependencies between actors coherent with the aim of supplying 'one another with their reciprocal wants'. Steuart's analysis acknowledges the coexistence of intended and unintended outcomes and recognizes that this coexistence may itself become a policy instrument under certain conditions. A few years later, Pietro Verri would go back to this point calling attention to the condition of imperfect information upsetting the direct implementation of macro-decisions and highlighting the effectiveness of indirect legislation: 'the insight of everybody is limited, and narrow are its confines for the greatest part of the human kind, so, of the great social machinery, only a small set of moving devices may be discovered [...] *[T]o invite and guide* is the distinctive mark of a beneficial and enlightened legislator, whereas *to force and prescribe* is the mark of an ordinary legislator' (Verri 1964 [1796], pp. 26 and 268; original emphasis). Around the same time, François Quesnay developed early insights by Pierre de Boisguillebert (1707a, b) into a comprehensive analytical tool (the *Tableau économique*) aimed at disentangling the web of interdependencies between economic sectors (Quesnay 1972 [1759], 1766). Quesnay's contribution tackles the same problem addressed by Steuart and Verri but from a different point of view. In his case, the social system is a mechanism that should follow proportionality conditions to be identified *independently* of the statesman's intervention and of the actions of individual actors. However, these proportionality conditions reflect structural constraints and thus provide a benchmark for assessing the effectiveness of policy decisions and that of individual agents' responses to those decisions.

The relationship between political governance and the causal mechanism regulating the working of the economy has remained central to nineteenth- and twentieth-century political economy. The effective demand/unemployment controversy that saw mainstream Classical Economists such as Adam Smith

(1776), Jean-Baptiste Say (1803) and David Ricardo (1817) opposed to 'oversupply economists' such as Jean-Charles-Léonard Sismondi (1819) and Thomas Robert Malthus (1820) is rooted in their different approaches to the identification of causal paths in the economy. For the mechanism of wealth production looks different depending on whether the production of intermediate goods or that of final consumer goods is highlighted. In the former case, production is a self-sustaining structure of interdependent activities, which may work independently of external triggers; in the latter case, production looks like a transformational machinery (of resources into consumer goods) whose operation depends on the existence of sufficient external sources of effective demand (for this distinction, see Quadrio Curzio and Scazzieri 1986). The difference between alternative views of the causal mechanism of wealth formation is also at the root of subsequent discussions on the role of policy in the economy (Scazzieri 2018, Chapter 7, this Handbook). A focus on the limited information available to both policy makers and individual micro-actors leads to an emphasis on policy as a *framing device* triggering institutional conditions conducive to desired states of the economy, such as the best utilization of resources (Wicksteed 1910; Wicksell 1934 [1901–1906]; Hayek 1937; Arrow and Hahn 1971). On the other hand, the acknowledgment that this type of institutional framing may not be effective in achieving political objectives has led to more interventionist approaches to economic policy. In this case, there is a further distinction arising from the difference between the macroeconomic and the structural view of the economy. The macroeconomic approach visualizes the economy as a collection of resources generated by savings and leading to final consumer goods and highlights the importance of policy actions sustaining the level of effective demand, and thus also the level of employment and the degree of capacity utilization. The structural approach, on the other hand, sees the economy as a fundamentally circular system of interdependent production and consumption processes and highlights that policy measures may be needed to achieve the proportions between productive sectors that are necessary to a viable (i.e. self-sustaining) economy. The macro-approach is well expressed by John Maynard Keynes's belief in 'the vital importance of establishing certain central controls in matters which are now left in the main to individual initiative', to enable the State 'to determine the aggregate amount of resources devoted to augmenting the instruments and the basic rate of reward to those who own them' (Keynes 1936, p. 378). The purpose of such central controls would be to establish 'an aggregate volume of output corresponding to full employment as nearly as is practicable' without intervening in determining or orienting 'in what proportions the factors of production will be combined to produce it [the aggregate volume of employment], and how the value of the final product

will be distributed between them' (Keynes 1936, pp. 378–379). Differently from the macro-approach, the structural approach to political economy takes the view that only certain proportions between productive sectors are consistent with the achievement of a self-sustaining ('viable') system of production and consumption. This standpoint leads to acknowledging a scope for policy in the economic sphere that is wider than the governance of macroeconomic aggregates, for the same aggregates may reflect sustainable or unsustainable proportions between sectors. An instance of this approach is Adolph Lowe's view that 'to maintain steady production in the [economic] system, not only must each sector produce its respective output but parts of this output must be "moved" by other engineering processes from the producing sector into some "utilizing" sector. The same is obviously true of the output consisting of consumer goods, whose aggregate must be distributed among the workers of all [...] sectors [...] In these physical processes in which inputs are transformed and outputs are shifted, definite quantitative relations must be maintained between inputs and output within each sector, between the outputs of the [different] sectors, and between that part of each sector's output which is applied "at home" and that part which is "exported" to other sectors' (Lowe 1987 [1968], p. 177). Lowe's 'definite quantitative relations' entail that only certain proportions between sectors would be compatible with a viable (self-sustaining) economy. A remarkable implication of this point of view is that viability would allow different maximum levels of employment for different sectors at any given time (Hicks 1973, 1974). This suggests that macro-objectives cannot be achieved by only controlling the level of aggregate magnitudes. Recent discussions on the political economy of employment have again highlighted the distinction between policies targeting aggregate output and employment and policies combining output and employment targets with the governance of proportions between productive sectors. Robert Solow clearly expresses the former viewpoint with his emphasis on the Keynesian revolution as opening 'large vistas of useful research [...] on the mechanisms by which monetary policy and fiscal policy can affect aggregate demand, and therefore output, when output is limited by effective demand' (Solow 2012, p. 269). He also acknowledged the need for a research agenda extending 'the study of macroeconomic dynamics to incorporate the structural changes [...] in an analytical framework that is capable of looking at the evolution of capitalist economies' (Solow 2012, p. 271). Luigi Pasinetti, in contrast, highlights that the pursuit of proportionality conditions should be at the core of any policy targeting macro-aggregates since 'there exists a genuinely *macroeconomic* equilibrium condition that must be satisfied over-all' but this condition holds through the changes in the *composition of aggregates* that are triggered by technical progress and the evolution of

consumers' preferences. In view of this, 'it will be the task of the institutions of the economic system to govern the interaction between individual efforts and the consumption choices so as to drive the economic system to the fulfilment of such macroeconomic condition' (Pasinetti 2012, p. 285).

Political economy highlights different ways of approaching the interface between objectives and constraints depending on whether the 'reciprocal relations and dependencies' between the relevant actors are reliable instruments for the achievement of systemic objectives. A relatively stable pattern of interdependence is more likely associated with interactions between actors that may be conducive to the achievement of systemic objectives without further political intervention (this is what we may call the 'Steuart-Hayek case'). On the other hand, interdependencies that are often upset by structural changes are unlikely to be reliable instruments for the achievement of those objectives, and policy intervention into the internal structure of the economy may be needed (this is what we may call the 'Lowe-Pasinetti case'). Finally, there may be interdependencies that are relatively stable in the short period but are not an effective instrument to the achievement of systemic objectives such as full employment (this is what we may call the 'Keynes-Solow' case). In the latter case, it is acknowledged that some degree of 'central control' may be required to achieve macro-goals, but this control is limited to the level of macroeconomic magnitudes and does not extend to the fine composition of those aggregates. The structure and dynamics of interdependencies between relevant units of analysis are the central factor determining the character of the interface between objectives and constraints under given conditions.

The foregoing reasoning has focused on systemic objectives and constraints. When considering different units, such as firms or sectors, different objectives and constraints may become relevant. In the example provided in Sect. 1, an individual firm may not face scarcity of a given non-produced resource, but the constraint might become binding at the sectoral level. This makes the identification of the relevant actors in a given situation a central feature of political economy both as an object of study and as a type of investigation. For changes in the interdependencies that are most important at any given time, or along any given dynamic trajectory, may trigger changes in the most relevant units of analysis. Thus, it cannot be taken for granted who the relevant actors are in a given situation; this should be part of what political economy analysis must identify (Cardinale 2018, Chapter 21, this Handbook). The mutual shaping of agency and material interdependencies points to a vast field of investigation for political economy as a type of analysis dealing with the changing interface between the economic and the political spheres.

3 The Palgrave Handbook of Political Economy

The aim of the *Palgrave Handbook of Political Economy* is to outline the field of political economy as the domain of objectives within the polity and of the internally structured constraints on their achievement. Our aim relates to, but is also distinct from, what Sir Inglis Palgrave presented as the ‘primary objective’ of his *Dictionary of Political Economy*: ‘to understand the position of economic thought at the present time, and to pursue such branches of inquiry as may be necessary for that end’ (Inglis Palgrave 1894–1899). For our aim is to outline political economy as a field of investigation addressing the material life of the polity seen as a structured set of actions instrumental to objectives within the polity. This aim entails a concentration of attention on the polity and its material means. Our approach also distinguishes the *Handbook* from *The New Palgrave. A Dictionary of Economics* (Eatwell et al. 1987) and *The New Palgrave Dictionary of Economics* (Durlauf and Blume 2008), which are both characterized by an internal focus on theoretical and empirical economics from the standpoint of their respective differentiation into specialized fields and of their extension to fields previously seen as external to economic knowledge (Eatwell et al. 1987, vol. I, p. ix; Durlauf and Blume 2008 vol. I, p. ix).

Part One of the *Handbook* (‘Foundations’) provides framing contributions for this project. The chapters by Vincent Dubois on the fields of policy-making and by Jeremy Adelman and Jessica Mach on the public sphere explore two fundamental constitutive spheres of the polity. Dubois’s chapter (‘The Fields of Policy-Making’) provides the building blocks of a theory of the State and policy-making grounded in the social setting within which policy takes place. Dubois’ contribution examines the policy field as an internally differentiated structure including a plurality of politically relevant bodies and emphasizes that ‘the balance of power and modes of cooperation’ between stakeholders such as bureaucracies, professional organisations and experts exert a critical influence on policy decisions and their implementation. This approach entails the view of policy as a type of action embedded in a system of social relationships. Different policy domains presuppose different systems of relationships between individual and collective actors; this requires the concept of ‘field’ as a social space distinguished by specific activities and purposes. At the same time, any specific policy is generated by interrelations within a multiplicity of spaces and sub-spaces.

Its characteristics point to the 'system of positions' of relevant stakeholders, which is the 'arena in which various views and interests compete, according to the spheres the agents belong to, from state organisations to interest groups and experts'. As a result of the plurality of positions within each policy field, policy decisions reflect both the different stakeholders' interests and the general interest expressed through the set of rules characterizing that field. This interrelationship of private and public interests is essential to the legitimization of policy decisions, as it is by this means that external actors (say, public bodies) can generate policy decisions that can be seen as effective responses to private needs and expectations. The chapter by Adelman and Mach ('Political Economy and the Public Sphere') examines social interdependence as a breeding ground of both market integration and the breadth of the political field. In these authors' view, the coevolution and tension between the two spheres are further proof of their close relationship, as economic integration highlighting 'workings and setbacks of the market' also led to 'resistances and pressures' arising from the public sphere. The chapter reconstructs the historical process leading to market integration on the one hand and to increasing awareness of a global public sphere on the other. Since the age of nineteenth-century liberalism, this coevolution has been associated with a cleavage between the need 'to keep markets from being submitted to the whims of public opinion' and the need 'to protect public affairs from the corrupting effects of markets'. The twin genesis of market integration and the public sphere highlights the constitutive internal tension of liberalism while at the same time suggesting conceptual and policy tools to address the crises and failures of the market economy. Thus, John Stuart Mill acknowledged that the public sphere could be the arena in which market disequilibria could be corrected, while the age of imperialism in the latter part of the nineteenth century triggered widespread criticism and inspired proposals to overcome the setbacks of the market through an expanded active public sphere. Keynesian economics (with its welfare state associations) and the post-World War II development programmes mirror each other in trying to make the development of the public sphere support the market economy (Keynesian economics) or vice versa (development policy). The chapter maintains that the path of market integration since the 1980s made the project of a 'unified political economy with a public sphere' increasingly difficult to implement.

The relationship between the political domain and the sphere of commerce has been a central object of investigation since the formative period of political economy as a distinct field of inquiry. The chapter by Craig Muldrew on 'Political Economy of Markets' examines the changing

attitudes of economic writers towards the governance of the economy between markets and State in the period between the formation of the early modern State and the industrial revolution. Here, Muldrew examines the role of market governance in political economy discussions since the early seventeenth century and highlights the central role of social welfare objectives (poor relief) in policies intended to provide industrial employment. The chapter highlights that since the early seventeenth-century discussions of market regulation, promotion of industry and international trade were conducted in terms of national welfare. In turn, a primary objective in the pursuit of national welfare was to address ‘the problem of overpopulation and lack of agricultural employment by advocating the benefits of market-oriented commercialization to provide industrial work’. The political economy of markets that takes shape in the economic writings of the seventeenth and eighteenth centuries shows an internal tension between economists holding the view that subsistence needs are best addressed by self-regulating markets (French Physiocrats) and economic writers promoting the generation of a persistent surplus of manufactured exports as the best policy to promote growth and employment (English Mercantilists). The success of England *vis-à-vis* France in providing growth and employment through industrial development is the backdrop of the early nineteenth-century criticism of corn laws and poor relief in England (inspired by free-trade premises) and highlights the character of the political economy of markets as an instrument for the promotion of national wealth through a variety of policy measures that are sensitive to context.

In a parallel investigation, the chapter by Sophus Reinert (‘Historical Political Economy’) discusses the ebb and flow of theoretical and historical approaches in the literature of political economy as marking moments of shifts within political economy as an object of study. Here, Reinert highlights that historical political economy has been associated—although sometimes as an ‘underground river’—with the development of economic thinking since its formative period, and that one of its most distinctive contributions has been to cast doubt on the idea that social improvement may derive from a ‘preordained tendency towards social advantage or improvement’ rather than from ‘purposeful human organization’. The chapter reconstructs the vicissitudes of the historical approach to political economy by pointing out the tension between ‘theoretical elegance’ and ‘world’s complexity’ as the most distinctive feature of its successes and failures. Ferdinando Galiani’s criticism of Physiocratic *laissez faire* in eighteenth-century France, Friedrich List’s disapproval of the promotion of free trade by classical political economists and William Cunningham’s denunciation of

‘cosmopolitan competition’ in the early twentieth century are all expressions of an approach that links attention for experience and context to misgivings about the unqualified extraction of policy guidelines from abstract (decontextualized) theoretical frameworks. This point of view is not anti-theoretical but requires theory to be systematically developed to make it sensitive to the variety of conditions and historical contexts. As Reinert points out (recalling a view expressed by Luigi Einaudi), historical knowledge is a ‘mediator between economic ideas and political practices’, so that political economy cannot but rely on historical judgment.

The chapter on ‘Classical Political Economy’ by Ivano Cardinale concludes this part of the *Handbook*. It presents Classical Political Economy (CPE) as a study of the key features of industrial economies. The chapter first focuses on the analytical coordinates of the two key Classical Political Economists (Adam Smith and David Ricardo) in view of extracting their contribution to understanding industrial economies. It goes on to use a modern theory inspired by the Classics to illustrate how CPE can be generalised to understand production, growth and distribution in modern industrial economies. Starting from the premise that the central focus of CPE is the study of the *wealth of nations* (i.e. their income) as generated through production rather than trade, two key issues frame the analysis of the chapter. One is structural change, i.e. the change in the composition of net product over time as a result of changes in sectoral proportions. The other is the problem of aggregation inherent in theories that aim to understand the interaction between parts (such as sectors) and whole (the economy). In the case of CPE, it is about assigning weights (relative prices) to the different commodities that make up the net product. The chapter concludes by highlighting that the legacy of CPE includes analytical tools to address problems of aggregation in society that go beyond the specific aims for which they were developed (i.e. assigning weights to different commodities within the net product). CPE thus provides fundamental building blocks for the *Handbook’s* aim to understand the variety of objectives within the polity and the constraints on their attainment that are posed by the material sphere.

Part Two (‘Research Themes’) addresses areas at the interface between the economic and the political spheres that are central to political economy and its transformations. Economic theory has shaped much of the past and present discussion in political economy. But different types of economic theory suggest different approaches. The first chapter of Part Two, by Roberto Scazzieri (‘Political Economy of Economic Theory’), investigates the conceptual premises and analytical structures of exchange-oriented and production-oriented theories and discusses on that basis the implications of

either framework for the theory of political economy. This chapter highlights the twofold character of political economy depending on whether the relationship between economics and politics is seen from the point of view of efficient allocation of given resources (*catallactics*) or from the point of view of the sustainability (viability) of the interdependent flows of intermediate products needed to produce national wealth (*plutology*). The chapter examines which economic and political arrangements each type of theory suggests for organizing the material life of the polity. Catallactics and plutology identify different benchmark conditions for structuring the economy: efficiency of resource allocation is the central criterion in the former case, while viability of product flows (that is, reproducibility of the existing social product) is the central criterion in the latter case. The two types of theory also find different benchmark conditions for political settlements. Catallactics pinpoints the extent to which any given allocation mechanism allows the attainment of political objectives (such as avoiding allocation outcomes that are too skewed against certain social groups) and the extent to which it may give rise to political conflicts or compromises. Plutology highlights whether political objectives are consistent with the existing economic structure and the extent to which the viability condition is compatible with alternative political settlements between social groups.

In political economy, the consideration of interdependencies between individuals and/or social groups involves the identification of 'values' specifying the relative importance of the material items (goods) by means of which individuals and/or groups interact with one another. The chapter by Ajit Sinha ('Political Economy of Economic Value') examines this issue by distinguishing between values as 'social weights' needed to measure heterogeneous collections of goods and values as 'exchange-values' (prices) used in transferring goods from one actor (or social group) to another. This distinction is central to debates within classical economic theory, even if it was not always considered as such at the time. In fact, Smith's view of labour values as relevant to the 'early and rude state of society', but not to more advanced economies, presupposes the identification between values as weights and values as exchange-values. Similarly, Ricardo's concern with changes in 'natural prices' (long-run exchange-values) as a result of changes in income distribution reflects a view of values as exchange-ratios rather than social weights. The distinction between the two concepts of value is explicitly outlined in Marx, according to whom 'the *difference* between the equilibrium exchange-ratios or "natural prices" and the "labor-time" ratios is more important than the question of the *cause* of *changes* in the exchange-ratios'. This view distances Marx from the classical economists, as it led him to

distinguish values as social weights (labour values) from the 'natural prices' of Smith and Ricardo (which he calls 'prices of production').

The relationship between the economic and political domains brings to light the concept of 'economic order' and the issue of its relationship with the constitutional arrangement of individual and group interests. The chapter by Viktor Vanberg ('Constitutional Political Economy') explores the fundamental norms that constrain actors' choices within a circumscribed set of possible actions thereby providing some degree of predictability for actors' behaviour under uncertainty. Vanberg highlights the link between constitutional political economy and Adam Smith's 'science of the legislator' in its exploration of the means available to societies for the conciliation of individual and group actions within a comprehensive political order. In this approach, rules take precedence over policies and procedures over outcomes, while 'exchange' moves beyond the point transaction of the standard allocative model to become a process unfolding through time in relational space. The chapter highlights the distinction between theoretical constitutional political economy, which investigates 'how different rules and institutions affect the nature of the socio-economic-political processes that unfold within the constraints they impose' and applied constitutional political economy, which examines 'how the insights of the theoretical branch can be used to provide solutions to "problems" that the agents in socio-economic-political processes face'. The interest for processes rather than social outcomes distances constitutional political economy from the pure catallactic approach to the economic order of society. For the constitutional sphere emerges from a mutual 'exchange of promises and commitments' (rather than goods and services) and is inherently concerned with the intertemporal stability of relational arrangements between individuals and/or social groups.

The interdependencies between the economy and the polity relate to units at multiple levels of aggregation. Collective objectives result from conflicts and/or compromises between groups at those different levels and lead to outcomes that propagate from the macro-polity to individual actors through mechanisms working at intermediate levels of aggregation. Civil society has traditionally been considered the locus in which individuals and/or groups relate to one another in view of objectives relative to domains intermediate between the microsphere and the macro-system. The chapter by Adrian Pabst ('Political Economy of Civil Society') revisits the conceptual history of civil society in relation to political economy and outlines on that basis a theoretical framework for the political economy of civil society. This chapter highlights the nature of civil society as a social body inherently concerned with collective aims and procedures even if distinct from the polity as such.

In this light, Pabst distinguishes four models of civil society: the contractual civil society associated with state sovereignty (Thomas Hobbes and Jean-Jacques Rousseau), the commercial civil society (John Locke and the *Federalist* writers), the ‘moral’ civil society of the Scottish Enlightenment and the ‘civic virtue’ society of writers such as Paolo Mattia Doria, Antonio Genovesi and Benjamin Constant. The political economy of civil society outlined in this chapter builds on those intellectual traditions and develops a conceptual framework centred on the consideration of differentiated spheres of interest belonging to different domains of social connectivity and leading to cooperation or conflict in the pursuit of economic objectives. In this light, the political economy of civil society is intertwined with the political economy of constitutional settlement, insofar as the latter includes not only contractual arrangements but also ‘the ordering of different functions’ and the ‘arranging of different positions’ in the social domain prior to formal contracts (what may be considered the ‘material constitution’ of society).

The material constitution of a political economy highlights the relationship between the structuring of interests in the economy and the ways in which the existing configuration and dynamics of interests influence collective choices and policy-making. Important insights into the structuring of interests in society are provided by the differentiated interests of industrial sectors and their influence on political outcomes. The chapter by Thomas Ferguson, Paul Jorgensen and Jie Chen (‘Industrial Structure and Political Outcomes: The Case of the 2016 US Presidential Election’) builds on the investment theory of party competition to explore to what extent changes in the composition of the industrial élite (associated with changes in the relative weights of different sectors within the élite) may trigger the transformation of the political investment pattern of the élite within and across political parties. This chapter provides a conceptual framework for the analysis of the relationship between industrial interests, distribution patterns and the formation of public policies in a multiparty political system and investigates it in the context of empirical evidence provided by the 2016 US presidential election.

The following chapter by Bruno Amable (‘Political Economy of Economic Policy’) investigates the related issue of the leverage of different social coalitions in the formation of economic policy. This chapter starts with a criticism of the view of the macroeconomy as an undifferentiated unit of analysis as this view evades the issue of identifying for which actors economic policy, and in particular macroeconomic policy, is good or optimal. Contrary to this view, the chapter argues that economic policy decisions have a multidimensional character. In this case, it is important

to investigate ‘the type of social coalitions that can emerge’ and ‘what type of compromises can be made to support a political strategy regarding economic policy and institutions’. Central to this chapter is the concept of ‘social bloc’, which is defined as an ‘aggregation of social groups whose most important policy demands are satisfied by a political strategy’. Due to the structural changes associated with economic growth, both the demands expressed by social groups and their relative bargaining power may change over time. It follows that any political strategy is inherently unstable since the social compromise supporting that strategy may weaken as the growth process unfolds.

The relationship between economic policy and changes in the configuration of interests across socio-economic groups is also central to the chapter by Patrizio Bianchi and Sandrine Labory on ‘Political Economy of Industry’. This chapter highlights the mutual influence between the dynamics of manufacturing structures and the organization of power in society. The authors develop Adam Smith’s analysis of division of labour and highlight the importance of the relationship between the extent of division of labour within productive structures and the firm’s or the industrial sector’s ‘power of exchanging’ in society. They argue that power of exchanging presupposes market power but cannot be reduced to it. In fact, a firm’s market power entails political power, both over the workforce employed within the firm itself and in the wider social sphere external to the firm. The chapter investigates the dynamics of productive structures as a major influence on market power and political power. This means that changes in forms of production organization (manufacturing regimes) are closely associated with changes in competitive conditions and ultimately with the distribution of entitlements and the organization of power in society.

The provision of liquidity is one of the most important channels through which systemic decisions exert influence across units at different levels of aggregation in the economy. The chapter by Rainer Masera (‘Political Economy of Liquidity’) discusses liquidity provision from a complex system point of view. This means considering the economic and financial system as a set of interdependent units whose dynamics cannot be adequately understood by examining only individual components and the direct interaction between them. Economic and financial systems built on strong interdependencies between components can be robust within a certain range of parametric shocks but become shock amplifiers after the shock absorption threshold is reached. This chapter highlights

that the indirect effects of liquidity policy can exert a dominant influence and lead to systemic outcomes contrary to the intended ones. Financial stability requires a prudential approach to liquidity provision, in which the potentially destabilizing interrelationships with other economic policies are promptly identified and corrected. The chapter concludes with an assessment of liquidity policy in the Eurozone. It is argued that European Central Bank's independence should not be confused with disregard for the interdependence between the outcomes of different economic policies, that fallacies of composition should be avoided, and that a medium-term reference framework should be adopted to address 'transition and aggregation processes'.

Public finance is a central field of conflict and compromise between social groups. The chapter by D'Maris Coffman ('Modern Fiscal Sociology') examines the generation and allocation of public revenue by outlining a reformulation of Schumpeter's research programme of fiscal sociology in view of the subsequent transformations in the state and the economy. In his classic paper on the crisis of the tax state, Schumpeter argued that '[i]n some historical periods the immediate formative influence of the fiscal needs and policy of the state on the development of the economy and with it on all forms of life and all aspects of culture explains practically all the major features of events; in most periods it explains a great deal and there are but a few periods when it explains nothing' (Schumpeter 1954 [1918], pp. 6–7). Coffman's analysis builds on Schumpeter's research programme and on the concurrent research programme of Italian fiscal sociology by examining their theoretical underpinnings and implementation in a variety of historical contexts. Eighteenth-century Britain and France are paradigmatic cases of the relationship between fiscal mixes and social structures and were theoretically investigated as such at the time. In the British case, discussions on the incidence of taxation across different social groups provide invaluable insights into the political economy of taxation. This chapter reconstructs the historical experience of the link between fiscal mixes and social structures and outlines on that basis a framework for investigating the role of fiscal mixes in contemporary political economies.

The following chapter by Robert Boyer ('Comparative Political Economy') discusses the relationship between economic interests and political settlements by comparing the hierarchies of interests that characterize different political economy regimes and their impact upon what the different regimes identify as general interest. The chapter investigates

the coexistence of different regimes as a persistent feature of the world economy. This leads to the question of whether the disequilibria specific to those regimes compensate one another, making them reciprocally 'compatible and in some cases complementary'. For instance, the coevolution of US finance-led and Chinese competition-led capitalisms is likely to exert a decisive influence on European welfare capitalism, while resource-based rentier regimes are structurally dependent on demand originating in industrial and financial economies. The chapter argues that the analysis of this complementarity is a primary objective of comparative political economy.

In the chapter on 'The International System', Martin Daunton analyses areas of cooperation and conflict developing among interdependent countries connected through trade, capital transfers and migratory flows. Daunton's analysis focuses on the post-Bretton Woods period and discusses policy trade-offs that have become apparent in this period (exchange rate trade-off, capital movements trade-off, free trade versus protection trade-off, labour migration versus labour protection trade-off). This investigation pays special attention to the relationship within each country between domestic and international interests and to the way in which changes in that relationship induced policy changes at the national level. Structural changes are inherent to economic dynamics and are likely to transform the configurations of interests both within each national economy and in the international economy. Indeed, different configurations of interests may be visualized differently depending on the way in which they are represented at the national and international levels. The chapter highlights that international political economy is 'a complex mixture of real material interests and cultural appropriations' and that this mixture will determine whether 'a new balance between national democracies and the world economy, sustained by international institutions' will eventually emerge.

The chapter by Alberto Quadrio Curzio and Fausta Pellizzari ('Political Economy of Resources') outlines a structural approach to the analysis of non-produced resources that highlights the reordering of economic functions and rearrangement of social positions characterizing structural dynamics in a resource-constrained economy. The analytical core of this chapter is the structural definition of scarcity, whereby scarcity reflects the position of certain means of production within the production system independently of whether such means of production are produced or not

within the system. This view entails that scarcity is endogenously generated within the technological structure of the economy and highlights the relationship between resource availability and technical progress, as the latter 'plays a fundamental role in overcoming scarcity also through changes in the structure of the economic system'. This chapter puts forward the view that the interdependencies between production processes play a central role in establishing which means of production are structurally scarce and which ones are not, and thus also in determining the character and size of the rent incomes accruing to the individuals and social groups that are in control of those resources. Different types of interdependence bring about different types of structural scarcity. Thus, a production system that is horizontally integrated (what this chapter calls a 'global technology') allows a 'weighting' of different scarce means of production compatible with a uniform rate of net product across the system. On the other hand, a production system that is vertically integrated (what this chapter calls a 'compound technology') highlights the disproportionality between the rates of growth of sub-systems using different scarce means of production and the possible appearance of dynamic trajectories on which certain means of production may alternately drop from use and come back in use as the economic system moves from one technology to another. This chapter puts forward the view that the sequence of technology changes triggered by structural scarcities depends in an important way on the actions of macro-decision-makers who can influence technical choices, the rate of capital accumulation and the level of distribution variables. The differentiated interests of macro-decision-makers, which lead them to compromise or conflict, are thus a critical influence on the emergence of structural scarcities and the dynamic trajectory followed by the economy.

The chapter by Michael Landesmann ('Political Economy of Structural Change') examines the related issue of the relationship between the compositional, behavioural and organizational changes along structural change trajectories and the changes in the relative weights of different socio-economic groups as the economy moves from one structural configuration to another. This chapter highlights the multidimensional character of structural change and the correspondingly complex reconfigurations of social interests that structural change brings about. For example, changes in the composition of economic aggregates may lead to changes in the 'material weight' of certain sectors of the economy that may in turn be thwarted by behavioural or organizational inertia. Or, structural changes affecting the

sectoral composition of the economy may lead to systemic outcomes (say, an increase in overall unemployment) that may in turn feed back into sectoral composition through compensatory policy measures aimed at the protection of declining sectors.

The following chapter by Wang Hui ('Political Economy as Social Transformation: China's Road in a Global Perspective') investigates social transformation as a process triggered by political intervention aimed to promote the functioning of market relationships. Wang Hui examines the social transformations induced by marketization processes in the Chinese economy and highlights the interface between the economic and the political spheres as those processes unfold. His analysis brings to light specific features of the Chinese experience and the role played by the State in buffering and/or governing the asymmetries associated with the privatization of economic initiative and the market coordination of economic decisions and activities. Wang Hui examines the role of the political system as the governing structure of social transformation. In particular, he highlights the role of party politics in promoting social participation and as means to allow the political system to filter social demands beyond the market-oriented model of party competition. This approach is rooted in a view of social equality as openness to social experiments that moves beyond the European Enlightenment view of formal equality, as well as beyond John Rawls' distributive justice and Amartya Sen's equality of opportunity criterion. In this connection, Wang Hui explores the 'equality of all things' view, which Zhang Taiyan outlined at the beginning of the twentieth century, and highlights on that basis a 'diversity equality' criterion. This criterion aims to overcome the antagonism between equality and diversity, which arises from the fact that diversity is often associated with rank inequality and is thus incompatible with the formal equality condition. Wang Hui argues that diversity equality may provide both a conceptual tool for the analysis of social transformation and a policy tool for achieving a type of institutional embedding making diversity and equality complementary rather than opposed to each other.

The final chapter of Part Two is by Ivano Cardinale on 'Structural Political Economy'. The chapter explores a conceptual framework that can encompass instrumental rationality as well as the structure of division of labour. The starting point is the idea that division of labour can be seen as structuring society by providing not only a material set of opportunities and constraints, but also a blueprint for the formation of coalitions between actors, which may potentially organize themselves to influence decision-making at various levels. However, because division of labour

can be represented in a variety of ways, understanding which ones will be relevant in a given situation, i.e. which ones will be adopted by actors as a basis for their action, requires understanding agency. In particular, it requires understanding what the relevant actors are as well as how they visualize the opportunities and constraints offered by division of labour. This in turn requires doing justice to both actors' embeddedness in the structure of division of labour and their ability to visualize alternative configurations. Cardinale argues that existing approaches to this problem suffer from conceptual limitations and suggests a route to overcome them. In particular, he outlines a framework in which the structure of division of labour not only enables and constrains, but also actively structures actors' understanding of their objectives and constraints, thereby orienting them towards certain courses of action over others. This framework aims to do justice to the relative autonomy of actors and structures at any given moment, as well as to their mutual constitution over time. Cardinale argues that this approach provides a route to encompass the structures of division of labour and the means-ends action that takes place within them.

In Part Three ('Ways Ahead'), the chapter by Ivano Cardinale and Roberto Scazzieri ('Political Economy as Theory of Society') develops the view that political economy as a type of investigation requires considering objectives as well as the means (material structures) for the achievement of those objectives within the polity. The chapter starts by tracing the divide, often emphasized in the political economy literature, between traditions focusing on means-ends reasoning and those investigating the structures of division of labour. The chapter shows that the former theorize action but do not have a theory of the internal structure of constraints posed by the material sphere, whereas the latter focus on economic structures but do not have an explicit theory of action, and hence of how different objectives are formed and why some possibilities come into being instead of others. This divide is to some extent exemplified by the distinction between the 'materialist' and the 'scarcity' views of political economy (Cannan versus Robbins). The chapter argues that this distinction blurs the fact that in either approach economic reasoning pinpoints conditions for the effective arrangement of human activities to fulfil individual or collective requirements. The chapter outlines a view of the political economy field that brings together the attention for means-ends reasoning and for the structure of material conditions. Despite the different priorities accorded to economic phenomena and the different requirements being considered (respectively, the viability requirement for the 'materialist' view and the efficiency requirement for the scarcity view), the two approaches point to complementary

aspects of political economy as the study of structurally constrained social action of the means-ends type. In this sense, they should be seen as building blocks for the construction of a more general political economy field.

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Part I

Foundations



2

The Fields of Policy-Making

Vincent Dubois

1 Introduction

Policy-making and public policy in general are at the core of the major issues that political economy addresses. Market regulation, balance between private interests and common good, resource allocation, provision of goods and services by non-market and state-funded public bodies are indeed inseparable from the policy process and shaped through it. In addition to accounting for their outputs, political economy “opens the black box” of these processes by analysing the role of institutions, of interest groups and of ideologies, by identifying the factors that influence decision-making, and by accounting for the technical aspects of implementation through policy instruments. There is, therefore, a political economy approach to public policy. This approach is largely focused on economic policy in the broad sense of the term (Rausser et al. 2011). It is, however, not limited to it and is also used to analyse specific policy sectors (on agriculture and wine, see Anderson et al. 2013; Itçaina et al. 2016), especially since these sectors are increasingly impacted by economic policy rationales in the economicisation process observed in various domains (e.g. environment, urban planning, welfare, education or scientific research), and in various national contexts.

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The aim of this chapter is to contribute to these analyses by posing the question of the social organisation of the policy process. By this, I mean the internal structures of the social milieus involved in this process (e.g. the balance of power and modes of cooperation within bureaucracies, professional organisations or among experts, to name only but a few), and the relationships between these specific milieus (e.g. negotiations between a bureaucratic and a professional organisation, and their respective uses of expertise in these negotiations). It is no coincidence that I have chosen this angle of approach. By focusing on what I propose to call the social structures of policy-making, I follow the theoretical postulate according to which any given policy (its very existence, its contents, its style, its instruments and its legitimacy) stems from the system of relationships between individual and collective actors involved in its definition. This postulate is more original than it may seem, since it contrasts with usual ways of considering public policy (as a series of stages, from agenda to evaluation, in the sequential approach; as the result of an institutional trajectory, in historical neo-institutionalism, as a decision made after a calculation, in rational choice theory, etc.). It serves as the basis for a sociological redefinition of public policy as the product of social relationships. This chapter argues that Bourdieu's field theory is the most powerful analytical tool to unveil the structures of these social relationships, and, therefore, a key concept for critical policy sociology.¹

In the first section, I present this sociological approach to public policy and discuss the available tools to analyse systems of relationships in policy-making. This will bring us to Bourdieu's concept of field, which I present in Sect. 2. In the third section, I examine the various possible uses of this concept to analyse a public policy and briefly present six of them. In the fourth and last section, I show in greater detail how a policy and its orientation result from the relationships between various fields. In the concluding section, I open the discussion with the question of autonomy, which is central to field theory.

¹The critical orientation contrasts with what Burawoy has coined as "policy sociology", namely professional sociological knowledge in the service of policy-making (Burawoy 2005). For further explanation on what being "critical" means when it comes to public policy, see Dubois (2015).

2 A Relational Approach to Public Policy

2.1 A Sociological Redefinition

There are uncountable definitions of a public policy. It is not in the scope of this chapter to review them, nor is it even possible to discuss in detail the most influential ones. I will only mention that most definitions share at least one of the two following flaws. The first one has to do with an intentionalist if not rationalistic view, be it implicit, considering a policy as a means to a predefined end. This is the case of classic problem-solving approaches, for instance, and of all approaches referring to notions of intentionality, goals, plans or programmes as substantial elements for the definition of public policy. Such elements may matter, but not always. This is a research question and not a defining feature. We should not define public policy on the basis of pre-existing intentions or goals, or for that matter any phenomenon considered from a sociological point of view. A second flaw is that most definitions share, if not a state-centred point of view, at least that policy is mostly defined by the public status of its supposedly main actors. This is the case for instance of Thomas Dye's interesting classic definition of public policy as "what government chooses to do or not to do" (Dye 1987, p. 3). Not to mention the debatable concept of choice (does the things a government or an individual accomplishes really or mainly result from actual "choices?"), such a definition identifies public policy with the government (others refer to the state, or to public authorities), while these public bodies may not be the most important actors in the definition of a course of action (or inaction). Private companies, interest groups, experts or the media can be more influential in this regard than those officially vested with government or state power. We also know that private organisations play an increasing role in the implementation of public policies, by now even in traditional government/state functions such as policing (on this question, see for instance White 2012). Not overestimating the role public actors play in public policies should bring us to be cautious about conflating public policy and public actors.

In order to avoid these common flaws and to consider public policy from a sociological and critical point of view, I propose an alternative conception. Following this conception, I define public policy as *the set of relationships, practices and representations which contribute to the making of politically legitimised regulation modes of social relations*. These relationships can be formal and institutionalised, as the chain of command within bureaucracies, or in

official arenas of negotiations. They can be unofficial and informal, as discreet exchanges between officials and lobbyists or between colleagues from different departments can sometimes be. These relationships bring together actors with various statuses, which are not reducible to public authorities, and may include journalists, clients, academics and many others. Their practices also are diverse, from expertise to raising issues in the public debate, from making rules to giving speeches and providing public services. Representations, defined as categories of perception and judgment, ranging from official views on “public problems” to the criteria used in the daily enforcement of a policy (e.g. who is regarded as a “real” refugee and who is not), are strongly associated with practices and do matter both as a factor influencing them and as part of the discourses accounting for and legitimising policy practices. Forms of regulation of social relations include resource allocation systems, legal rules, service provision, processing of people, management of undesirable situations, which contribute to maintaining social order, that is, an organisation of society which can be regarded as “normal” or acceptable, and which, at least, is not questioned by large parts of the population. The specific feature of public policies as forms of regulation lies in the fact that they are politically legitimised (contrary to market regulation, which does not require such a legitimisation). Political officials endorse them and present them as the desirable or unavoidable result of collective choices, even if they have played only a minor role in the process. This political legitimisation of a policy is what sets public policy apart, more than the public status of the actors influential in its elaboration.

This definition therefore takes into account the political dimension of public policy, while many existing definitions focus on its functional nature (solving problems). It is rooted in directly empirically observable elements (relationships, positions, practices), which enables us to analytically reconstruct indirectly observable ones (representations), while competing definitions most often use abstract notions (such as intentions or goals). Lastly, while “substantial” definitions of a “real” policy are widespread, at the risk of an essentialist if not normative bias, my definition is fully relational. Adapting Hegel’s famous proposal (“the real is rational”) to the principles of sociological reasoning, Pierre Bourdieu used to say that “the real is relational” (Bourdieu 1998a, p. 3ff.). My definition of public policy fully is. Each of its components is relationally defined. Positions, practices and representations are referred to other positions, practices and representations, and there is a direct relationship between a given position and the practices and representations of individuals holding this position. Last, I consider public policy from the point of view of the system of relationships linking

actors involved in policy-making. I propose to consider public policy as the product of the practices and representations of the agents involved in it, these practices and representations being determined by the social characteristics, interests and objective positions of the agents, and therefore by the structure of the relationships among them. By making it possible to objectify the structure of the positions, of the corresponding position-takings and relationships, Bourdieu's analysis of field enables us to uncover the social foundations of a policy, and in doing so offers a critical policy sociology.

2.2 Analytical Tools for a Relational Approach

Numerous concepts are useful to account for systems of relationships between actors involved in policy-making. The most commonly used certainly is the concept of network. This concept appears in various versions, and its uses range from a metaphoric mention to the implementation of sophisticated quantitative methods. One of the best examples of network analysis in policy studies is illustrated by the research Edward Laumann and David Knoke have published on two policy domains (health and energy) in the USA (Laumann and Knoke 1987). They beautifully illustrate the postulate I have formulated, according to which a policy stems from the system of relationships between actors involved in its definition. Following this postulate, the empirical analysis of such a system of relationships grounds the sociological explanation of a policy in its various aspects. *The Organizational State* locates the most powerful actors in the network, sheds light on their constraints, and, by doing so, helps us gain a better understanding of the orientations of health and energy policies. Laumann and Knoke, as network analysts in general, focus on concrete interactions between individuals. Who gets in touch with whom, how often, in which circumstances, are both empirical questions and explanatory factors. While direct interactions matter, I posit that they must be set in a wider and structural perspective to understand how they really do. First, the characteristics of actors cannot be reduced to their position in a network during a specific period of time. They also include pre-existing features such as social background, training, position held in an organisation and the position of this organisation in relation to other organisations involved in the process.² In other words,

²In Bourdieu's framework, the notion of "agent" reflects this structural definition of social individuals, who "act" (as "actors" do), but also "are acted" by social structures determining their possible actions (Bourdieu 1977).

policy networks and interactions within them are rooted in pre-established structures. We need to pay attention to these stable (but not unchangeable) settings to understand how a network works, which network analysis does not. This is what the concept of field enables us to do.

Just as there are various ways to use the notion of network, there are different conceptions of the notion of field (Martin 2003). Here, I will only give two examples among those that most directly relate to the topic of this chapter. The famous paper by DiMaggio and Powell on institutional isomorphism proposes the notion of “organisational fields” to account for the relationships between various organisations and institutions in a specific domain, in order to understand why and how they become increasingly similar. The authors define an organisational field as “those organisations that, in the aggregate, constitute a recognised area of institutional life” (DiMaggio and Powell 1983, p. 148). More recently, Fligstein and McAdam have formulated the concept of “strategic action fields”, located at the intersection of social movement studies and organisational theory, to propose a general theory rethinking the roles of structure and agency (Fligstein and McAdam 2012). Despite their claim of a renewal and progress in social theory, their attempt remains, for reasons which would be too long to explain here, a much weaker contribution than the systematic field theory Pierre Bourdieu progressively structured throughout his career.

3 A Bourdieu-Type Approach to Policy Fields

Bourdieu’s field theory is a comprehensive and complex ensemble of inter-related notions, difficult to sum up in a few sentences. Here, I will only outline its key elements for unfamiliar readers (for an introduction, see Bourdieu and Wacquant 1992, pp. 94–115; Bourdieu 1993). A field is a social microcosm, meaning a social space whose activities and purposes (e.g. the arts) differ from others (e.g. politics), located in other fields, and which has its own specific issues and rules. What is at stake in the arts field has little to do with the core issues in the political field. Individuals (agents) within a field do not run or compete for the same trophies, and they do not obey the same rules (in the sociological and not the legal sense of the term). An artist will look for recognition among his or her peers and by arts critics, and will therefore endeavour to fit the criteria defining what a good artist is, while a politician will look for power positions and will either play the democratic game, show faithfulness to the party and its leader, or demonstrate usefulness in government as a well-trained technocrat. This also means that part of the resources

used in a field are specific to it; this is what Bourdieu calls the “specific capital”. The technocratic capital of acknowledged skills in government affairs matters in the political and bureaucratic fields, but is of no value in the arts field. In addition, lifestyles, preferences and attitudes conceptualised by Bourdieu as *habitus* differ from one field to another. Artists do not think, speak, dress or behave like politicians usually do, and conversely.

These elements introduce two major points. First, these specificities have been progressively defined, in the historical process of differentiation that specifies modern societies. Religion, politics, arts and science have not always been regarded and organised as distinct spheres of activities. This historical evolution is an *autonomisation* process, meaning that fields have appeared together with the specific rules (*nomos*) they have established for themselves (*auto*). Second, a field is a structured space of positions and competition. Positions are defined by the level and structure of relevant capitals in the field, in relation to other positions—namely according to the distribution of capitals within the field. Agents compete with others in order to reinforce their position within the field.

All of this is of great help to understand the way a specific sphere of activities is organised. But there is more: Bourdieu posits a relation of homology between the location of an agent in a field and the position he or she takes (a political statement, a work of art). There is therefore a multiple level relationship, between positions (agent a, agent b, etc.), between positions and position-takings (agent a, position-taking a', etc.), and between position-takings themselves (a', b', etc.). Products (like a work of art or a political discourse) are understood relationally by referring them to the set of products in competition at a specific period of time (the space of position-takings), itself referred to the social structure of their production (the space of positions, e.g., the arts field or the political field).

In order to illustrate how this framework can be used to analyse public policies, I shall reformulate the main five classic questions in field sociology and apply them to the space of production of public policies.

1. As we have seen, a field constitutes itself by defining a stake that is specific to it, irreducible to those of other fields. A first question then consists in establishing what stake specifies the space of production of a policy. One can answer this by positing that it is the power to regulate a particular sphere of practices (immigration, housing, education, health, etc.) by mobilising resources (financial, legal, administrative, etc.) specific to a public institution (national government, local authority, European Union, etc.), or one linked to the public authorities (a joint public–private agency, a para-public body, an association financed with public funds, a social security body, etc.).

2. How does one define and delimit this space? As with any field, its periphery cannot be posited a priori, but results from the reconstruction performed in the course of the study. In his research on housing policy (Bourdieu 2005, pp. 89–147), Pierre Bourdieu starts by identifying those whom he calls “the efficient agents”, on the basis of institutional positions, a reputation analysis and a survey of position-takings; this then serves as a basis for a systematic reconstruction of the whole through successive cross-checks and additions. Here as elsewhere, and indeed to a greater extent, the definition of the limits of the field is a stake in struggles, because being “inside” or “outside” corresponds to securing, or being denied official recognition of the right to intervene in the regulation of a sphere of activity and the opportunity to contribute effectively to it.

3. The existence of a field presupposes a degree of autonomy, short of which a field ceases to function as such, because it is subject to external logics. Far removed from the theoretical debates of the Marxist tradition on the autonomy of the state relative to the dominant classes, field sociology calls for empirically reconstructing the historical configurations of the power relations internal to each field and the respective chances of different fractions of impacting policy orientations (this is extensively discussed in Bourdieu 2014). In complementary fashion, it invites us to establish the state of the political and bureaucratic fields that determines the possibilities of alliances and the types of exchange with these different fractions, the regulation of their differentiated access to the sites of power and public resources, the capacity or propensity to gain the upper hand over them or to convert their demands into official policy. In other words, it is necessary to establish systems of relations among different systems of relations (or fields), following the logic of a conception of the state as a meta-field, which clearly opens more on to empirical research than to general, abstract discussion of its autonomy.

4. Which principles of opposition structure a policy’s field of production? The answer must be established on a case-by-case basis, but some recurrent principles can nonetheless be identified. The pool of the agents who successfully claim to speak for the general interest (e.g. senior civil servants, “qualified persons”) is opposed to the pool made up by those relegated to the defence of particular interests (e.g. trade union representatives, locally elected politicians); this opposition may overlap with the one between generalist agents and sector specialists. The two competing principles of legitimacy—competence and political legitimacy—pit the experts against elected representatives, in a game of mutual delegitimation between “technocrats” who are seen as aspiring to take over power and “politicians” chiefly concerned to be re-elected.

5. Final question: what are the products of these competitions? They are politically legitimated ways of seeing a “problem” or a sphere of activity (objectified, for example, in speeches and official reports) and handling it (materialised in projects and reforms). These products are formally legitimated by their endorsement by an agent endowed with political authority (a mayor, a minister, etc.) or sanctioned by a vote. They are also legitimated by the very logic of the functioning of the field, by observance of the procedures, by the claim to technical or scientific competence, by the accumulation of symbolic capital, by recourse to public opinion, by a more or less staged consultation or the regulated confrontation of rival points of view, aimed at producing a somewhat illusory consensus.

Following the hypothesis of a homology between the space of production and the products, it is possible to provide a sociological understanding of policy orientations (products) by referring them to the field of public policy (the space of production). As we have recalled, Bourdieu’s field theory posits a relation of homology between positions and position-takings. On this basis, we can relate the competing options and orientations in the definition of a policy (regulating the financial system or not) to the positions and interests of those who advocate them (activists and left-wing political leaders, bankers and orthodox economists). Having objectified this system of positions and position-takings, it is possible to propose a more innovative hypothesis, which consists in establishing a correspondence between the content of a policy (its orientation, its style), and the relational structure of the space of the agents involved in its production. I will expand on this hypothesis now, further specifying the sociological redefinition I have proposed in the first section of this chapter. Under this more detailed definition, a policy can be considered as the output of a provisional state of the power relations within the field of struggles over the definition of politically legitimated forms of regulation.

4 The Notion of Field: Six Possible Uses for Policy Analysis

Quite surprisingly given the international dissemination of Bourdieu’s theory and the multiform rise of policy studies over the last decades, this framework is rarely used to analyse public policies. Emirbayer and Johnson have elaborated on a similar underuse in the related research domain of organisational analysis (Emirbayer and Johnson 2008). Apart from limited

references to the notion of field in general (see for instance Duffy et al. 2010), most—rare—mentions to Bourdieu's theory in research on public policies are found in literature in the field of education (Lingard and Rawolle 2004; Thomson 2005; Lingard et al. 2005; Rawolle and Lingard 2008). As Hilgers and Mangez write, many of these researches often refer to Bourdieu's theory of fields only partially and do not systematically follow up on its analytic and methodological implications (Mangez and Hilgers 2012). Rawolle and Lingard have recently proposed one of the most systematic and comprehensive applications of this theory, but without fully fulfilling its empirical (that is, quantitative) programme (Rawolle and Lingard 2015).

Yet, as we have already seen, this theory may be of great help to understand the origins and orientations of public policies. In this section, I will examine six different possible uses of Bourdieu's field theory in policy analysis.

1. The notion of bureaucratic field makes it possible to analyse the formation, structure and functioning of a space of positions specific to the state, which in turn specifies the state itself (Bourdieu 2014). This notion avoids the monolithic view of bureaucracy as a homogeneous whole oriented towards shared collective goals and sets specific bureaucratic organisations in the general landscape of inter-organisational competition, usefully complementing organisational analysis (Emirbayer and Johnson 2008, p. 20). Within the bureaucratic field, one generally observes a combination of hierarchical, vertical oppositions (central state vs. local authorities, senior vs. junior civil servants), functional oppositions (e.g. financial departments vs. spending departments) and institutional competitions between “bureaucratic fiefdoms” (Allison and Zelikow 1999) defending divergent interests and orientations. At the level of the individual agents, this corresponds to competitions between different kinds of bureaucratic capital, also linked to generational oppositions: experience vs. technical knowledge; internal competences and legal or practical mastery of the rules of the game vs. sectorial competences, transposable outside of the bureaucracy. These principles of opposition combine with principles of grouping and solidarity, such as the classic *esprit de corps* observed among senior members of the different branches of the French civil service. Systematically accounting for internal competition and contradictory views in a structural perspective enables us to understand how public choices reflect the internal balance of power within this specific space of relationships, for instance between budget departments and welfare departments.

2. The concept of field can be mobilised to analyse a space of specific positions and relationships which is closely related to the formulation of public policies. Thomas Medvetz gives a good example of this in his research on American think tanks (Medvetz 2014a, b). In this study, Medvetz shows how the formation of a distinct sub-space of intellectual production contributed to the structure of public debate in the USA, drawing the space of politically conceivable and possible options, and thus indirectly orienting government policies.

3. In Bourdieu's theory, while fields usually organise a specific range of practices (such as arts, sports, medicine or science), the "field of power" has a more transversal dimension. The field of power is composed of the most dominant fractions of a series of specific fields (such as the field of economy, the media, the political and intellectual fields), whose power can be exerted on other fields in addition to their field of origin. For instance, CEOs of the largest companies may own press outlets and TV channels, then be powerful in the field of media and, thanks to this position, exert power in the various domains where the media play a direct role, such as politics or culture, these indirect influences reinforcing their initial dominant position in the field of economy. These CEOs are then part of "the field of power", together with politicians, influent journalists or intellectuals, with whom they share a high level of capital under its various forms (economic, social, symbolic), enabling them to intervene in a wide range of domains. In Bourdieu's words, the field of power is not only about enjoying a high level of capital. It is about enjoying power on capital itself. This is the case when bankers can influence political decisions on interest rates, or when media coverage impacts the internal balance of power of the political or cultural field. As any field, the field of power is defined by the structure of power relationships within it, namely, by the competition between its various fractions (economic, political, cultural, in some cases religious). What is at stake in this competition is power on various forms of capital and on the hierarchy between those forms (e.g. between economic and cultural capital)—namely the general economy of hierarchies between fields and within the social space as a whole (Bourdieu 1998b). The notion of field of power is therefore of great value to understand the elite both as a specific social milieu and as a collection of various specific milieus (fields), while literature on the elite usually opposes these two dimensions in the "monist" vs. "pluralist" debate. This has been illustrated by several national case studies, for instance on France (Denord et al. 2011) and on Norway (Hjellbrekke et al. 2007). This powerful relational morphology of the elite

could be directly useful in policy analysis. It can be argued that most policy decisions are made among this specific space of relationships. It can also be argued that what we have called “policy”, as politically legitimised modes of social regulation, is only a specific way of regulating the various forms of capital and their hierarchy, which Bourdieu defines as the function of the field of power.

4. A fourth way of mobilising the concept of a field to analyse the system of positions within which policies emerge consists in establishing the structure of an institutionalised space of political power relations. Didier Georgakakis and Jay Rowell propose such an analysis in the case of the European Union. While it is most often viewed from an institutional and legal perspective, they consider the European Union as a field, with its own (social) rules, forms of capital and stakes. Their study of “the field of Eurocracy” provides a comprehensive perspective on the various types of agents involved in this system, from national officials to journalists covering EU news, from high-ranking civil servants of the European Commission to lobbyists, and on their relatively stable relational structures. This is of great value to understand the style and contents of EU decisions and programmes.

5. This concept can serve to objectify the space of production of a specific policy, whose power is to regulate a particular sphere of practices (immigration, housing, education, health, etc.) by mobilising resources (financial, legal, administrative or symbolic) from a public institution or linked to public authorities. It is then necessary to consider a policy as the objectification of a provisional state of the internal balance of forces within the specific field of struggles for its legitimate definition. Pierre Bourdieu and Rosine Christin give an example of this in relation to housing policy, explaining the reform by referring it to the alliances between “modernist” fractions which lead to the relegation of formerly dominant agents in this sector, and, consequently, of the policy orientations they promoted (Bourdieu 2005). It is worth elaborating on this case study, since it is the one policy programme analysis in which Bourdieu’s field theory has been most comprehensively illustrated so far, including at the methodological level with a multi-correspondence analysis, a statistical method used to map systems of positions which can be regarded as the technical tool for a systematic empirical application of the notion of field (on MCA, see Le Roux and Rouanet 2004; on the affinity between this technique and the notion of field, see Lebaron and Le Roux 2013; Duval 2013). This research shows how changes in the relative values of forms of capital within the bureaucratic field (see above)

in the latter half of the 1970s, during the presidency of Valéry Giscard d'Estaing, facilitated a short-term alliance between young technician graduates of the *École Polytechnique* (one of the most prestigious French *grandes écoles* training state engineers) and young financial administrators from the *École Nationale d'Administration* (another prestigious French *grande école* training higher civil servants) to gain the upper hand over the positions previously established in housing policy—civil servants in the *Ministère de l'Équipement* (at the time in charge of housing, in addition to environment and road infrastructure) local politicians and representatives of joint public–private undertakings. The former were thus able to impose the “modern” and “liberal” vision attached to their own position and interests, dismissing the latter’s ideas as “archaic”. One then understands the social and also ideological foundations of the decline of building subsidies (*aide à la pierre*) in favour of personal subsidies (*aide à la personne*), the technical translation of an individualisation of the housing question (financial support for households rather than building social housing units), signalling the start of the move to neoliberalism.

This example shows that the contribution of field sociology to policy analysis goes far beyond the social morphology of the elite “decision-makers”. On this basis, it demonstrates what the properties of the agents and the logic of their relationships induce in terms of position-takings, i.e. symbolic productions (expert opinions, ideological constructs, legitimate visions of the world) and, inseparably, practices of intervention (laws, regulations, budget decisions, reforms, institution building, resource allocation, policy instruments). This example also shows that the sociological objectification of the structure of a field does not prevent scholars from accounting for change. Giving an account of the successive states of this structure makes it possible, on the contrary, to better understand policy changes, which can no more be ascribed to the individual “wills” of the decision-makers or their replacement than to a simple “adaptation” of public choices to the objective development of the situations on which they have an impact, but which can be systematically referred to the shifts in the power relations within a specific policy field.

6. Finally, the sociology of fields invites us to account more broadly for the relations between distinct social spaces within which public policies are formed. In the process, it allows us to grasp the foundations and the scope of the relations of domination and legitimisation that define the intervention of the public authorities. This final level of analysis in terms of field is developed in the final section of this chapter.

5 Policy as the Product of Relationships Between Fields

As we have just seen, there are many possible ways to use Bourdieu's field theory to objectify the systems of relationships between agents involved in policy-making processes. The choice between one of these six ways depends on the research question, but also on the empirical case under scrutiny. In any case, the concept of field needs to be used for clearly stated reasons, documenting its relevance to the research design.

In this section, I have chosen to elaborate on the relations between the constitutive social spaces of public policy, as contemporary policy-making processes are increasingly complex, involving multiple relations and a wide variety of agents which cannot easily be circumscribed to a single field. Beyond a monographic use of the concept to account for a single system of relations within a field, I will here illustrate an analysis of the relations among the fields or fractions fields mobilised in the pursuit of a policy, establishing (systems of) relations among (systems of) relations in the process.

5.1 The Relations Between the Bureaucratic Field and the Other Fields

The first form that these relations among systems of relations can take consists in the exchanges, collaborations, confrontations, etc., that are established bilaterally between the fraction of the politico-bureaucratic space mobilised in the public handling of a particular domain (e.g. the civil servants and political agents at least temporarily in charge of a particular sector or dossier) and the corresponding field. This approach can be applied to any policy that touches on the functioning of a field constituted as such—culture, education, science or sport, for example—even when this field is itself constituted within public institutions, as in the case of the field of justice.

This can be useful to analyse the genesis of a policy, which then can be viewed as the result of the interaction, be it a collaboration or a confrontation, between the politico-bureaucratic field and the field in question. In my research, I analysed French cultural policy from this standpoint, as the product of the relations between the field of culture and the group of administrative and political agents who intervene on cultural questions within the governmental space (Dubois 2012). The history of cultural policy is then defined as the history of these relations. Reconstructing them makes it possible, in particular, to understand the formation of inter-field alliances which

could not have happened at other times, and in which one finds the principle of the major innovations or reorientations in this domain—even if credit for them may be claimed by or attributed to singular agents. The first political formalisation in France of a “Republican policy for the arts”, for example, sprang from the encounter, in the late nineteenth century, between reformist administrators, the composite milieu of the “industrial arts” and the avant-garde of the artistic field; it was facilitated by political agents who were both novices and multi-positioned and made possible by a political juncture that was conducive to innovation. The institutionalisation of policies for culture in the modern sense of the term corresponds to a moment when the field of culture was sufficiently established for the intervention of the state to be seen as a support rather than external interference, when, on the contrary, the market was seen as unable to fulfil necessary functions in artistic innovation, cultural dissemination and heritage preservation, if not a dangerous force liable to make financial logics prevail over “the rules of art” (Bourdieu 2006), and when the central administration was strengthening itself in a modernising direction that favoured the opening up of new areas of intervention.

In democratic regimes, policy orientations are rarely reducible to the coercive imposition of choices by public authorities, especially when these policies concern autonomous fields. This perspective is therefore also useful to show how relations between fields ground the compromises and shared beliefs influential in policy programmes and in their legitimisation. This is how we can interpret the principle of “cultural democratization” as a motto issued from the collaborations between the politico-bureaucratic and the cultural field in the 1960s France. The dual political and cultural connotation of the phrase clearly indicates its origin: a technocratic humanism taking up and neutralising the political strategies of the artists in a compromise between agents of the bureaucratic and cultural fields made possible because the notion of democratisation could echo principles rooted in the history of the cultural fields, such as the “popularisation” of the arts and the “social function” of the artists.

Here again we can notice that this relationship is not unilateral. Public policies illustrate how the politico-bureaucratic field intervenes and influences the other fields and their internal structures. Sectorial policies also reflect the state of a given field, i.e. its legitimate definition according to the balance of competition within it, which determines the options for public policies. In addition to that, the specific settings, principles and rules of a field are partly imported in the politico-bureaucratic field in the policy-making process. Departments and services in governmental bodies more or less follow the distinction between fields (e.g. separating culture and education

in France). They also partly comply with the rules of the field they regulate, as when state councils invite arts critics and artists to grant subsidies to other artists, following the principle according to which only members of the arts field are fully legitimate in making artistic choices. This could be viewed as a reversed form of the “institutional isomorphism” analysed by DiMaggio and Powell (1983).

5.2 Policy as the Output of the Relationships Between Multiple Fields

It would, however, be too simple to consider that a policy stems only from the binary confrontation between the political-bureaucratic space and the relevant field. That is a possible configuration, especially when the question is very specific and narrowly defined and/or the field is strongly self-enclosed and its functioning has little effect on the functioning of other fields. In most cases, the multiplicity of the spaces and sub-spaces involved in generating a policy actually entails a much more complex set of interrelations. Even a seemingly technical question, internal to the bureaucratic field, such as the reform of the State, originates and derives its logic from its handling in different spaces and through their interrelation: the airing of the administrative question in the press; its transformation into a stake in electoral competition; the intellectual and literary investments of senior civil servants in devising and diffusing reformist arguments (Baruch and Bezès 2006).

This is especially so when the reform or policy programme in question has more diverse roots and implications, which is most often the case. We can thus hypothesise that an option is most likely to be selected when the dominant poles of the different fields involved are, for reasons that may differ, favourable to it or have an interest in it. A policy and its orientation may be therefore regarded as the result of the convergence between logics and interests that are (partially) specific to distinct but interrelated spaces of interrelation. This is what I show in my ongoing research project on what I would call *the dark side of workfare*, meaning the reinforcement of surveillance and penalties for welfare recipients observed over the last two decades in most European countries. In the following, I focus on the four social fields most directly active in the success of this policy orientation in France.

First, the scientific field of economic expertise contributes to framing policies. It provides intellectual models which can play two roles: they sometimes strongly influence policy-making; they are referred to after the fact by policy-makers in order to confer so-called scientific legitimacy on political

orientations defined on different grounds. The field of economic expertise, now dominated by neoclassical orthodox approaches, paved the way for more control in welfare. The success of the concept of inactivity trap, or poverty trap, is a good example of this role. To put it simply: according to this model, individuals on welfare calculate their financial interest to decide whether they take a job or stay on welfare. When the level of welfare benefits is “too high”, they will prefer to stay on welfare. This debatable model has been widely used as a basis for welfare reform and its legitimisation, including the development of control and sanctions as incentives to work. This has been the case in France, as we can see in numerous policy recommendations by economists. To mention only one, Michel Camdessus, former director of the IMF in 2004, in a report on the general economic situation of the country entitled “The burst: towards a new growth for France”, surprisingly devoted numerous pages to urging the government to strengthen control over the unemployed and welfare recipients, directly in line with the inactivity trap model.

Second, in the bureaucratic field, the welfare elite took a decisive managerial turn, beginning in the early 1990s, whose impact has been increasingly visible during the past two decades. These economic models became all the more influential as a new generation of higher civil servants with a background in management and in economics replaced the previous one, trained in law and attached to the old welfare model. At this level, welfare control was defined as a good management technique. The new welfare officials laid emphasis on financial concerns and imposed neo-managerial references and practices on their organisations and their agents. Within the bureaucratic field, the ministry for finance and budget, the Court of Auditors (*Cour des Comptes*) and the accounting departments in welfare organisations came to play a decisive role in the management of welfare provision, including a new “risk management” strategy which in practice consists in new tools for monitoring and sanctioning welfare recipients.

These orientations were widely reported upon if not supported in the media field. In my research, I found hardly any evidence of papers on welfare fraud before the mid-1990s. By contrast, countless amounts were published after that date, especially after the most important reforms of the early 2000s. This chronology shows that the media have not fulfilled an agenda-setting function, urging the government to make reforms. On the contrary, they have generally followed the government on these issues, spurring public support for governmental reforms. While some left-wing papers were initially critical and used references to George Orwell to denounce a surveillance society, the vast majority of articles denounce welfare fraud as

a scourge requiring more control. Not all the press follows this orientation, but crucially, national TV channels and mainstream newspapers do.

Fourth and last, the internal dynamics of the political field appear to play a prominent role. The right has unsurprisingly promoted the theme of welfare fraud. In 1995, this was to retain the support of the privileged fractions of the conservative electorate and of independent workers. Later, it became an explicit means to gain support from the working classes, among which turnouts are very low. Criticising the “lazy entitled” became a very common way for right-wing politicians to present themselves as sharing the concerns of workers who can hardly make ends meet and are supposed and encouraged to be upset with “their neighbor who stays home and makes as much money on welfare”. This is in my view a good example of the circular effect of a political discourse, which by repeating the same arguments reinforces if not generates the concerns to which it supposedly responds. This is also an illustration of how right-wing themes spread across the political spectrum. Other issues, such as security and immigration, have become central in the political debate on welfare and beyond. The moderate left which alternates with the right in government could not avoid addressing them. Its leaders have had to do so in order to appear as credible government officials, tough on crime and fraud, far from the “over-leniency” denounced by their competitors. By doing so, they have progressively included some of their opponents’ arguments into their own discourse and unintentionally contributed to the political success of these themes.

The construction of welfare fraud as a public problem and the new relevant surveillance policies result from the interaction between these four fields. This interaction is also an explanation of the fact that welfare fraud as an object of public rhetoric combines a wide range of registers, from financial rigour to morals, from expertise to casual conversation and barroom politics. Its targets can vary from the bad mothers who “have children to live on welfare” to the bad immigrants who come to France to abuse the system; it is also part of the delegitimisation of welfare in general, even if it, somewhat ironically, the system is depicted as in need of saving because it is supposedly undermined by fraud. This rhetoric peaked under the Sarkozy regime, when welfare fraud and entitlement were contrasted with “the work value” (*la valeur travail*) promoted as the key element of the governmental programme to “redress” French society.

From a political economy perspective, we should not forget that such policy orientations may serve the private interests of employers, and that they may have been influenced by their unions and lobbying. Sanctions to welfare recipients are closely related to cuts in welfare benefits, themselves necessary to achieve the tax cuts routinely demanded by employers’ representatives.

Making welfare “less comfortable”, as reformers put it, can also be a means to make precarious work and underpaid jobs more easily acceptable. Field theory enables us to understand that these interests could not have been translated into policy programmes if they had not been instilled through a long and complex circuit of legitimisation, including various social spaces, that in the end makes these options appear as inevitable if not consensual. The social structures of policy-making are, in the meantime, the basis for policy legitimisation (I elaborate on this question in Dubois 2014, pp. 216–217).

6 Conclusion: Questions of Autonomy

To conclude this overview of the contribution of Bourdieu’s field theory to policy analysis, I will come back to the question of autonomy. This question is central to field theory and in turn raises other theoretical questions. I will address it in two main parts.

First, how can we rethink the question of the autonomy of policy apparatuses? This question is most often posed in the perspective of the Marxism vs. neo-institutionalism debate on the state. While Marxists authors, such as Nikos Poulantzas, mainly posit that the state and its policies reflect the interests of the dominant class, and enjoy no or at least only little autonomy, neo-institutionalists, on the contrary, posit that the state and its institutions are able to pursue their own goals and to conduct policies that cannot be reduced to the influence of external actors (Skocpol et al. 1985). The problem of this dichotomist opposition is that, whatever side we are on, it substantialises “the state” when we should view it as a complex web of relationships without unchanging established boundaries (Bourdieu 2014). Field theory invites us to examine this question in a different perspective. Looking at the objective system of positions involved in policy-making gives us a more concrete view of the relationships between agents (state agents and others) who effectively intervene in policy-making processes. This system of positions is an arena in which various views and interests compete, according to the spheres the agents belong to, from state organisations to interest groups and experts. It is not therefore independent from private interests, but cannot merely reflect these interests. It has to be organised following specific rules to translate interests and rationales into a policy that claims to serve the public interest. This translation is not only a discursive process; it consists in legitimisation procedures which rest on the social organisation of the policy field. We could therefore say that, paradoxically, a certain degree of autonomy is necessary for external powers to be efficiently exerted in policy-making processes.

A second way to address the question of autonomy is to reflect on what public policies do to the autonomy of social fields. Upon first glance, as external interventions on the internal functioning of fields, public policies may reduce their autonomy. This is obvious in authoritarian regimes, where all spheres of social activity are subject to the rules of the political-bureaucratic apparatus and are no longer (autonomous) fields in the strict sense of Bourdieu's concept. This also may be the case in other political contexts, as public policies import if not impose heteronomous logics (political and or bureaucratic) into fields ruled by other logics. However, we could say that a certain respect for the principle of self-organisation of the differentiated social spaces is an implicit rule of contemporary liberal democracies, where intrusive political interventions in the internal functioning of a social field (the arts, sports or science) may occur, but under particular conditions so as not to cause outrage. More generally, historical analysis shows that public intervention has contributed to the genesis and autonomisation of fields. Among others, Pierre Bourdieu has shown that the creation of an economic market required state intervention, through a minimal guarantee of security, transport infrastructure and monetary unification (Bourdieu 2005). Likewise, the formation of fields specific to the arts, sports or science partly results from political and state initiatives. From the post-war era to the neoliberal turn, we could generally say that the growth of public intervention went hand in hand with the autonomy of social fields, insofar as this intervention consisted in "correcting" the effects of the market and in preserving a wide range of social activities from an excessively straightforward implementation of its rules. In contrast to this paradoxical contribution to their autonomy, neoliberal policies consisting in imposing these rules as functioning principles of potentially all spheres of activities have contributed to reducing the autonomy of social fields. This is the case in health, higher education, sports, culture, welfare and many other fields. This time, the redefinition of public policies, sometimes nearly amounting to a retrenchment of public intervention, is leading to a growing heteronomisation of social fields. Pushing the paradox, we could say that, contrary to common conceptions, "interventionism" may, in certain conditions, favour the autonomy of fields while "liberalism" can work in the opposite direction.

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3

Political Economy and the Public Sphere

Jeremy Adelman and Jessica Mack

1 Introduction

When the greatest political economist of his times, David Ricardo, died in 1823, the idea of revolution seemed bygone. Hopes for reform also seemed lost; Ricardo had been one of the reform's beacons. Parliament was a closed shop. Reactionary forces seemed to have gained the upper hand after the Congress of Vienna. But several changes were afoot that would give new hope to reformers and modernizers. Thanks in part to a drop in coffee duties and rising Brazilian supplies for the bean, coffee houses—where literary disputes had been active the century before—became hotbeds of politics. Moreover, falling cotton prices, thanks to the spread of slaving frontiers in the USA, made magazines cheaper to print. Reformers could congregate over coffee and teas and debate the latest publication. Ricardo's passing and these changing global conditions prompted Jeremy Bentham to found the *Westminster Review* as a new mouthpiece in a quickly expanding sphere of gentlemanly debate. Its first number in January 1824, while Bentham was writing constitutional charters for the new republics of South America, featured a blistering attack by James Mill on the Whig gentry and

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the romanticism of the *Edinburgh Review*. Salons, clubs, magazines, and newspapers burst forth as the sites for active contention about public affairs (Reeves 2008, p. 50).

So it was that market integration of the nineteenth century gave us more trade and more debate over what integration meant; with the birth of global capitalism came civic contention and debate. Two essential features of the modern age were born at the same time, tethered from the start.

Despite the twin-born foundations of market integration and the public sphere, our social sciences came to divide these spheres into the domains of economics and political science. On one side are the “dismal scientists,” toiling away trying to understand how individuals and rational actors seek to maximize personal benefits and private happiness. Theirs is the tradition that grew from the fount of political economy. On the other side are the men and women preoccupied with order, legitimacy, and the public good. Theirs has been the domain of political science or branches of sociology. If there was once an amalgamation of political philosophy, democratic theory, and reflection on market life during the Enlightenment, the course of the nineteenth century divided them. Around 1900, the modernization of universities (which were scarcely hotbeds of intellectual production in the 1800s) turned the study of economy and public affairs into “disciplines,” named them, and created increasingly bounded norms of activity and reproduction. The process, more or less, coincided with the triumph of liberal ideology, which rested on a bipartite notion of separable spheres, the private and the public, market and state, to segregate and protect each sphere from its sibling. In the discipline of economics, the goal was to identify and isolate the mechanisms and “laws” of market exchange in part to protect them from the meddling propensities of governments. For those committed to understanding public affairs, meanwhile, there was a no-less important resolution to protect the common good from the intrusions of what we now call “special interests”—though a century ago it was fashionable to warn about the corrupting influences of “monied men.” The reformist zeal of 1800 was quite different from the reformist zeal of 1900; if the former aimed to curb arbitrary government, the latter aimed to protect government. Nowadays, the pendulum swings both ways, with free marketeers railing against the government over-regulation, while a resurgent populism fulminates about crony capitalism.

This essay charts the ways in which the paths of political economy and the public sphere forked under the weight of ideological pressures to keep markets from being submitted to the whims of public opinion and to protect public affairs from the corrupting effects of markets. The bifurcation

was a central tenet of liberalism. And yet, at the same time, the splintering produced countervailing responses: efforts to bridge, mix, and combine disciplines because the workings of private pursuits and public goods kept intruding on one another. Keeping them apart yielded the urge to reunite them. It took Herculean work to keep the optimizing *homo economicus* sheltered from public intrusion and meddling; meanwhile, the specter of private avarice and misery kept spilling into political affairs and activating the public sphere.

One of the challenges is that political economy and the public sphere were both subjects of analysis and analytical categories at the same time—which means there is a tendency to slip back and forth between what is being studied and how it is being studied.

This essay traces the arc of the twin-born notions of political economy and the public sphere. It also explores how history trespassed the boundaries that were supposed to separate them, which provoked thinkers and writers to consider the mutual dependency of both spheres and the tension over strict, disciplinary, divides. Instead of seeing political economy and the public sphere as basically devoted to the understanding of two separate domains of modern, human, activity, this essay stresses the mutual dependence and tense entanglement of the two. If political economy privatized ideas of the self and turned *homo economicus* into an autonomous agent, the inequities and risks of market life spawned outrage and opposition that invited writers and publicists to occupy the public sphere as a terrain of battle over capitalist legitimacy. In this fashion, questions about personal accumulation and public opinion were never as divisible as the disciplinary guardians proclaimed.

2 Going Global

We add a twist. It is customary to frame matters of political economy and public spheres in national settings. But as the story of a burgeoning public sphere in the 1820s suggests, shifting global conditions were the source of trouble as well as the enabling conditions for what motivated political economists and worried those concerned with civic virtue and public affairs. The emergence of a world economy was an important enabler of both market expansion and deepening public affairs. It also became the fuel for debate in the public arena. There was the fact that costs of creating commercial society dropped—cheaper cotton or coffee were tacit conditions for the making of public opinion.

There was also the fact that, as the world became more integrated, especially once the mobility of capital across borders joined the circulation of commodities in suturing the world market into one, it was also more precarious and imposed private and social costs on classes and regions displaced or marginalized by what we would now call globalization; the very subjects of political economy and public sphere were vulnerable to upswings, and escalating expectations, and downswings—and dashed expectations. World market swings could elicit personal euphoria and thus frequently a more docile public sphere; in more turbulent times of risk and precarity, the public sphere could become the site of mobilization and disenchantment.

By the late eighteenth century, the growing awareness of price movements helped propel the mobilization of resources and financial innovation. Bills of exchange, networks of merchants, speculative bubbles and spread into new frontiers drew more and more attention to the importance of a commercial and financial information, and a growing circulation of specialized magazines, broadsheets, and periodicals. The press, in turn, became the arena for advertising specific investment opportunities, as well as exchanges in London, Amsterdam, and elsewhere. The rise of financial capitalism depended on the simultaneous rise of a printing industry, and the rising importance of financial and commercial information spurred the spread of printing (Neal 1990).

If information and news were important to the fabric of commercial society, they were also born global. The same year that Bentham founded *Westminster Review* saw the young John Stuart Mill, liberalism's most important public intellectual, enter the halls as a servant of the East India Company, where he would labor until 1858. The crushing of the so-called Indian Mutiny and the mothballing of the chartered firm put an end to Mill's private occupation and released him to become the more public face of liberalism. This was also the time that commodities and news of the world expanded the horizon of personal expectations as trade barriers dropped and steam and cables tangled together ports and hinterlands. The press and public opinion became, themselves, as commercialized as the world upon which they reported and ruminated. Political economists and opinion-makers, from John Stuart Mill to Thorstein Veblen, John Maynard Keynes to Albert O. Hirschman, were part of the fabric of the ebbing and flowing of global integration—and disintegration—at an international scale. They consumed reports about conditions about faraway places and distant forces, like the exploitation of workers or the opportunities for investment, which influenced the categories and understanding of both political economy and public sphere; interdependence made the periphery matter to the

core and the core vital to peripheries long before the advent of “emerging markets” or our contemporary globalization. We need to reckon with the significance of faraway peoples and processes in the making of what has, until now, been seen as Europe’s intellectual bequest to the modern social sciences, as if the study of political economy and the public sphere were purely internal forces.

This essay therefore calls attention to the global conditions for conceptualizing market integration and the public opinion. It calls attention to the ways in which global integration was not something that got added to the categories and models of private wants and public good with the dawn of our globalization. Global integration fired public debate from the start. Both political economy and the public sphere were, this essay will show, the effects of global integration, whose dynamics ensured that the lines separating the two fields were never solid. Seen in this way, we can question longstanding views that the “West” created the practices of capital accumulation and civic deliberation on its own, and thereby pioneered concepts that would differentiate—and separate—the West from the rest. In recent decades, ideas of development and civil society have become traits that have helped scholars sort societies into advanced or backward ranks. We might equally see these ideas as responses to, and even effects of, global integration (Hall 1992, pp. 276–317).

3 The Liberal Age

The way we use the concept of public sphere nowadays refers to an intermediate space between the state and the market. The idea has its origins in the writings of Jürgen Habermas from the late 1950s. The notion gained added circulation in the 1980s, as social movements, civil disobedience, and public communication emerged as important engines of resistance against authoritarian regimes in Latin America, Eastern Europe, and in a fledgling way in China before the repression of 1989. These tides of associative activity had pronounced self-created yet institutionalized expressions in the form of a more activist press and proliferation of non-governmental organizations.¹

¹For an important synthesis of the late 1980s view of the role of civil society and the public sphere, written on the heels of the fall of the Berlin Wall and Latin American democratization, see Cohen and Arato (1992).

But just as political economy predated the triumph of neoclassical economics, the public sphere was not a Cold War creation. It was, rather, a bequest from an earlier age, a response to the democratization of political life and the integration of market forces as the *ancien régimes* of aristocracy and monarchy gave way to new ideological coordinates and new institutions of integration and representation. It is important to underscore that Habermas was himself building on a century's reflections on the role of the media, public sociability, and political opinion-making as censorship rules crumbled, associational life took off, and the press grew by leaps and bounds. Habermas took inspiration from Alexis de Tocqueville, who argued that the public sphere had severed itself from civil society to constitute the domain of free and ultimately rational exchange of ideas between civil society (understood as the private domain of the marketplace) and the state. This discovery, first articulated in his *Democracy in America* (1835–1840), was one of ambivalence, for it marked a basic shift away from old aristocratic ways. On the other hand, as Tocqueville told John Stuart Mill, this new age demanded a new “complete model” to outline the features of democratic, market, society (cited in Katznelson 2003, p. 97).

Tocqueville's quest for “a new science of politics...for a new world” inspired Habermas to look back at the eighteenth and early nineteenth-century bourgeois world of clubs, salons, and scientific societies (like the ones we mentioned above) where an elite of social equals debated problems affecting (so they thought) society as a whole. It was, he argued, really in the 1830s that the social, political, and philosophical hallmarks of the public sphere took their modern shape. The health of the public sphere was a condition for democratic life, for it was there that public opinion took shape and enabled society to confer or deny legitimacy to state authorities. Democratic governance depended, then, on the ability of citizens to partake in enlightened debate as an ultimate check on arbitrary uses of authority. The twentieth century thickened the publicness of this space with the spread of mass politics, mass media, and the circulation of news, information, and imagery—which made them open and non-exclusive. It also presented the ultimate conditions for the demise of the public sphere's autonomy, for mass consumption and the welfare state blurred the boundaries between market, state, and public sphere (Habermas 1989; Calhoun 1992).

In its idealized form, however, the spheres coexisted, reinforced each other, but were fundamentally autonomous. What is more, political economy and the public sphere shared some historical and conceptual roots as ways to consider social life defined in contradistinction to the *ancien régimes*

of the evolving eighteenth century. Practices that we now associate with the public sphere and the idea of actors in possession of their own self-interests made their appearance as monarchy and mercantilism came under increasing criticism. Coffee houses, salons, and gentlemen's clubs became features of urban life, especially in the larger, commercial hubs of Europe. They sprang up elsewhere, too, in Bengal in the 1820s, during the *tanzimat* ("reorganization") of the Ottoman Empire after 1839 and in Japan by the 1880s. Across the nineteenth century, and in many major urban centers from Lima to Bombay, these became the seats of an emerging, gentlemanly discourse of mannered trade and exchange of commercial information and global news (Conrad 2012; Kopf 1969; Hourani 1983; Blacker 1964).

For this reason, Habermas appended the adjective "bourgeois" as a qualifier to his notion of the public sphere, for it was normatively populated by independent owners of property who, though they competed with each other, had grown beyond the confines of family and clan affiliations and were committed to rational exchange and reasoned and unconstrained communication. Whether being bourgeois was a condition for the existence of the public sphere or whether it was possible to imagine a public sphere in non-bourgeois settings was not always so clear. This remains a point of debate, and Habermas himself was at times skeptical about the survival of reasoned and moderate deliberation as gentlemanly capitalism of the mid-nineteenth century gave way to mass capitalism and consumption of the twentieth century (Cohen and Arato 1992).

It was the nineteenth century that propagated an emergent public sphere as a space of sociability and as an analytical concept upon whose shoulders liberalism could ride. The spread of newsprint extended the range of ideas about checks on state power, especially as a result of the tumult of the age of revolutions across the Atlantic world, and powered a webwork of associational activity. There emerged a space between public authority and private domains of exchange and production. When Alexis de Tocqueville wrote *On Democracy in America* (1835 and 1840), he complemented the idea of political society with "civil society" as more than a space of market exchange that mediated between the family and the state (*bürgerliche Gesellschaft* in G.W.F. Hegel's version, where capitalists convened); it was where common sense and public opinion took form, and shed the connotation with private life without being reduced to public authority (Swedberg 2009).

Among the enabling conditions for the expanding of this new public sphere was a series of technological shifts. A reporting revolution buoyed the formation and spread of an increasingly global public sphere, interlaced

postal services, telegraphs, cheaper paper, mass production, and the ability to produce higher-quality photographs that could be stamped onto newsprint. It is important to underscore that the modern media was a function of state decisions to decontrol trade in movement of the commodities—including paper and information—that made printing possible, as well as decisions to tolerate private monopolies in the management of communicative technologies (Starr 2005; Schudson 1981).

New businesses climbed on to the shoulders of the technological breakthroughs. Reuters (British), Havas (French), and Wolff (German), among the first truly multinational corporations with agents and “bureaus,” scattered all over the planet (the Americans’ Associated Press joined the club a bit later). It was not mere coincidence that these networked firms reflected the imperial molds from which they sprung. They partitioned the planet like their ruling classes. Reuters made a grab for Asia. AP, in the shadow of the Monroe Doctrine, took the western hemisphere. AFP mopped up the Middle East and Africa. Wielding such market power, the cartel struck insider pricing deals with telegraph companies; exclusive cable rates helped lock down their edge over other sources of global news, though Australians, Canadians, Japanese, Russians responded with agencies of their own to rival the informal empires of the cartel. The Japanese Foreign Ministry opened bureaus in Shanghai and New York; later, the Kokusai and Tōhō News Agencies were pre-war ventures to feed reports to China to frame East Asian “news” in a common esprit against non-“Orientals.” It didn’t work. After the Russo-Japanese War, Japanese, Russian, Chinese, and British reporters were crawling all over Manchuria digging up stories of imperial entanglements and encounters. To top off the transformation, the advent of half-tone printing enabled publishers to stamp photographic images onto cheap newsprint just in time for a spasm of imperial entanglements and struggles from the Philippines and Korea to Namibia. By 1914, halfpenny papers like *The News of the World* and *The Daily Graphic* had conditioned readers to expect pictures alongside the text (Schwartz 1999, p. 169).

As with so many other facets of the world economy at this stage, the business side of the global public sphere was a picture of oligopoly and upstart competition (Boyd-Barrett and Rantanen 1998; Akami 2012, pp. 12, 66). Several features of the public sphere deserve to be underscored. First, it crisscrossed borders from the start and made international news an important ingredient of national affairs and public concern. Second, despite its normative autonomy from the political arena and private pursuits, the public sphere was entangled with both precisely because it mediated between them.

4 Market Integration

As the spread of commercial society and communicative technologies laid the groundwork for the idea of the public sphere as a buffer between states and markets, they also gave rise to the study of markets as an adjacent normative field of political economy. The spread of the marketplace that spilled across national boundaries to create a global economy became a staple for the public sphere as well—as trading and financial information, reporting on risks and hazards of enterprise, were vital news elements for the burgeoning press and the subjects of deliberation in salon culture.

For these reasons, Habermas' notion of "bourgeois" denoted not just the space associated with a rational form of discourse, but also its attachment to a specific class with shared interests that were independent of (and often critical of) governments yet pooled by freer trade and widened opportunities for accumulation across borders. It was from this associational activity that pressures on governments led them to reduce constraints on trade, privilege the rights of creditors and shareholders, abolish the slave trade and promote free flows of labor, and break up entailed, landed fiefs. It was clear enough in magazines like *The Economist*, founded in 1843 by the businessman and banker, James Wilson, as part of a crusade to promote free international trade. Aligning private interests and public causes on the same page was a global affair. On the front page of the oldest continuously circulating Spanish-language newspaper, *El Mercurio de Valparaíso*, daily announcements of the ships in port ran alongside discussions of local and global affairs. First published in 1827, the paper monitored mercantile life in Valparaíso, a public service for maritime visitors and locals as the city became South America's port of call in the Pacific. Layout reveals the paper's purpose: Amid advertisements for shipping and insurance companies, every issue announced which ships were in port, for how long, and whom to contact about the wares of each. News of commerce occupied the foreground of the port city's periodicals, just as the news itself was becoming more commercialized. Amid low literacy levels in the post-independence period, the written word still carried some of the ordering power of colonial governance (Rama 1996). By providing a factual, verifiable report of the ships in port alongside reprints from international newspapers and opinionated debates, *El Mercurio* occupied an intersection of functions and sidestepped in some measure questioning of veracity.

El Mercurio provided a daily measure of the port city, but the paper's very existence also reflected Valparaíso's increasing prominence as a node

of global capitalism in the Americas. From its founding, the paper was a natural ally and mouthpiece of the commercial elite and it reflected global integration in a city flooded with international commercial actors. Founder Pedro Félix Vicuña worked closely with a business manager from the USA, Thomas Wells, who was also a protégé of Benjamin Franklin (Campbell 1962). Foreign involvement in the paper's founding dovetailed with constant British presence on its pages and subsequent ownership by Spanish and Argentine managers, including a period of editorial leadership by Argentine intellectual and statesman Domingo Faustino Sarmiento. *El Mercurio's* shifting international influences reflected the cosmopolitanism of its city of origin. The public sphere in Valparaiso was born global, and both the debates over public affairs and the merchandise advertised alongside flowed along its transnational commodity routes.

Political economy, like the public sphere, was a stepchild of the *ancien regime*. It offered alternative ways to understand market forces than those that had prevailed under old mercantilist systems in which the workings of trade and finances were subordinated to the exigencies of state authorities. As with the public sphere, the accent was on the autonomy of market integration from the old tools of absolutist governments. Long-distance trade and the influence of New World silver had been core subjects of ministerial discussion and some pamphleteering in *ancien regime* statecraft in Europe. But the debates were, for the most part, reduced to competing reasons of state. It was not until the middle of the eighteenth century that trade and finance got some currency as separate fields of inquiry from politics and philosophy in the contours of university appointments, pamphlets, and treatises as separate from other humanistic pursuits. The first academic chairs were in Naples and Vienna; in 1805, Rev. Thomas Malthus became the first professor of political economy at, significantly, the East India Company College in Hertfordshire (Winch 1996).

There were many strands and contests over what political economy was; but by the beginning of the nineteenth century, it was increasingly associated with the idea that marketplaces were the engine of economic prosperity. It was fueled at the outset by a shared agreement that, unfettered, the forces of supply and demand might fail; moral education and state policy were important bulwarks against the potential damage of unbridled competition and pauperization. When Karl Marx came along, he went one step further, to argue that competition sowed the seeds of its own destruction, and his heirs would devote careers to explaining how capitalism devised schemes to resolve its internal contradictions, imperialism, Fordism, or fascism. Thereafter, political economy forked. One prong accented the self-correcting

habits of market life, which would veer into the scientific notions of “economics” as subject to some universal laws once markets were freed from the shackles of tradition or non-market constraints; the other prong saw imminent crises and turmoil (Muller 2003; Hirschman 1977).

At heart was a view of market life that made it amenable to an ever-widening public sphere. In its most optimistic variant, the workings of commerce created the conditions of other-regarding habits that made modern, collective, life superior to the *ancien régime* habits of warfare and predation, of winner-take-all struggle. No one captured this more elegantly than John Stuart Mill, who famously elevated this harmonious view of commerce and interdependence to a global scale. In a famous passage from his *Principles of Political Economy*, Mill noted:

It is hardly possible to overrate the value, in the present low state of human improvement, of placing human beings in contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar. Commerce is now what war once was, the principal source of contact...It is commerce which is rapidly rendering war obsolete, by strengthening and multiplying the personal interests which are in natural opposition to it. (Mill 2006, p. 594)

But the hand of political economy did not always fit so nicely into the glove of the public sphere. Even the most felicitous version of the relationship between private interests and public pursuits had to acknowledge some degree of tension; note, for instance, that Mill recognizes some “natural” resistance to interdependence. Drawing the lines between the private and the public was, therefore, an ongoing process. The public sphere was a zone for building confidence in both authorities and markets, especially when they appeared to falter.

In few domains did the impression of faltering markets and faltering authority braid more often, and become a cause for scandal, than over financial doings. There had been brouhahas in past, from the upheaval over John Law’s investment schemes of the Mississippi Company bubble and the Banque Générale in France (which was more or less contemporaneous with the South Sea Company *affaire*) in the 1720s, or the great panics of 1796. But these were nothing compared to the mayhem produced as global finance expanded tremendously after the Napoleonic Wars. The first of the modern runs on banks, and major wave of defaults by private and sovereign debtors took place in the early 1820s after Britain’s first return to the gold standard and a splurge of lending to shell companies in South America,

involving the fragility of the new, indebted, republics from the USA to the collapsing United Provinces of the River Plate. The financial crisis of 1825 led to sweeping bankruptcies and unemployment, causing a massive public panic; it was the first of its sort to prompt political authorities to reform the financial system to put the brakes on what was perceived to be excessive risk taking. It beefed up the regulatory role of the Bank of England and established some norms governing public debts. The key was, as Larry Neal has shown, coming up with systems to reduce uncertainties by bolstering public accountability and enhancing the freedom of circulation of information in the emerging public sphere (Neal 1998; Hilton 1977; Marichal 1992, pp. 22–32).

If the public sphere was a setting for legitimating and stigmatizing legal and rogue business, separating the licit from the illicit, news was especially incendiary when it was about the pernicious influence of foreign affairs on domestic happiness. Few issues got the public more incensed than the handling of public debt, especially when it entangled foreign powers in national affairs. For instance, in November 1884, as the presidential term of Manuel Gonzalez came to a close, Mexico broke into a legitimacy crisis over foreign debt, specifically obligations to British creditors dating back to independence. By the 1880s, what was known as *deuda inglesa* was still highly politicized since President Benito Juarez's suspension of payment on debts in 1861 had been used to justify intervention and the subsequent French imposition of Emperor Maximilian (Villegas Revueltas 2005, p. 259). The Gonzalez administration sought to shore up its reputation by recognizing the debt to the British that dated back, in some form, to independence. With the help of Swiss financier Edouard Noetzlin—and at some cost to national coffers—Mexico planned to settle its debts, resume friendly relations with Britain, and open the channels for European capital necessary to finance the economic program of returning President Porfirio Diaz. But confidence abroad could run afoul of domestic legitimacy. An active press leaked details of the deal months before the Chamber of Deputies would vote, sparking outrage among citizens who took to the streets and marched to the legislative chamber. Mexico's public sphere seethed with outrage. Protests led by university students continued throughout Mexico City for weeks and were violently repressed by state police forces, resulting in at least 18 civilian deaths and many injuries. In the Chamber of Deputies, members of the opposition railed against the deal before the general public, intensifying the “democratic proximity” between the people and politics with every word. As the press covered the minutia of each debate, it channeled the instruments of communication constructed for capitalist markets to shape

public opinion about popular sovereignty. Meanwhile, several notable professors, lawyers, and intellectuals defended the English debt deal by calling for reason and casting doubt on the representative nature of public opinion amid shouts from the observation gallery. When the new government of Porfirio Díaz took control, it immediately touted measures to curb public voice (Bulnes 2008; Piccato 2010, p. 105).

This story from Mexico was not an outlier. Scandal, fear, and anxiety about distant affairs were staples of an increasingly global public sphere and interconnected markets. Here was a case in which the logic of global investors ran headlong into the activity of the national public sphere as Mexico's elites sought to integrate the republican economy into the world market. And for the rest of the century, as with so many debtor clients, there was a trade-off between national legitimacy and a model of access to global capital and a new type of investment aimed toward economic development and growth. In June 1885, President Díaz finalized the agreement on English debt through executive decree and began a cycle of constraining Mexico's public sphere that would last for the next 25 years (Villegas Revueltas 2005, p. 222).

5 Age of Empire

If political economy and the public sphere were normative responses to *ancien régimes* of the eighteenth century, they got repurposed as empires reformulated markets and media in the nineteenth century. The liberal age of free markets and the competitive scramble for information and news also saw empires, from Japan to Germany, reach their acme. Indeed, the classic age of liberalism was an imperial one in part because it was through empire that liberalism became the dominant ideology worldwide for market integration and the autonomy of the public sphere. Just as important, it was through imperial entanglements that liberalism had to contend with resistances and disenchantments with markets and bad press and civic activism directed against the ruling model. Abstract works of political theory and private wants were part of the war over how empires partitioned and governed the world. "Civic imperialism" (to borrow Duncan Bell's term) underlay the way in which the British public came to understand the frontiers of settlement, as well as the dangers of corruption and capitalism both far and near. The idea of a patriot queen, like Victoria, got burnished as the defender of the "mother country" doing good things like spreading markets and money around the planet while making sure that the rulers of empire stood at the

ready to defend the constitution and the imperial nation whose fate was increasingly identified with grandeur and gain abroad (Osterhammel 2014, p. 392; Bell 2015, pp. 160–163).

As more and more historians of liberalism are showing, the universal claims about liberty were carried on the backs of empire, for it was empire that spread markets and private property. Empire also compelled liberal thinkers to address the exclusions that soon came with ruling others. Mill, de Tocqueville, and others had stoutly defended empire, and by the 1880s, civilizing self-confidence was reaching high-water marks. Pluralism and liberty at home came to contrast with inequality and illiberty abroad. Indeed, more and more “strange” cultures such as India had to be imagined as backwards, or childlike. In some cases, as in Algeria, de Tocqueville noted the complete absence of any possibility of a civil society or public sphere without French empire, for it would “fall back into the hands of the Muslims.” France could follow the English model of India and subordinate the local inhabitants directly or indirectly, or it could—as he advocated after marveling at the effects that the open frontier had on the public sphere in America—follow the example of the USA and “replace the former [who have disappeared from the stage] inhabitants with the conquering race” (De Tocqueville 2000, p. 61; Singh Mehta 1999; Pitts 2005).

It was in this fashion that empire came to be seen as the main mechanism that allowed markets and the public sphere to continue to expand, for expansion was the key to resolving the tensions between them—creating open frontiers and shared conquering spirits to legitimate the virtues of liberalism at home.

As the elements of liberal-imperial ideology fanned out, it ran into increasing resistance and opposition—whose spectacle led to important reflections on the nature of world market integration. Karl Marx would pen some notorious reflections on the power of capital to transform the world in a series of newspaper articles on tensions in India in the 1850s. John Stuart Mill did exactly the same thing, but gave it a positive spin—as heir to his father’s position as Examiner for the East India Company (cited in Ledbetter 2007, pp. 212–260; Stedman Jones 2016, pp. 314–374).

Once news and events about distant places conveyed a sense of globally straddled interests, supported by international networks of reportage, a global public sphere took shape. It conjoined the ripening ideas of political economy and the autonomy of market forces with a spreading vocabulary of rights and obligations. Behind all of this was spreading literacy and empires of readers. By 1914, some European and North American countries were approaching almost universal male literacy. Japan, after the 1868

Meiji Restoration, made the leap from feudal education to near universal male literacy in two generations. Even colonial regimes, such as India, saw the proliferation of schools, colleges, and universities. Achieving the spread of education required conceiving it as a public good backed by intruding, reformist states. Where states were relatively weak, educational reforms lagged. And so did literacy. The causes of the weakness may have been internal (the power of sacred authorities) or external (predation by empires). The story of China and the Ottoman Empire was of halting progress. In Iran, the second largest non-colonial Muslim country in the world, the *ulama* retained their absolute grip over schools. All three were unable to overcome the obstacles to state formation, and the toll on schools was clear by 1900. One of the ironies was that new readers could digest the world's news; they could also more easily follow instructions on how to use weapons that would prove so lethal with the outbreak of world war in 1914 (Osterhammel 2014, pp. 788–798).

On the heels of the spread of imperial readership would follow the spread of higher education from the hearth in Europe and the Americas. Indeed, they were often the legacies of American and European missionaries. The University of Tokyo (re-baptized as the Tokyo Imperial University as part of a wider imperial network in 1886 after the Congress of Berlin carved sub-Saharan Africa into different European possessions) was the brainchild of Protestants and the Meiji state. The Imperial University of Peking followed in 1898, and an Imperial University was re-founded in Istanbul in 1900 after many fitful years of reform. Within these imperial university structures, there would soon be a drive to institutionalize western social sciences, including economics and sociology, very often starting out from the incubi of the law schools, breaking away from professional moorings to become bounded disciplines (Axtell 2016; Osterhammel 2014, pp. 798–808).

While markets fused and forms of social knowledge increasingly flowed into disciplines in universities, there would soon constellate a globe-spanning debate about the nature of the world economy and the limits of privilege. The debate would reveal the ways in which questions about empire would entangle political economy and the public sphere through rival conceptions of freedom—including the freedom to trade, to invest, and to work. It was also the stage upon which anxieties about what it meant to live in an interdependent economy played out, and it would shape popular as well as academic conceptions of political economy.

For some, economic integration had moral implications, as European, American, Brazilian, and Japanese expansionists set out to conquer new

lands and peoples in the name of bringing resources into private use for public good—if not religious and racial redemption. The idea of the *mission civilizatrice* had an ancient Christian taproot. But it got scientific legs when used to explain global, racial, hierarchies and to justify the ways in which new imperial rulers remade their possessions along scientific lines. Imperial reformers in India, Africa, and the Dutch East Indies invented a new politics of rule inspired by the ethnologist Sir Henry Maine, who partitioned people into two systems: one governed by territory and custom, that is tribes, and another by history and law, that is societies. It was up to the latter to tutor, if possible, the former into the ways of advancement. Maine, already a noted jurist and founder of the magazine *Saturday Review*, became part of the India brain trust and spent years in Bengal accumulating insights on to property in Punjab and Hindu marriage practices. These became the bases of administrative manuals and pioneering ideas of village life, premises for an enlightened way to govern distant colonial peoples (Mamdani 2012). Few used the pulpit of the public sphere to convey this message more than Rudyard Kipling. Kipling's most epic statement came in reaction to the USA's war against Spain in 1898, and its aftermath. The conflict was hugely controversial, and anti-war agitators called for an immediate return of US troops, especially from the Philippines. To bolster Yankee determination, Kipling penned an ode to imperialism with a humanitarian face, "The White Man's Burden." It would become a staple of western view of the Orient, often called "Orientalism."

Take up the White Man's burden,
 Send forth the best ye breed
 Go bind your sons to exile,
 To serve your captives' need;
 To wait in heavy harness,
 On fluttered folk and wild—
 Your new-caught, sullen peoples,
 Half-devil and half-child.
 (cited in Said 1979; Scott 2011)

Ever since, images and tales of global wealth mobilized great thinkers, writers, as well as opportunists, in exchange and argument about economic interdependence. They crossed the porous frontier that separated private accumulation and public legitimacy.

Indeed, the moral argument was made that with empire came a duty to promote a different kind of mandate, one to eradicate slave labor wherever it endured—and especially wherever imperial investors breathed new life into an oppressive form of exploitation. Just as muckraking journalism fueled a vision of spreading Satanic mills in the Midlands and mill towns of Pennsylvania and slaughterhouses of Chicago and Buenos Aires,

so too did reporters and commissioners reveal the wrongdoings of capitalism. Take the case of rubber extraction from the Congo. The International Association of the Congo, founded in 1884 by the Belgian King, Leopold II, was recognized by other European powers as the framework for uplifting and integrating Congolese into commercial benevolence. The King's only goal, putatively, was "to open up to civilization the only area of our globe which it has not penetrated" (Inglis 1973, p. 22). Within a decade, Leopold had turned the region into his personal colony; profits overwhelmed philanthropy. In response, Roger Casement would emerge as an emerging archetype of the public sphere, its global reach, and the way it shaped political economy. Casement teamed up with Edmond Dene Morel, the former clerk of a Liverpool shipping company who'd probed into the Free State's accounts to find evidence of rampant abuse, and thereafter became a tireless publicist of the cause to strip the Belgian King of his possession. Casement authored a devastating report in 1904, which pulled the curtain back on atrocities in the Congo and a new kind of African slavery on African soil to benefit a charmed few Europeans, like the King of Belgium. It created a template for reporting the "truth" behind the workings of the world economy, a prototype for official and semi-official truth commissions and activist reportage of our day. What ensued was a broad-based social and diplomatic campaign to put pressure on the Belgian parliament to strip the emperor of his colonial clothes (Morel 1906; Hochschild 1999).

Sometimes, cross-border reportage about the economy could also help bring down regimes while exposing wrongdoing. In 1911, John Kenneth Turner prefaced a collection of his articles called *Barbarous Mexico*. It cautioned US readers. Thirty thousand US troops stood on the border with Mexico at that moment, he warned. Sent by President Taft, these soldiers represented a threat of intervention, a counterforce to the unfolding Mexican revolution, even as they contradicted the "traditions of political freedom upon which this country is based" (Turner 1910, p. 5). On the other hand, Turner was also cataloging the horrors of Porfirio Diaz's political and economic system and, like Casement, implicated the imperial power. Turner not only painted an ugly picture of coerced labor in faraway parts of Mexico, but also reminded readers of their own part in the system that allowed and incentivized those very exploitative labor practices, both through individual consumption and through national policy. "For the horrors of Yucatan and Valle Nacional, Diaz is to blame, but so are we;" Turner wrote, "we are to blame insofar as governmental powers over which we are conceded to have some control are employed under our very eyes for the perpetuation of a regime of which slavery and peonage are an integral part" (Turner 1910, p. 102).

Turner's initial calls for protest based on civic democratic duty gave way to calls for action founded on collective responsibility in the realm of political economy. Politicizing everyday consumption by linking it to coerced labor in Mexico cast Americans as participants in Diaz's economic system both as consumers and as US citizens. What followed were the articles that comprised *Barbarous Mexico*, published serially beginning in 1909, in which Turner attempted to harness existing channels in the US public sphere to effect change across the border. Questions about coerced labor in Mexico were already circulating in the US, but these were concerns about competitiveness and threats to the US labor market. Turner's arguments activated a sense of outrage latent in the US public to reframe the problem of labor, expose the risks and pitfalls of capitalism, and most importantly, spur action against the Diaz regime.

This was the wider global setting in which political economists framed their understandings of the world market and state policy. As global wheat or rice prices had profound influences on the welfare of millions around the planet, "economists" took note. The Minnesota-born Thorstein Veblen—who would go on to fame for coining terms like "conspicuous consumption" and "invention as the mother of necessity"—would reflect on the plight of mid-western wheat producers and the depression of the 1890s. While Frederick Jackson Turner shocked fellow historians gathered at a congress in Chicago in 1893 when he announced that the open frontier was closed, Veblen pointed out some uncomfortable truths about the fate of farmers locked in a vicious cycle of harvesting more wheat to compensate for falling prices. Globalization had brought prosperity to hinterlands, but it also brought perils. Veblen's ruminations also marked the arrival of a new platform for a new age—*The Journal of Political Economy* was just the kind of venue to circulate a new breed of social scientific knowledge about and for the world (Veblen 1893).

By the turn of the century, as the tales of creditor abuses and unfree labor circulated in the European public sphere, more and more political economists observed that there was a relationship between the development of capitalism at home and its expansion abroad. The debate about empire soon conveyed self-described economists onto the wider public stage. Consider the reformer economist John A. Hobson, who had cut his teeth thinking about industrial production, Say's Law (the notion that supply could generate its own demand for commodities), and underemployment. He became a more household, English, and eventually global name after he returned from South Africa, having been dispatched by the *Manchester Guardian* to report on the Boer War. At the time, he was laboring on a theory of under-consumption and a

critique of David Ricardo's classical theory of rent. His eyewitness accounts and his craftsmanship at tabulating trade and financial statistics put political economy into the public domain in the form of the highly acclaimed—and criticized—*Imperialism: A Study* (1902). In that work, he explicitly connected the amount of money that taxpayers were forced to subsidize colonies with the private rewards to a handful of imperial businessmen whom Hobson labeled “economic parasites” (Hobson 1902, p. 51). The book's connection between under-consumption at home and surplus capital to be splurged abroad in ventures that had to be subsidized by treasuries would go on to influence Marxist theories of economic integration and imperialism and become one of the most influential, if debated, works in the history of political economy. It would also be a cornerstone for Hannah Arendt's later critique of authoritarian regimes.

6 The Consumer-Citizen

Broadly speaking, the twin-born concepts of political economy and the public sphere, the intellectual progeny of global economic integration, coexisted and reinforced each other; economic integration yielded insights into the workings and setbacks of the market, while the notion of an active public sphere produced resistances and pressures that highlighted the market's failures or disappointments—and spawned rethinking among political economists.

The liberal era was, thus, one of generally complementary dynamics so long as they were premised on the expansion of the global marketplace, the possibility of settling new frontiers with tired and huddled masses, and of sending forth excess capital into distant ventures. Empire was, as Duncan Bell has aptly noted, a kind of dream machine for a liberal synthesis. It was a crucible for political and economic thinking—among liberals and Marxists alike (Bell 2015, p. 19).

It may have worked like a dream, but the tensions between what was going on in the market and its representations in the public sphere pointed to divergent ways of handling interdependence; but, aside from a few cranks, there was little within the corpus of liberal thought that considered the possibility of ruin by one side or the other. At the margins, voices could be heard warning of the mutually destructive properties of integration. For Marxists, capitalism was ratcheting up the explosive potential of the division of labor. But as the turn to thinking about imperialism suggested, Luxemburg, Lenin, and others were starting to realize that the global scale of

capitalism helped defuse the contradictions at the heart of the industrial revolution. For conservatives, meanwhile, the spreading commodifying social relations invariably destroyed social bonds and dissolved the orderliness of the gentlemanly world that Habermas associated with the bourgeois features of nineteenth-century market life in favor of unbridled avarice and mass consumption (Hirschman 1986, pp. 105–141).² But it is important to note that there was little before 1914 that cracked the fundamentals of the liberal synthesis of the market for the acquisitive individualist prized by the emerging field of political economy and the public sphere touted as the arena for resolving the public good. At its best, the synthesis argued, the market's spreading of consumption and the public sphere's promotion of causes did not so much pull capitalism in opposite directions; rather, they produced a necessary tension that corrected any tendency to favor one over the other. That, after all, was the liberal faith, and why Habermas and market ideologists have tended to look back on the nineteenth century with some intellectual fondness, not to say nostalgia. One who warned that the dream might be an illusion was Normal Angell. In 1910, he warned that the great powers were so economically interdependent yet bent on rivalries stoked by nationalism and populism that a conflict between them might be catastrophic. By August 1914, his *The Great Illusion* had sold over a million copies in 25 languages (Knock 1993).

But if there was nothing within the core of the liberal synthesis, there were some, like Veblen and Hobson who did point to some emerging problems in the way that liberalism had conjugated the relationship between market integration and the autonomy of the public sphere. By 1914, there was rising concern about financial instability and the rise of underlying inequalities within and across societies. The issues enlivened political economy and the public sphere, and ensured that the lines between them got constantly blurred. If liberals had once imagined that integration would dissolve *ancien régime* ways of state meddling and create autonomous domains of private pursuits and public good, the ideal never quite materialized. There was not only repeated intrusion of the public sphere into the market, but the market kept erupting with problems that became matters of public policy.

A solution to the problem of the unstable divide, Albert O. Hirschman has argued, would be to create a new ideal type updated for an age of mass consumption: the consumer-citizen, the hyphen combining the shopper and the voter into a single agent delicately balancing rival urges and complex

²Hirschman has likened this to two “rival views” of market society.

needs. By the end of the nineteenth century, modernizing societies saw frustrated consumers take their disappointments to ballot boxes, turning issues like whether to stick to the gold standard into the fuel for rival parties. Opinion-makers and politicians, meanwhile, preyed on the nerves of market-dependent citizens. Thus was born the image of “populism” as a creed of politics that pandered to less than virtuous drives—and threatened the machinery of capitalism at its moment of triumph. Old misgivings about the tyranny of the majority and irrational masses now acquired a whole new meaning. In the past, the fear was of pre-capitalist peasants or artisans attacking the public purpose of governments; now, it was the very people that capitalism created that posed the threat, which grew all the more ominous as, Hirschman reminded us, people turned to more and more durable goods to satisfy their wants. Disposables were never supposed to yield high satisfaction quotas; they were as “disappointment-resistant” as they were perishable. Bad food or soap never elicited the kind of outrage that bulkier, more expensive, and more durable goods do when they break down before they should—or don’t turn out to be quite as shiny in real life as in the glossy ad. The flip side was that governments themselves increasingly had their legitimacy measured by the ability to help the private consumers satisfy their personal wants (Hirschman 1982).

7 Between Warfare and Welfare

What catalyzed the shift to the idea of the consumer-citizen was, however, not inequality of financial turmoil—it was war. According to Charles Tilly, “citizenship rights came into being because relatively organized members of the general population bargained with state authorities for several centuries, bargained first over the means of war, then over enforceable claims that would serve their interests outside war.” It was a long time coming, in other words. But the heightened activity in the media and the global nature of war extended the pattern of claims making worldwide (Tilly 1998, p. 57).

The effects of world war were too numerous and complex to catalog here. But in a now-classic study, Theda Skocpol has illustrated the ways in which warfare created a new set of demands, from veterans’ pensions to maternalist welfare rights. It was not just a coincidence that it was during war that the world saw the first cascade of drives to enfranchise women as a means to legitimate war-making efforts; the quid pro quo was to inscribe degrees of health education, labor regulations, rationing basic goods, and social spending to protect women, children, and veterans. War, in effect, intensified

associative activity and agitation in the public sphere while at the same time imposing scarcities and shortages and uncoupling the trade links forged during the long *belle époque*. In various degrees, warfare had profound welfare effects on the balance of political and private affairs; but it also led to justifications that the new balance would support and stabilize mass consumption in market societies and created a new way for citizens to press their claims—that governments were duty-bound to protect their consumer rights. It also therefore created new ways in which the state got summoned to manage the market and spend on social services (Skocpol 1993; Eisner 2000).

Like the earlier liberal synthesis, the new synthesis of the consumer-citizen was a balancing act that would have to endure repeated shocks, not least the blows delivered by the unemployment and misery of the 1930s. That crisis would in turn herald a full-blown anti-liberal turn toward authoritarian solutions of various stripes. But there was also some concern, even before 1929, that the era of the consumer-citizen presented stresses that neither the public sphere nor the marketplace could resolve.

One who captured the tensions between the political economy and the public sphere was John Maynard Keynes. His *Economic Consequences of the Peace*, written in the summer months of 1919, looked back on the golden age with an eye to its fragilities. Integration had brought wealth and disparity: “The railways of the world, which that age built as a monument to posterity, were, not less than the pyramids of Egypt, the work of labor which was not free to consume in immediate enjoyment the full equivalent of its efforts.” Note the accent on uneven consumption, which we will return to shortly. Then came the Great War—what Keynes called “the consumer of all such hopes” of spreading the delights of consumer-citizenship more widely. And finally came a Treaty—the recipe for a Carthaginian Peace—which was a direct pandering to the manufactured public lust to strip Germany of its assets and make the former enemy pay. “The man in the street,” moaned Keynes, is now prepared to believe anything which is told him with some show of authority, and the larger the figure the more readily he swallows it.” The net result was a dangerous concoction of crippling Germany, once one of the economic pillars of an integrated European trading and investment system, and a dependence on the USA’s continued lending to keep allies and former adversaries afloat enough to pay off their old and new debts. So, to the internal maldistribution of wealth and the envy it stoked got added “a precarious equilibrium”—and dependence on US financiers. So it was that the “paper shackles” of debt and the caprice of public opinion got fused. As many would note after 1929, when the Wall Street Crash reversed the flow

of capital from New York to Europe, Keynes had been prophetic (Keynes 1971, pp. 19–21, 205).

Economic Consequences of the Peace became a runaway best seller, ironically stoking the very public opinion for which Keynes harbored such low esteem. Within six months, it had sold 100,000 copies and would go on to be translated into a dozen languages and infuriate French readers for appearing to exonerate Germany for its sins (and it would also be used by Hitler, later, for justifying his own fury at the terms of the Treaty). As a symptom of the crisis it was trying to explain, Keynes' diatribe was not the only tract to argue that the public sphere had turned from a base of support for market society to its great destabilizer. The American journalist, Walter Lippmann, launched a campaign in 1919 to professionalize the practice of journalism and to rescue the reporting of facts from the abuse of opinion. In 1922, he published *Public Opinion* to warn against the damaging effects of runaway individualism, greed, irrationality, and the perversions of passion in the public sphere (Lippmann 1922).

If Lippmann was anxious, many thinkers grew downright despondent after the breakdown of the world economy following the Wall Street panic of 1929. As governments responded to the financial crisis with a combination of monetary orthodoxy and protectionism, world trade tumbled, prices plummeted, and country after country abandoned the policies and principles of the integrative model of the nineteenth century. Economists were left scrambling for new coordinates. The rise of demagoguery and authoritarian politics, buoyed by new mass media of the public sphere, seemed to confirm the worst fears of the pessimists. Global disintegration stripped what was left of the hope that the market and the free public sphere could be allies of progress.

Across the ideological spectrum, the triumph of consumer-citizenship seemed an expedient doomed to wreck either the health of the public sphere, the virtues of the marketplace, or both. With the electoral triumphs of tyrants in Italy, Germany, and hard-line segregationists in the southern USA, one influential circle of theorists at the Institute for Social Research at the Goethe University Frankfurt (created in 1923 and eventually known colloquially as the Frankfurt School) wondered whether mass consumer society was condemned to drive itself away from the age reason into a kind of dystopian darkness, in which the zeal to acquire eclipsed all civic virtues; shopping did nothing to solve alienation and only mystified it; the public sphere, meanwhile, operated in a way to distort and misrepresent real-world happenings, and thus to legitimate and justify capitalist

oppression. The view reached its acme in Max Horkheimer and Theodor Adorno's grim *The Dialectics of Enlightenment*, published in the summer of 1944, which excoriated "mass deception" of the culture "industry." In a typically dark passage, Horkheimer and Adorno noted that "men pay for the increase in their power with alienation from that over which they exercise their power. Enlightenment behaves towards things as a dictator towards man" (Horkheimer and Adorno 1972, p. 9; Jay 1996).

It was from the wellsprings of this pessimistic view of mass consumer society that a later generation of Frankfurt thinkers, like Habermas, would re-examine the de Tocquevillian roots of the nineteenth-century order to revalorize the normative attributes of the public sphere and rescue it—to some extent—from the prevailing gloom and decline.

While commentators mourned the passing of a civic-mindedness, others worried about the ways in which the warfare-welfare state brought the curtain down on the other element of the liberal synthesis: market life. Undoubtedly, the most successful Jeremiad along these lines counterposed the growing euphoria for centralized planning, among socialist and non-socialist societies alike, with the elegant, if doomed, marketplace. The work was Friedrich Hayek's *The Road to Freedom*, published the same year as Horkheimer and Adorno's *Dialectics*. The two provide a good illustration of the sense of conservative and radical dismay about the fate of mass society. For Hayek, however, it was not the end of the normative conditions of the public sphere that was the source of the tragedy, but the "abandoned road" of laissez-faire capitalism. Nor was there any real alternative. The warfare-welfare state had gained ground after 1919. Even in Anglo-America, which was slower to embrace the centralized certainties of planning, the market was giving way after 1931. Yet, "even by then they had moved so far that only those whose memory goes back to the years before the last war know what a liberal world has been like," he moaned (Hayek 1944, p. 15).

The uplifting promise of Mill's vision of human improvement by commerce had tumbled into an ever-darker view of the relationship between the market and public life. The University of Chicago economist, Frank Knight had called the breakdown of markets in the 1930s a moment of "unmeasurable uncertainty"—the kind of risk that was so radical as to undermine all confidence in prediction, bereft of a model of the future. In the depths of the Great Depression, the recently elected US president, Franklin Delano Roosevelt gave his "Fear Itself" speech in his inaugural address of March of 1933. He minced no words. The causes of the "dark realities of the moment" were entirely man made. The main malefactor? "The rulers of the exchange of mankind's goods have failed, through their own stubbornness and their own

incompetence...Practices of unscrupulous money changers stand indicted in the court of public opinion, rejected by the hearts and minds of men.” The old principles of political economy and the monied men who’d reaped the harvests belonged to the past. The president urged Americans to find a new deal a moral equivalent to war; seen in the darkened shadows of Hitler’s rise to power in January of that year, FDR’s injunction to reconcile capitalism to democracy to save both of them required new coordinates between political economy and the public sphere (Katznelson 2014, pp. 35–36, 196).

The New Deal rhetoric drew upon global influences. We now know that Roosevelt and his brain trusters monitored the welfare policies being hatched in fascist Italy and Germany. Big plans unhatched in the Soviet Union also inspired similar models in the USA—in the form, for instance, of the Tennessee Valley Authority—and Brazil—in the form of the giant Volta Redonda steel mill. Though it seemed as if states were retreating from the global trading and financial system, their leaders systematically borrowed and learned from each other. The fuller effects of this global exchange of ideas and models of welfare and state regulation would only come to fuller view after 1945 (Patel 2016).

But until then, nothing confirmed the ways in which the older liberal synthesis had given way to a new synthesis of collapse than the way states handled the crisis of 1929. Faced with rising protectionism and competitive devaluations, dozens of envoys convened at the London World Economic Conference in the summer of the “Fear Itself” speech. Fittingly set in the Geological Museum, the idea of restoring the open-market liberal pact and the sanctity of stable money got demolished by FDR himself, who denounced the cult of currency stabilization at the expense of suffering citizens. The outcome confirmed the impossibility of cooperative solutions to shared problems so long as public opinions had so clearly favored nationalist solutions to a global crisis. The Harvard economist John H. Williams challenged policymakers “to discuss the problems in the spirit of experts rather than as representatives of national interests,” which of course presumed that there was now a fundamental break between the two modes of thinking about market life. In 1937, the American magazine, *The New Republic* ran a series of articles on “The Future of Democracy.” It began with the following introductory words: “At no time since the rise of political democracy have its tenets been so seriously challenged as they are today.” What appeared to spread disenchantment and fascism was the malaise of a failed, capitalist, world economy. The public despair about the end of plenty led to a political economy of national introversion and a withdrawal from the world market (Clavin 2013, pp. 84–94; Schudson 1981, p. 119).

Collapse and crisis re-connected the modes of knowing about private and public affairs, economic and political knowledge. It also gave social scientists a new mission, one that got channeled increasingly into the task of the expert. And the rush to produce expertise had the effect of segregating academic-disciplinary divides into growing economics and political science departments, even as the public functions of knowledge blurred them. During the 1930s and 1940s, the flow of “experts” back and forth between the academy and government grew. Keynes, once an outlier for his service at Cambridge and in government (starting, like so many other British political economists, in imperial commitments—in Keynes’ case in the India Office), became an emblem of professional, expert civil service. Governments’ need for economists to reframe economic policy was an important driver, as Peter Hall has noted, of the transformation of Keynesian writings and his *General Theory of Employment, Interest and Money* (1936) into a Keynesian school of thought. The rise of the first truly macroeconomic (a term popularized after the Second World War to denote the ways in which economic thinking had grown beyond studies of business cycles and money into a full-scale technical management of prices and output) worldview then bolstered an increasing distance of economic thought from other intellectual domains. Economic analysis, even as it became more engaged in policymaking, got hived off from sibling social sciences. Here was thought tethered to prescriptions, but which required immunity from external sources of knowing, particularly the messy world of politics, in order to keep the technocratic function working according to plan. Citing the Keynesian gospel, governments embraced counter-cyclical demand management. But in so doing, they created a canon for a discipline apart from others; economics began to resemble more engineering than a social science. And for increasing numbers of self-described economists, this was seen as a good thing (Hall 1989, pp. 3–26).

8 Trentes Glorieuses

Variants on the Keynesian gospel took full force at the end of the Second World War. They revived hope in the synthesis of the consumer-citizen, a subject able to balance private and collective urges, and thus to prevent runaway excesses of individual greed or communal conformity.

For all the efforts to specialize and separate economics from the rest, there was an uneasy balance between the market and public life. The growing welfare functions of the state, proclaimed in Roosevelt’s New Deal

and inscribed in Britain in the 1942 Social Insurance and Allied Services Report (also known as the Beveridge Report, named after the economist, William Beveridge, who echoed FDR's campaign against fear with his call for a war against "giant evils"—squalor, ignorance, want, idleness, and disease), expanded under the mantle of the war-making state. Once the Second World War ended, governments could wind down the war-making capacity and bolster the welfare-making side. The mid-century drive to create a new synthesis around welfare with social science experts employed for the enterprise was nothing less than an effort to re-dimension the contours of civil society, the public sphere, and national economies to strike a new balance between mass consumption and mass citizenship. What Keynes had pinned as the underlying source of turmoil in capitalism in 1919 got a reset by 1945, effectively soldering welfare to capitalism, the right to freedom from fear and want to the sustainability of market society. The function of the public sphere was crucial—as the avenue for manufacturing popular consent for, as Ira Katznelson has recently described it, a social revolution without violence (Katznelson 2014, p. 36).

In so doing, the equipoise of the consumer-citizen ideal shifted, but did not do away with tensions and blurring between the activities of consumers and the commitments of citizens. One of the implicit assumptions to technocratic demand management of the new Keynesian-welfare orthodoxy was that the task of the economist was to support the growing and stable consumption. And if the economist could deliver on that side of the bargain, other experts could focus on theirs, notably keeping the civic-minded political actor focused on the job of rebuilding a democratic fabric after the catastrophe of the 1930s and 1940s. Welfarism began the basis of a new pact in much of Europe, Japan, and North America, and the premise for what would be recognized by the 1970s as an age known as the *trentes glorieuses*, the thirty years of peace and prosperity, guided by macroeconomic fine-tuning of the market and management of public opinion and free press in the political arena. In practice, this was harder to keep balanced and separated than in theory. Upheaval in France and Japan in the late 1950s and rising tensions over war and civil rights in the USA all anticipated problems to come in the juggle between the political economy and the public sphere.

But where the tensions between markets and the public sphere found heightened expression was where they got attached to a commitment to economic development. The War's end not only released energy for welfarism, it also redirected institutions to the task of uplifting what would soon—in 1952, by the French demographer Alfred Sauvy—be called the Third World. It was there that the twin tasks of private pursuits and public purposes got

conjoined in a way that picked up on earlier challenges to global economic integration—the anti-imperial analysis we saw ripen in the thinking of John A. Hobson. It is important that the year 1945 not only brought an end to the Second World War, it ushered in a period of dismantling Japanese and European empires. Post-colonial societies therefore saw the *trentes glorieuses* as an opportunity not only to rebuild ties between new political subjects and new economic fortunes, but to refashion ties between the Third World and the rest of the world. An important ingredient to the development model was creating new conceptual and practical ties between citizenship and consumption. This was so because, as Jawaharlal Nehru proclaimed, planning for development in independent India was supposed to lift the population from misery *and* build a new democratic spirit. The idea was to foster a gradual transformation. Development, therefore, freighted more on the citizenship and consumer sides of the *trentes glorieuses* coalitions, while the institutions that sustained them were, basically, still works-in-progress. Accordingly, Nehru took a personal interest in managing both the organization of economic outputs and the management of democratic inputs, making social relations modern while legitimating a new order. Nehru's post-1947 projects for India echoed from India to Brazil. But they also ensured that while social scientists and experts got mobilized for the purposes, the dividing lines between the realm of the economy and the public sphere kept getting erased (Frankel 2009, pp. 149–200).

The world's most ambitious postwar development programs were sustained by the conviction that development would deliver prosperity, democracy, and a sense of common good by leading to fuller participation in global markets. Leaders in places like Mexico and India built their economic plans with enormous faith in planning. But, as they carried out these developmental programs, the state's relationship with the public sphere oscillated between performing public good and constraining any unrest that might disturb necessary foreign capital.

In 1943, President Ávila Camacho of Mexico created the Mexican Social Security Institute (IMSS) to provide health services and disability insurance for Mexican workers. This public institution not only linked welfare to work, but also prioritized workers in industries central to Mexico's large developmental program during this period, especially manufacturing, transportation, construction, and other heavy industry. IMSS enshrined rights guaranteed by the Constitution of 1917 in institutional policy and, several years later, took up residence in a prominent modernist building on Mexico's busiest avenue. The building's construction and IMSS hospitals' folkloric murals were part of Mexico City's mid-century transformation into

a laboratory of developmentalist experimentation (Davis 1994). The architectural models associated with development—often modernist—circulated globally but took on unique local shapes and styles in Mexico. The institute's powerful political and aesthetic nods to fundamental ideals of the Mexican Revolution—protections and assistance for the poor—also allowed the Institutional Revolutionary Party (PRI) to consolidate a strategic alliance with organized labor. By providing this channel for public benefits, the state could perform welfare—both for internal and external audiences—while avoiding other urgent social problems, such as land reform (Dion 2010). In the decades following the revolution, performing welfare made participation in the market economy more palatable as rebukes from the national and global public sphere grew more constant.

By the end of the postwar export boom, a wave of new industrialization focused on heavy industry had already begun to alter the social landscape, producing durable goods like cars for a growing Mexican middle class consumer base. Leaders believed that industrialization would lay the groundwork for national development. Mexico was “caught up in the embrace” of the war, benefitting not only from economic growth and industrialization but also from rising expectations of democracy, participation, and equality (Roxborough 1994, pp. 248–274). Experiments with Import Substitution Industrialization relied on more state involvement in the economy and were integrationist by nature—they required enough internal demand for domestic goods to sustain investments in industry. Stronger, expanding labor organizations argued for higher wages and measures that would address social problems and increase market integration. It seemed that development and an expanded public sphere could be mutually beneficial. A growing urban working class also meant more state interest in harnessing that base for political purposes. The *Confederación de Trabajadores Mexicanos* (CTM), founded by Vicente Lombardo Toledano in 1936, brought this increasingly influential sector of the public under the control of the dominant political party and simultaneously defanged its potential as opposition.

The postwar period was an open social and political moment for the global public sphere as the prestige of liberal democracy infused ideas about national and international cooperation. The aspirations of multilateralism engrained in the United Nations, Organization of American States, and Universal Declaration of Human Rights, for example, implied a new respect for the pillars of democracy and equality both within and among nations. But practice proved otherwise in this new global order, for instance, at the 1945 Chapultepec Conference in Mexico City where Latin America's role in the global economy as a supplier of commodities was decided, a disillusioning

development for leaders looking to further industrialize. As the gloss of multilateralism wore off, the requirements of political economy infiltrated public life. The state clamped down on labor mobilization to maintain good climates for investment and avoid disrupting flows of foreign capital. Repression reversed the gains of corporatist labor, more inclusive citizenship, and populist leanings that had accompanied the development programs. If a strong public sphere was deemed necessary for democratic life, a public sphere segmented by the mandates of the market presented new challenges for participation.

9 Forking Paths

We end on one example, taken from the global margins but which illustrates the delicacy of the balance between political economy and public life, between the market and politics, between consumption and citizenship: Argentina. There, the development crusade infused citizenship with consumption. It soon went off the rails and demonstrates the ways in which the balance of citizen-consumption could yield to instability not a new synthesis. Buoyed to power in 1946 by campaign promises to bring the bounty of mass consumption to the masses themselves, Juan Domingo Perón promised to humble the old elites and make the defense of a “dignified life” for all Argentines a cornerstone of his populist regime. For almost a decade, he used partial control over the media, street rallies, and popular clubs and associations to mobilize support for a “popular economy.” One of the cornerstones was to bring women into the political economy more fully as consumer-citizens through the pursuit of what the regime called “little economies” of household producers and buyers, from the respectability of domestic duties to the marketing of beauty products. The public sphere was also saturated with a campaign against the enemies of the new economic model—“speculators,” “monopolies,” and “egotists” who pursued self-interest and the expense of social welfare. Backing Perón’s model was a new coalition of manufacturers, planners, and economic experts, as in India and Mexico. But unlike India or Mexico, where the one-party states managed to keep the balance from spiraling out of control (at least until the 1970s), the Peronist Party could not. As Argentina’s developmental coalition splintered, the government became more and more repressive of both markets and the public sphere, until it was toppled in a coup d’état in 1955. The Argentine cycle, from ramped up consumer-citizenship on the backs of an activist developmental agenda to a military clamp-down, would anticipate a wider

failure to hyphenate consumption with citizenship in Brazil, Indonesia, and elsewhere (Elena 2011, p. 187).

As the development effort sputtered, social scientists got enlisted to help manage its transitions. Indeed, the very idea that there could be different stages, each requiring special policies and plans, became a dogma for what was called “modernization theory”—a brand of social scientific thinking that sought to stylize the process of development into different periods and sectors. Here too economists led the way in trying to manage economic growth in the peripheries in order to keep it from being overwhelmed by the out-sized claims of newly empowered citizens. Figures like the American Walt W. Rostow, the Polish-born Paul Rosenstein-Rodan, and the Argentine UN economist Raúl Prebisch were all committed to managing not just macro-economic demand, but the wholesale economic transformation from one model of accumulation to another. As they each learned, the job of keeping the economic plans insulated from the political purposes of the regimes that contracted them was all but impossible. Coups, civil wars, and unrest spread mid-way through what the United Nations had dubbed the Development Decade of the 1960s. By 1968, one political scientist, Samuel Huntington, tore the gauze off. Economic and social change, Huntington warned, could fuel expectations of the teeming masses in Asia, Africa, and Latin America and lead to more, not less, civilian impatience and radicalization. Unlike in western liberal or eastern communist regimes, development, by definition, unfolded in what he called “debile political systems.” Noting the escalation of insurgencies and violence (a five-fold leap from 1948–54 to 1955–62, according to his sums), the effort to uplift the economic fortunes of the poorest of the poor had instead drowned fledgling political systems. The results were, for Huntington, catastrophic. In contrast to the conviction that all good things go together, Huntington concluded that when it came to development, all bad things go together. What was needed was “an organizational imperative,” effective authority to tutor new political subjects out of their traditional ways before giving them new liberties. “In the modernizing world he controls the future who organizes its politics.” Many saw this type of argument as a justification for authoritarian rule (Huntington 1968, pp. 1, 4, 460–461; Latham 2000).

The *trentes glorieuses* also unraveled in the developed world, albeit in less dramatic fashion. The hyphen that connected the consumer to the citizen, fortified by the civic mobilization and common purpose of war and peace-building after 1945, saw the welfare system challenged and contested. After 1973, as growth rates suddenly stalled, inflation rose, and social conflict

which had been brewing through the 1960s spiked, the pacts that had been made in the 1940s came undone. The most dramatic breaks took place in the USA and Great Britain as new ideologies associated with a rollback of the state and deregulating markets took hold. But the same spirit also affected even die-hard welfarist regimes, which began to tinker with market-friendly policies. The shift can be traced to the growing fiscal pressures and disenchantments with technocratic rule. They also reflected the rise of new knowledge regimes lumped nowadays under the rubric of “neoliberal” social science, which offered new coordinates for thinking about personal behavior and political consensus—a shift we now know had deep, transnational roots, and began to converge across developed societies in the 1980s (Campbell and Pedersen 2014).

Two other important factors were at work to reveal a widening gap between market political economies and the public sphere. Both of them remind us of the backdrop of the role that world economic integration played and the media structure of the global public sphere.

The shape of the media landscape underwent profound changes. First, the scale expanded greatly, buoyed above all by the significance of commercial advertising (Croteau and Hoynes 2005, pp. 96–97). In constant 2004 US dollars, the total amount spent on advertising in 1950 was \$44.7 billion as compared with \$258.6 billion in 2003 (Croteau and Hoynes 2005, p. 49). Second, the number of options available to a news-hungry consumer, especially with regard to television but also in digital news, has multiplied exponentially. In 1970, broadcasters—the evolved form of the newspaper empresarios of the nineteenth century, were comfortably ensconced in state-sanctioned monopolies (or oligopolies as was the case in the USA). Starting in the 1970s, cable companies, satellites, and streaming services shattered television and print monocultures. Today, the number of channels available in the European Union increased from 47 in 1994 to 7200 in 2014 (though EU membership increased in the same timeframe) (Simon 2014, p. 35). And while the number of printed newspapers in circulation has decreased since the 1970s, online platforms have increased exponentially the number of news sources to which consumers can turn. The results were the fragmentation of reader audiences into niches, bound above all by their shared consumer preferences. But the fragmentation also coincided with global integration. While audiences broke up, fewer and fewer players took control of the resources needed to compete in a globalized media economy. Whereas media conglomerates previously focused on production and distribution within a *single* medium, beginning in the mid-1980s, they sought to own and operate all aspects of a range of media. Furthermore, worldwide deregulation and liberalization of media interests facilitated unprecedented

cross-border consolidation. None of these changes would have been possible without the various technological revolutions that have irrevocably increased the speed and decreased the cost of transmitting information. In the digital era, “[n]o news is national news any longer because it can be accessed from anywhere in the world.”³

As with the media industry, so with the rest of the economy. The structural transformation of the public sphere was part and parcel of a wider pattern of decontrolled markets, freer capital markets, greater cross-border commerce, and the development of elaborate supply chains which created a whole new model of interdependence between societies but more divides within them. De-industrialization of the Rhineland, the American rustbelt, and the manufacturing belt around the capital of Argentina was mirrored by the industrialization of Brazil, China, and South Korea in the production of goods for export markets. By the turn of the millennium, there was more and more concern that the number of have-nots was growing along with the wealth flowing to the haves. If the idea of the consumer-citizen and a unified political economy with a public sphere had buoyed the coalitions and compromises from the 1940s to the 1980s, by 2000, it was becoming increasingly more difficult to hold the parts together (Maier 2010, pp. 25–48).

This, in the end, would have intellectual effects on the contemporary social sciences. Faced with the shifts in the global structures of the world economy and the public sphere, it was rare to see bridges across disciplinary divides. Indeed, as Daniel Rodgers has chronicled for the USA (which was at the vanguard of disciplinary specialization), economics and political science and sociology grew as niched as the markets and publics they studied (Rodgers 2012).

The consumer-citizen was contrived as a balancing act. Each side of the hyphen offered outlets for private and civic activity, and each side was supposed to be, in its idealized form, a counterbalance to the other. Consumer interests and private pursuits were supposed to restrain any excessive drive toward collective, political goals. By the same token, an active civic spirit and vibrant public sphere were supposed to put a check on private avarice. This compromise, born of the tensions of global integration and conflict, was only sustainable as long as the institutions of welfare and development

³Zhou Xiao, “How Digital Technology Impacts International News Communication: From Integrated Cost to Power Structure,” in Judith Clarke and Michael Bromley (eds.), *International News in the Digital Age: East-West Perceptions of a New World Order* (New York: Routledge, 2012), pp. 60–74; David Croteau and William Hoynes, *The Business of Media: Corporate Media and the Public Interest* (New York: Sage, 2005).

could shoulder the burdens of both missions. By the mid-1970s, it was increasingly clear that the sense of common purpose born of warfare and decolonization was wearing thin. Citizens, as Robert Putnam memorably put it, were beginning to learn how to bowl alone (Putnam 2001).

This is not a terminal story. The divides never became absolute solitudes. Indeed, just as crises in previous historical conjunctures reset the relations between public and private pursuits, and summoned new modes of knowledge to address fundamental problems, it is clear that the new malaise with globalization and the model of prosperity for a few while leaving many behind is now being called into question. How social coalitions and social scientists will rise to the challenges will chart a new chapter in the history of the tensions and fusions between political economy and the public sphere.

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4

Politics and Economics of Markets

Craig Muldrew

1 Introduction

...our present situation is the unavoidable consequence of the spirit and manners of the present times; ...it is quite compatible with all the liberty, affluence, and prosperity, which any human society ever enjoyed in any age, or under any form of government[.] A people taught to expect from a statesman the execution of plans, big with impossibility and contradiction, will remain discontented under the government of the best of Kings. (Steuart 1767, p. xii)

Today, even after the collapse and state-led rescue of financial markets in 2008, there is still a strong widespread policy assumption that markets will produce the most economic growth and material plenty when they are most free and open to competition. The theory of market equilibrium has been central to the discipline of economic theory since the 1870s, which requires freedom of buying and selling to reach price equilibrium. The mid-nineteenth century was a period when free trade in the sense of reduced tariff barriers between nations was actually expanding. This was largely due to Britain and subsequently other European countries being able to use military superiority to open markets to their domination. However, this environment proved to be favourable to liberal politicians who were able to legislate for more competitive trade between countries such as the UK and the USA

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and then France (Findlay and O'Rourke 2007, pp. 387–396). World War I and the depression returned the world to nationalist protectionism and tariff barriers, and the post-World War II recovery and rapid economic growth were based on nationalist models of industrial production and consumption with strong state participation in the former to achieve full employment and social provisions such as healthcare pensions and employment insurance. The stagnating growth and continued wage and price inflation of the 1970s ended this statist model when faced with competition from Japanese industry which could produce better quality products for less cost. Since then, notions of post-war nationalist industry and services, and even the German idea of the social market with worker participation in management, have been argued to be less efficient by policymakers, and free trade has been promoted as offering efficiency, lower prices and inventiveness through increased competition. Free trade has also prevented national markets being held captive to poorly made or overpriced goods. It is further justified in terms of mutual advantage between countries with highly educated workforces which earn high wages to innovate and produce specialised goods, and low wage economies to manufacture the majority of cheaper consumer items. However, all the 'economies' between which free trade takes place are based in nations, and these are embedded within the political, cultural and social institutions present in those countries. As long as employment remained high and the price of consumer goods dropped, free trade policies were supported by electorates. Since 2008 such policies have continued, but in order to maintain employment while economic growth remained low, real earnings have been greatly reduced by inflation and the shift to self-employment or other arrangements which eliminate holiday and sick pay as well as pension and other employer contributions. In 2016, electorates in England and the USA voted for politicians who claimed that it was global, or European, wage competition which was the cause of such losses. It is too early to say how successful the current proponents of protectionism will be, but what can be said is that they are very wealthy, and do not see inequality, either within the nation-state, or between states, as a problem to be addressed.

It is arguable that political economy, paradoxically, has been a major contribution to the current situation because it has been morally and ideologically prominent in supporting 'non-political' solutions. There has certainly been a politics of markets, but rather than saying that markets need to be integrated into government and politics, the opposite was promoted. For extreme libertarians, this freedom should be absolute, as they believe markets to be self-regulating. Most governments, though, that have privatised

state enterprises, such as railways, or water and energy suppliers based on internal markets using the same infrastructure, have relied on complex legal structures of regulation. But, regulation remains problematic, as the complexity of the law means expertise has to come from the sector being regulated.¹ As Adam Smith warned over 200 years ago, regulatory capture is an easy way for merchants and tradesmen to create a market in which their profits are supported at the expense of other competitors and most damagingly consumers (Muldrew 2014, pp. 373–376).

How markets should or shouldn't be governed, and the value of international commerce to the emerging entity of the nation-state have been central points of discussion for political economy since the term was first coined at the beginning of the seventeenth century. After the promotion of industry, the role of freedom *to* trade and the role of monopolies were discussed in terms of *national* welfare. Trade and commercialisation were also discussed almost exclusively in terms of national *interest* until the enlightenment, when more utopian ideas of peaceful world trade were seen as *political* possibilities. How then did the political become divorced from the propensity to 'truck and bargain', in Adam Smith's words? Smith is often seen as the key figure in advocating free trade because of his stress on the motivating force of self-interest in bargaining. He was also critical of regulation, and especially so of the English Corn Laws which he thought inhibited agricultural innovation by controlling prices during bad harvests rather than supporting purchasing power. However, he saw his project as one of moral self-regulation more than government regulation, and he was as well known for the labour theory of value in the decades after his death as for his digression on the Corn Laws (Muldrew 2013, pp. 329–339; Stedman Jones 2004, pp. 3–5, 36–41).

A much more important milestone on the road to self-regulating self-interested markets came out of the huge intellectual debate in England at the end of the eighteenth and beginning of the nineteenth centuries concerning the problem of the vast expansion of poor relief as a result of rising food prices. It became the first period in which the term political economy entered into everyday national newspaper and pamphlet discourse as the question of what right the unemployed poor had to taxable wealth, and the extent to which the wages of those in work were adequate was discussed. British socialism developed in support of the labour theory of value, but a

¹Prem Sikka, the co-author of *Reforming HMRC: Making it Fit for the Twenty-First Century* in *The Guardian*, <https://www.theguardian.com/commentisfree/2016/sep/08/hmrc-thrall-big-business-tax-collection-labour>.

conservative position was also espoused by authors such as Joseph Townsend who developed a new competitive view of 'natural law'. Previous theories of natural law had argued from the 'natural' right of survival, that everyone had a right to defend their own existence, and thus a starving person could not be said to be acting immorally in stealing food from someone who would not share a surplus (Healey 2014, pp. 18–20). In contrast, the competitive view of natural law stipulated that, in a situation of competition for limited resources, the unsuccessful should naturally perish (Filtness 2013, pp. 41–47, esp., p. 46). Although this was developed from Malthus' ideas on population, he never presented his theory in terms of rights, simply inevitability if resources were overstretched (Filtness 2013, Chapter 3).

It was Jeremy Bentham, who in his attack on customary communitarian justice (which he saw as injustice), argued that moral choice had to be reduced to only an individual basis. He, however, disagreed with those who thought the poor should not be helped, and he believed people were free to act in charitable ways, but to compel someone to part with their wealth if they did not want to help the poor had to be decided on the basis of a calculus of individual happiness (Bentham 1907 [1823], pp. 3, 312–314). Political compulsion had no validity. Such an ideology became very important in creating the legal decisions which would lead to the doctrine of freedom of contract, and free trade, first with the repeal of the Corn Laws in 1846 and then eventually the move to support global free trade (Atiyah 1979).

In this essay, I will make the case that before this nineteenth-century turn political economy evolved in the sixteenth and seventeenth centuries as a means of dealing with the problem of overpopulation and lack of agricultural employment by advocating the benefits of market-oriented commercialisation to provide industrial work. This was further expanded as foreign trade and colonisation became seen as means to economic growth and specifically national wealth. Writers were generally strongly oriented towards the nation-state as the instrument of government to promote industrial policy, and most, although not all, authors thought that a surplus of industrial exports was the best policy to promote growth. The state which was most successful at implementing such policies was England and then Britain as Ireland and Scotland were merged into an Atlantic trading system directed through regulatory laws passed in the Westminster Parliament. This wealth enabled Britain to outspend its rivals in the eighteenth century, and with the victory over Napoleon, it was left as the only world naval power. However, before the era of the French Revolution, no author writing in English ever felt it necessary to coin a term for their advice on governance, for reasons which will be explained below. Although there were important early Italian

writers on the relationship between the state and economy such as Giovanni Botero, Bernardo Davanzati and Antonio Serra, this essay will focus on the strongest commercial states of the period after *c.* 1580, England, France and the United Provinces, and since the term was a French coinage, it is there that we need to begin.

2 France

The term political economy was first used by the French author Antoine de Montchrétien in the title of a work he published in 1615, *Tracté de l'oeconomie politique*. One history of early modern political economy dismissed it as a 'book of little merit apart from its title' (Hutchison 1988, p. 17). If one considers political economy as something progressing towards a more accurate form of 'scientific analysis' this might be correct, but it is certainly not unimportant within its historical context. Montchrétien was the son of an apothecary who was orphaned and went to college in Caen, but had noble connections and began his career as a playwright, and as such had a significant effect on the development of French drama. Despite his bourgeois parentage, he only became interested in thinking about economic matters after he was exiled from France in 1604. At that time, he went to England and then the province of Holland. In England, he became impressed with the surge of proposals and schemes by so-called projectors presented to James I and the Privy Council for the promotion of new industry and improvement (Thirsk 1978). Here, and in Holland, he was also impressed by the success of woollen cloth production (Montchrétien 1889 [1615], intro., pp. ii–xiv; Cole 1931, pp. 113–114). The *Tract on Political Economy* was a result of this and was intended to be advice for the monarch on how to promote industry in France, and as a result increased trade and exports. It also advocated industry as a means of employment for the poor. However, his tract was written in a florid style with many classical references and imbued with many fawning references to the importance of the monarchy, in contrast to the plain style of merchants writing in English. The author of the most systematic treatment of it called it a rather a rambling, discursive treatment of various phases of business, commerce and government (Cole 1931, p. 115).

The choice of the term *oeconomie politique* was, however, the result of very specific circumstances in France at the time. By the end of the sixteenth century, the devastating religious civil wars resulted in an outpouring of vernacular publications dealing with problems of governance and religion (Keohane 1980, Chapters 1–5). Montchrétien's usage was also influenced by

contemporary French linguistic practice which focused on the word police to refer to political management and administrative regulation to enforce ethics in a religious society. Louis de Turgot Mayerne, a more important and systematic thinker than Montchréstien, used the term to refer to both social and public order in the wake of the St Bartholomew's Day massacre in his *Tract on negotiating and trafficking ... the regulation and administration of a political chamber or bureau for merchants* of 1599 and in his more compendious *La Monarchie Aristodémocratique, ou le Gouvernement Composé et Meslé des Trois Formes de legitimes Républiques* of 1611. The term police was an interpretive translation of Aristotle's politics and referred to the conduct of enforcing rules and laws similar to the contemporary English usage 'to govern'. *Policie*, or *polices*, referred more specifically to the making of policy. Such ethical administration involved rules to support public order such as fines for quarrelling or swearing as well as economic regulation. It was meant to contribute to what was described as *bien public* or *intérêt public* (Nuspl 1998, pp. 176–179, 263).

Following other sixteenth-century humanist writers, influenced primarily by Cicero, Mayerne interpreted buying and selling on the market as one of the most basic actions of human communication and society (Nuspl 1998, pp. 176ff.; Muldrew 1998, pp. 132–140). But Mayerne did not believe such sociability was natural. He believed men had contrary desires and wills, which without the government of *police* would come into conflict (Nuspl 1998, p. 179). Thus, the regulation of markets to check on the quality of goods and the honesty of sellers, as well as regulations to prevent monopolies were a means of achieving harmonious social relations. Contract was seen as being very important, but in general rather than a strictly binding sense, which gave complete freedom to contracting parties. He included a passage in his tract on negotiating which stated that:

There is nothing in the world so ordinarie and naturall unto men, as to contract, truck, merchandise, and traffique one with another, so that it is almost impossible for three persons to converse together two houres, but they wil fall into talk of one bargaine or another, chopping, changing, or some other kinde of contract. ...all the world choppeth and changeth, runneth & raveth after Marts, Markets, and Merchandising, so that all thinges come into Commerce, and passe into traffique.²

²This translation is taken from John Wheeler's *Treatise on Commerce* of 1601, who translated it verbatim from Mayerne. Muldrew, *Economy of Obligation*, pp. 137–138.

He stated ‘mutual helpers’ were joined by a ‘contractual bond’ (Nuspl 1998, p. 183). He also advocated that contracts should, in fact, have to be registered with municipal bureaus to reduce what he saw as the increasing amount of lawsuits over credit (Nuspl 1998, pp. 194–197).

Mayerne heavily influenced Montchrétien and other contemporaries, but while the former focused on local municipal administration, the latter’s aims, given his loftier place in the social order, was to provide policy advice for the monarch. Thus, he stressed industry and the support of manufacturing as well as arguing that the establishment of colonies could be used to create captive markets for manufactured goods (Cole 1931, pp. 154–156). Thus, he took the word economic from the Greek notion put forward by Xenophon, to refer to the material management of a household by its head for the prosperity of its members, to focus on the absolute power of the monarch rather than the administrative function of police, although he certainly stressed the importance of police for the success of increasing the wealth of France:

All of this goes back to this point, that with regard to the State as well as to the family, it is good and very beneficial to handle men according to their particular and personal inclination. And considering the relationship between these two categories, regarding the question of usefulness, in addition to several other reasons which would take too long to explain, we can very correctly argue, against the opinion of Aristotle and Xenophon, that we could not separate the economy from the police without dismembering the principal part from the Whole, and that the science of acquiring goods, as it is called, is common to republics as well as to families. (Montchrétien 1889 [1615], p. 31)

By police, he meant state officers who would both guide and regulate commerce including markets, which encompassed negotiating the just price and trade. He was also in favour of free trade as long as it only involved the exchange of agricultural goods native to their respective geographies (Montchrétien 1889 [1615], pp. 38–39). Competition of manufactured goods like clothing was another matter, and overall, Montchrétien’s tone was one of extreme nationalist protectionism and as much self-sufficiency as possible. He argued strongly in favour of banning the import of English woollens, claiming they had learned their craft from French refugees, while the French industry stood idle after the disruption of war (Cole 1931, pp. 128–130). He especially argued that the English had high tariffs against French woollens and that France was foolish not to retaliate. But he also developed Mayerne’s idea that market exchange was natural to men by

adding that the hope for material or monetary gain through selling on the market was a fundamental aspect of human psychology (Keohane 1980, pp. 161–168):

Therefore, the most skilful, who have studied most carefully the book of common experience, have held that the diverse necessities which each individual senses strongly as pertaining to himself have been the first cause of general communities. For the most ordinary liaison between men, and their most frequent assembling together, depends on the help they provide for one another and the mutual offices they render to each other, in such a fashion that each is primarily motivated by his individual profit, as he perceives it, rather than by nature, the real prime mover here, of which he is unaware. So many efforts, so much labour of so many men has no other goal but gain. The circle of affairs reduces itself to a single point; the necessity of movement depends on this (Montchrétien 1889 [1615], p. 39; translation in Keohane 1980, p. 164).

This probably influenced subsequent writers including Smith, but Montchrétien developed it precisely to argue that the selfish dangers of such motivation needed to be controlled. Given such human nature, police was clearly needed to turn the pursuit of private gain into something of social utility. As a *paterfamilias*, it was the job of the monarch to create a policy which would aid each subject to do what they were best equipped for in terms of industry. Through the *souverain maistre de police* virtue, honour and utility would be fused together (Keohne 1980, pp. 165–166).

Such extreme nationalism was not the only theory about markets in France at the time. Jean Bodin, who wrote on trade before Mayerne or Montchrétien, was more liberal in the way he advocated the general advantages of different nations being able to trade with one another, especially for goods and resources not commonly available. However, in common with other French and English writers of the period, he thought that home industry needed to be promoted and protected from foreign competition to support the employment of the poor. As a result, he advocated that high import duties be placed on imports of foreign manufactured goods and low export duties on French manufactured goods (Cole 1931, p. 64). This was an early incidence of the campaign which occurred in both Catholic and Protestant states to promote industriousness as a means of creating work for the increased numbers of subjects resulting from a century of continuous population growth across Europe. Unproductive smallholdings, as well as unemployed migrants in towns, were labelled as forms of idleness all over Europe, and employment in industry was seen as the solution. This was the policy of the Huguenot Barthélemy de Laffemas, who became the head of

the Commission of Commerce set-up on Mayerne's model in 1602 which investigated which industries could be supported. He did much to support the establishment of silk production which eventually saw great success in Lyon.³

But it was the theory of police which was most compatible with the absolutist aims of Cardinal Richelieu and subsequent Colbertist industrial policy, although neither chose to employ the term political economy for what they were doing. Historians who have studied Colbert's economic policy have argued that he held to a very rigid view that international trade was a zero-sum game which France needed to obtain more of.⁴ But, more importantly, he created a Council of Trade by 1664 and a system of bureaucratic informers, the *Intendants*, who created many reports on the economic conditions throughout France. Industries were promoted, and numerous factories were built, and an industrial inspection service was established to control the quality of goods. In this way, a very real and powerful centralised administration was imposed on the production and manufacture of goods which continued to plan and gather huge amounts of data on the French economy until the Revolution (Parker 1979).

3 England

The term political economy did not become popularised in England or the Netherlands in the seventeenth century, despite the increasing proliferation works discussing economic matters in the modern sense, which focused on topics such as trade, industry, industriousness, labour, wealth, commonwealth, money, improvement, national interest and eventually happiness. The term would not regain fashion until the resurgence of French economic discourse in the enlightenment. Since the 'political' aspect of much of this literature focused on the role of the emerging nation-state in legislating and administering customs duties and monetary policy it has come to be discussed under the rubric of 'mercantilism', which is often caricatured as achieving national wealth at the expense of one's neighbouring nation. The term mercantilism was famously applied in retrospect in the early twentieth century by Eli Heckscher, in reference to Adam Smith's denunciation of what he termed the 'mercantile system', which he

³This commission, however, only lasted until 1604 (Cole 1931, pp. 80, 86, 93).

⁴However, this is based on a single letter to the king (Murat 1980, p. 133).

characterised as a set of state import restrictions on trade designed to keep gold and silver currency inside nation-states, which were subsequently used by privileged merchants to enrich themselves with the surplus value of small producers (Heckscher 1935, I, pp. 19–30). Recent work on mercantilism, however, has demonstrated that although trade and the role of bullion in enacting and maintaining state power in its vital role as a means of supporting armies in the field was certainly a significant topic of discussion, other factors were equally important (Stern and Wennerlind 2014). These included employment and colonisation as a means of enriching nations by taking people out of poverty and employing them in industry to supply goods to be sold on the market, and even more crucially to be sold abroad creating trade surpluses.

For various reasons, in both England and Holland, Montchrétien's absolutist *police*-based political economy would have been controversial, so terms like 'national treasure' and then 'national interest' or 'national happiness' were more common.⁵ But, as the term economy moved from being specifically liked to patriarchal household management, to referring more to matters of communal and national material well-being, then political economy makes more sense as a term for seventeenth-century literature than mercantilism since it was offering advice on all manner of government policy, not simply that favouring home merchants. The term mercantilism has stuck because of Adam Smith's powerful critique of how merchants used tariffs and other protectionist measures to enrich themselves, but there was much more to early modern economics than this. Employment was the primary concern of most writers, and ironically it would be better to relabel this literature as that of emerging political economy using, not Heckscher's synthesis based on Smith's criticism, but Smith's succinct definition at the beginning of Book IV of the *Wealth of Nations*:

Political oeconomy, considered as a branch of the science of a statesman or legislator, proposes two distinct objects; first, to provide a plentiful revenue or subsistence for the people, or more properly to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the publick services. It proposes to enrich both the people and the sovereign. (Smith 1976 [1776], Book IV intro.)

⁵However, Montchrétien used the word happiness quite often to describe the aims of policy (Montchrétien 1889 [1615], pp. 99, 147, 153).

But, whatever term we as historians choose, the nature of writing on matters of material wealth followed quite a different path in England during the late sixteenth and early seventeenth centuries than in France. While there were certainly many individuals, who made proposals to the government advocating the setting up of industries, which, it was argued, would benefit the nation by providing employment and earnings through increased exports, most of these were made in manuscript form to members of the Privy Council, or in Parliament. Many of these, such as the encouragement of attracting protestant refugees to work at promoting the new draperies, stocking knitting, or the growing of flax for linen production, have been described by Joan Thirsk (1978). Perhaps the most famous of such tracts, though, was Richard Hakluyt's manuscript entitled *Discourse of Western Planting* written in 1584, which set out arguments as to why England should aggressively pursue a policy of imperial colonisation in the Western Atlantic. Much of the tract was concerned with reducing or challenging the power of the Spanish empire. English colonies would potentially be a source of equal or better commodities, while also providing a platform for attacking the Spanish in the Western Atlantic. In one chapter he argued, from an economic rationale, that England could best challenge the strength of the Spanish, not by discovering equal amounts of gold and silver, but by 'planting' colonies of people on the Atlantic seaboard north of Florida to exploit resources such as timber, fish, tar, resin, animal hides and anything else of value. But he also argued that, as these colonies grew, they would provide new markets for English woollen goods and other things manufactured in England, thus putting the poor to work (Hakluyt 1935 [1584]).

In England, in contrast to France, the top-down Reformation did not lead to religious warfare, and certainly, after the Armada, the politics of anti-Catholicism became firmly established. Thus, the nature of 'economic' discourse was contextually very different to France. In addition, the English system of Parliamentary government meant that an administrative and legislative system already existed which was developed by Elizabeth as a means of securing royal power. The rule of the monarch in a Parliament of commons (formed of rural gentry, lawyers and some wealthy tradesmen and merchants) and lords was a system where statute law was made through discussion and passed by the Queen before being sent to localities for promulgation and administration. Such local administration was crucially done by members of the gentry rather than the regional nobles as a means of increasing the power of the central state and monarch over the regional power of the aristocracy (Fletcher 1986, Part II). The gentry were lesser landholders, many of whom had become wealthy by farming for profit and then buying

land to become rentiers. They administered the courts of England and Wales through the legal institution of the Quarter Sessions where they sat as magistrates who could judge non-capital offences and were meant to regulate an increasing number of matters both practical and economic, such as upkeep of roads, licensing of alehouses, wages and other matters dealt with by officers of the *police* in France.

As G.R. Elton demonstrated, the majority of bills introduced into Elizabethan Parliaments by members concerned economic matters. Many statutes in this period concerned economic regulation, and most of the work in creating such legislation was done by interested members of the House of Commons in committees. To cite just one example, the comprehensively detailed cloth making act of 1552 stipulated standards of quality and specified rules for cloth making in different districts, and throughout Elizabeth's reign, a further 28 bills were introduced to attempt to modify these stipulations (Elton 1989, p. 250). Other bills concerned iron production, leather manufacture or cap making. Import duties were also charged on competing foreign goods. Contrary to Montchrétien's accusation, Christopher Clay has argued that the English import duties were generally low, amounting to an average rate of about 5% before 1600 and not much higher afterwards. Customs duties were higher on some imported items, although the most heavily taxed goods were small-scale luxury imports such as combs. The most commonly consumed item was French wine on which an 80% duty was extracted, but this was not protectionist since the English did not produce wine (Clay 1984, II, pp. 212–213). Although the desire to enact stronger protectionist legislation was often mooted in the first half of the seventeenth century, especially by the Merchant Adventurers, after the failure of the Cockayne project, little came to fruition.

The Cockayne project of 1614–17 was organised by a London alderman, and clothier called William Cockayne, together with other projectors, and was sold to the king as a radical attempt to increase profits and employment by starting a dying and cloth finishing industry overnight in London. This involved government action to ban exports of unfinished English cloth and replace it with finished cloth which Cockayne and his partners promised to supply. When the old Merchant Adventurers protested, James set up a new company with the same name with Cockayne as governor. Unsurprisingly, the finished cloth produced was of a lower standard than the established continental industry had been able to achieve and did not sell well. In addition, the Dutch retaliated by

refusing to allow any imports of the new English cloth (Clay 1984, II, pp. 119–121). Thus, the project failed and had disastrous consequences for the export of English broadcloths, and the cloth industry struggled to regain foreign markets in the 1620s and 1630s.

The Cockayne project was a result of the other main aspect of English polity and debate, which was shaped by the nature of its Parliament and its relationship to the crown and Privy Council, which concerned the monarch's right to grant patents of monopoly. This was increasingly done, not for any economic reason, but to raise revenue for the crown. The monarch's ordinary revenue was covered by customs duties collected on trade, while the House of Commons had to vote extraordinary taxation to pay for warfare. But, as the cost of warfare increased, and the subsidies voted by the commons decreased in real value due to inflation, the monarchy looked to other means of raising revenue, and one of the most important of these was the crown's right to grant letters patent to form corporate bodies. During the Elizabethan period, overseas companies with monopoly trading rights were created with a legitimate economic argument, in that the merchants who formed the company needed to invest in diplomacy and translators etc. before any profit could be made and needed protection from free riders. But the search for more crown revenue led to what Joan Thirsk termed the 'scandalous phase' of the granting of monopolies in which many trades such as soap boiling, playing cards, music paper production and many others saw monopolies granted to individuals for large sums of money.

By the latter part of Elizabeth's reign, monopolies had led to opposition voiced in Parliament. This was based on common law rules meant to regulate local village and town grain markets to protect buyers from monopolistic manipulation of the market by larger farmers and middlemen who purchased grain. Such an opposition had strength because market regulation to ensure fairness and honesty in the quality and weight of goods and to ensure equitable competition within the social and geographical space of actual marketplaces had a long history in England. A free supply of goods was seen to benefit poorer consumers, and regulation was intended to ensure that this freedom was not abused. The main thrust of regulation against regrators, forestallers and engrossers, for instance, was not to prevent tradesmen and specialised middlemen from trading between markets, or selling in shops, but was rather to prevent individuals from attempting to raise market prices artificially by buying up large amounts of goods and monopolising local markets.

The ancient notion of the 'just price' based on small-scale local competition was used to underpin both the political and legal opposition to monopolies. As David Harris Sacks has shown, Aristotle's writings on justice were often cited, and monopoly, because of its private nature, was criticised as promoting personal gain over the public good. One author of the 1580s defined monopoly as 'an encroachment of ...commodities into the hands of one or fewe ...which ought to be free and common to all the Citizens of the same Commonwealth' (Sacks 1998, p. 265). As a result, the creators of monopolies always attempted to define their project as of especial worth to the Commonwealth in the potential for creating jobs and new manufactured goods to export. In the case of trading monopolies, the prohibition of other tradesmen from following their practices was interpreted as being just as much as violation of the subject's liberty as the ability of the monopolist to artificially raise prices beyond what was justly set by supply and demand. Authors defending monopoly trading companies like the East India Company also presented a defence based on good order and government in trade, suggesting that free trade was potentially dangerous to a nation's security (Parker 1648).

In the case of crown monopolies, opposition also simmered and was eventually voiced in Parliament. In 1601, Elizabeth declared a number of her patents granted on such things as salt, pots, brushes and starch void. However, when James I came to the throne in 1603, he actually expanded monopolies for revenue. As a result, matters came to a head in the Parliament of 1621 when a bill against monopolies was presented to the commons. This was mostly written by the greatest legal authority of the period, Sir Edward Coke who argued that monopolies were against the liberty and freedom of the subject. Although this bill did not pass, it led to the dramatic impeachment of the Lord Chancellor, Sir Francis Bacon who was involved in a monopoly on the manufacture of gold thread. Eventually, a bill passed in 1624 which restricted the grant of monopoly rights to genuine inventors for fourteen years only. It did not entirely remove abuses, however, for privileges granted to towns and corporations were allowed to continue, and would-be monopolists continued to form corporations (Thirsk 1978, pp. 96–101). As a result, before the eighteenth century, the situation in England moved in the opposite direction of Montchrétien's political economy. A strong legalist defence of freedom to follow trade and to set quality privately was argued to be good for the economy. As a result, few monopolies were created after the outbreak of civil war in 1640, and the successful establishment of tobacco and then sugar cultivation in the American

colonies was based on the freedom of any merchant to trade there, and this success was used to criticise the monopoly of the East India Company.

The attack on monopolies was also in part motivated by the climate of economic depression in England caused by the failure of the Cockayne project. The decline in cloth exports caused unemployment and an acute lack of cash in the 1620s, as imports of Mediterranean groceries were booming. Unemployment combined with a lack of cash to pay wages led to riot and industrial unrest (Supple 1964, pp. 8, 11, 55, 65, 131, 174; Walter 1999, Chapter 7). This monetary shortage led to another body of writing which intertwined with the critique of monopolies, but which was primarily concerned with the balance of trading payments and monetary flows. The three most important authors of this period were Gerard Malynes, Thomas Mun and Edward Misselden. Malynes was the oldest, and had a long career as a merchant trading to Europe, and turned to writing about the economy to save himself from his creditors in the 1590s, in this case as an expert on the mechanisms of currency exchange, but arguing politically that England suffered from an undervalued exchange rate.⁶ He was attacked by Misselden in a tract entitled *Free Trade, or, The Means to Make Trade Flourish* of 1622, who argued that the depression was a result of the trade imbalance rather than exchange rates or monetary factors. Malynes countered with *The Maintenance of Free Trade, According to the Three Essentiall Parts of Traffique*, but came under further attack by a servant of the East India Company, Thomas Mun who had previously defended the company against critics who complained that it drained bullion out of the country to pay for imported goods. He argued that money was only a means of exchange and that it was the volume and balance of trade which mattered.⁷ Malynes retreated to an extent and published the popular compendium on law and trade; the *Consuetudo, vel, Lex mercatoria* by which he is now principally remembered.

It is noteworthy that the term 'free trade' was used to advocate the promotion of trade even by a supporter of the East India Company, showing how popular the term had become in the discourse of the 1620s. Much later Adam Smith accused Thomas Mun of creating the idea that gold and silver equal the wealth of a kingdom, and claimed, 'this doctrine of his, which however foolish has been adopted by all succeeding writers' (Smith

⁶Perry Gauci, 'Malynes, Gerard (fl. 1585–1641)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn., Oct 2008 [<http://www.oxforddnb.com/view/article/17912>, accessed 17 Jan 2017].

⁷Perry Gauci, 'Mun, Thomas (bap. 1571, d. 1641)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn., Jan 2008 [<http://www.oxforddnb.com/view/article/19527>, accessed 17 Jan 2017].

1976 [1776], Av. 75–76). As a result of Smith's criticism, Mun has come to be seen as the epitome of a 'mercantilist'. In reality, for someone like Mun, writing in the early seventeenth century, money was important for state power, because it was needed to pay for armies fighting on the continent at a time when the English financial system was not developed enough to remit credit which could be used to supply an army with regularity in war. Mun specifically claimed foreign wars exhausted a kingdom's treasure because armies needed to be provisioned with foreign wares (Mun 1664, p. 21; Petyt 1680, p. 11). As a result, war created two very serious monetary problems: the need to supply enough money to armies to allow soldiers and arms to be paid for to give them the needed power to engage and beat the enemy, and at the same time the need to deal with the economic, and potential social problems created in England by the drain on the circulating currency. It was precisely these two problems which occupied pamphleteers like Mun, Misselden and Malynes in the 1620s, when even the small commitments which England made in fighting the Thirty Years War created a need for much more taxation (Russell 1973, pp. 103–108). In the light of the problems of the coinage, which undoubtedly existed in other European countries, mercantilism in this sense makes a great deal of historical sense. But, this position also led to the argument that if a nation wanted to have enough wealth in the form that the state could tap through taxation, it could create this best by establishing a positive balance of trade with other countries by exporting manufactured goods. This would have the added benefit of taking wealth from potential future enemies in war.

Returning to internal trade, within England, market regulation was also becoming increasingly problematic, however, because most rules had been framed to govern practices in local markets and were based on the assumption that the majority of goods being exchanged would be agricultural commodities produced in the local area. But, because households were increasingly more likely to be buying goods that might have been transported from somewhere else rather than to just primarily exchanging local produce, they inevitably became less effective. William Harrison complained that magistrates were not so careful in their offices as they should have been, and as a result in most markets 'neither assizes of bread nor orders for goodness and sweetness of grain and other commodities...are any whit looked unto' (Harrison 1994 [1587], p. 247). Also, despite all the effort which went into framing and enforcing the 'massive' statute of artificers, in which wages were to be legally determined and set by local justices of the peace according to their judgment of local process and conditions, such regulation was the least important factor in determining wage rates (Woodward 1994, pp. 26–28, 32, 38–39).

On a national scale, such attempts at enforcement and other trade restrictions often encountered as much opposition as support (Muldrew 1993, p. 175). Whatever the effect of regulation, it seems to have had little effect on the free movement of prices, and the growth of market structures. By the time Thomas Hobbes came to write his *Leviathan* in the mid-seventeenth century, he argued that Aristotle's notion of distributive justice was misguided and instead of defining it as a positive act of authoritarian social relations, he redefined it very minimally as the act of arbitration by justices or superiors in disputes over parties in questions concerning commutative justice (Hobbes 1968, pp. 208–209).

4 Holland

The first three-quarters of the seventeenth century are described as the Dutch golden age, when the province of Holland rose to dominate European trade. Because of a lack of enough land to adequately supply food for a relatively large urban population, the Dutch also expanded their navy to protect their grain supplies imported from the Baltic, without which the country would face starvation. To bolster food supply, there was also a large and successful investment in efficient fishing. Finally, Dutch success in the Eighty Years' War leads to the capture of the Asian seaborne spice trade from the Portuguese, which created enormous mercantile wealth (de Vries and van der Woude 1997, Chapters 6, 7, 9). However, because of the fact that Holland was one of the seven United Provinces which had formed a republic in the 1580s, together with the continuing war against Spain, most Dutch publications of the time focused on religion and politics to the exclusion of trade or political economy. It was not until the publication in 1662 of *The True Interest and Political Maxims of the Republic of Holland* written by Pieter de la Court, with some contributions from the republican statesmen John De Witt that a major work on political economy appeared.⁸ This went through many editions and was translated into other European languages including English in 1702. It strongly advocated a beneficial relationship between a republican form of government and increased material wealth. It did this by describing the political history of the lowlands and the reasons for its current economic success. In this sense, the title was carefully chosen to refer to the opposite of what Montchrétien intended to imply by using

⁸The later was also from a mercantile background and was eventually lynched by the Orangists in the uprising of 1672.

the term *oeconomy*. The term ‘interest’ had become popular by the mid-seventeenth century as an extension of reason of state theory, which argued that war could be reduced by assuming that all states would predictably follow their own interests which, being more transparent, were then more negotiable (Gunn 1968, pp. 551–564). In a similar way, the contractual bargaining of trade was described as mutual benefit, and the word ‘interest’ was not used in the sense of self-interest, but rather referred to the mutual advantage, benefit or profit of two or more parties (Muldrew 1998, p. 140). De la Court took this economic meaning and argued that it was politically relevant in a different way than reason of state:

And seeing that almost all the people in Europe, ...do express the same by the word interest, I shall often have occasion to use the same likewise here for brevity sake, in the same sense that they do; viz. seeing the true interest of all countries consists in the joint welfare of the governors and governed; and the same is known to depend on a good government, that being the true foundation whereon all the prosperity of any country is built.

... We are only sensible of publick afflictions, in so far as they touch our private affairs; for no body halts of another man's sore. (de La Court 1746 [1662], Part I, Chapter 1, pp. 1–2)

For de la Court, good government and prosperity were the result of mutual interest, more than paternalistic central direction.

He began his first chapter with an explicit statement that republican politics and wealth were linked:

...the flourishing of manufactures, fishing, navigation, and traffick, ...will infallibly produce great, strong, populous and wealthy cities, ...all which to a monarch, or one supreme head, is altogether intolerable. And therefore I conclude, that the inhabitants of Holland, whether rulers or subjects, can receive no greater mischief in their polity, than to be governed by a monarch, ...God can give no greater temporal blessing to a country in our condition, than to introduce and preserve a free commonwealth government. (de La Court 1746 [1662], Part I, Chapter 1, p. 6)

The reason why this was so, he argued, was that ‘officers, courtiers, and idle gentry’ would use monarchical government to plunder the taxpayers through corruption to enrich themselves for their ‘private interest’. In contrast, free citizens would use their wealth to strengthen cities necessary for good defence (de La Court 1746 [1662], Part I, Chapter 1, p. 7). Thus, the entire first part of his book was devoted to how the fisheries and cloth

manufacture together with trade had created wealth. Free government, as well as freedom of religious worship and free trade, were all cited as being economically beneficial. By free trade, he too meant freedom not to be restricted by monopolies. In the Dutch Republic, this meant primarily the Dutch East India Company, and de la Court was part of a group of merchants who wished to expand into the Asian trade, and he was opposed to their monopoly.

However, he also went further to criticise guilds. His argument for doing so was based on a clear statement linking the idea of freedom to efficient labour market competition:

MUCH less ought we to curb or restrain our citizens and natives, any more than strangers, from their natural liberty of seeking their livelihoods in their native country, by select and authoriz'd companies and guilds

It is certainly known that this country cannot prosper, but by means of those that are most industrious and ingenious, and that such patents or grants do not produce the ablest merchants. But on the other hand, because the grantees, whether by burghership, select companies, or guilds, think they need not fear that others, who are much more ingenious and industrious than themselves, and are not of the burghership, companies and guilds, shall lessen their profits; therefore the certain gains they reap make them dull, slow, unactive, and less inquisitive. Whereas on the other side, we say that necessity makes the old wife trot, hunger makes raw beans sweet, and poverty begets ingenuity

people that we cannot exclude from that traffick or manufacture by means of our grants and guilds, have a great opportunity of profitably improving that which so foolishly, and with so much churlishness is prohibited to our common inhabitants. (de La Court 1746 [1662], Part I, Chapter XVI, p. 60)

This was a very unusual position to take in the mid-seventeenth century, as most merchants were more concerned to create secure relations of trust to ensure that their bills of exchange would be honoured, and debts paid back. Competition could easily weaken such trust (Muldrew 1998, pp. 188–189). Perhaps the success of the Bank of Amsterdam gave him more confidence that bank credit could overcome interpersonal dependence, but if so he did not state it in this work. It has been cited as a probable influence on Adam Smith's very similar remarks in his criticism of the corrupting nature of merchants' use of guilds to enrich themselves at the expense of others (Smith 1976 [1776], I.vii, Chapters 25–28; I.x. Part II).

de la Court also wrote pointedly against prohibitions on the trade of goods from other countries, although he still argued that it was in the

national interest to have low duties on exports of home manufacturers and high duties on imported manufactured goods (de la Court 1746 [1662], pp. 81–82). However, despite this qualification, it was his notion of the mutuality of interest in prosperity which would eventually underpin arguments for the benefits of free trade *between* nations, after it was repeated by Adam Smith. Before this, however, the political and intellectual victory of English protectionism prevailed.

5 Power and Trade: The New English Paradigm

In England, after the Restoration, there was a huge outpouring of works on trade which through translation came to have an enormous impact on the development of the question of ‘national’ economies. As Paul Slack has demonstrated, the antecedents of this literature arose from debates about ‘improvement’ originating in the 1630s (Slack 2014, Chapter 4). Such discussions mostly centred on the improvement of agriculture combined with the support of industry and education to feed and employ the overabundance of poor created by previous population growth (Muldrew 2011a, pp. 299ff.). But the emigration to existing and new colonies was also encouraged and had a direct influence on Oliver Cromwell’s Western design which resulted in the capture of Jamaica from Spain in 1655, and most importantly for the question of markets, the passing of the Navigation Act of 1651. This confined English colonial trade and other non-European imports and exports to English ships and owners. The same held true for re-exports of colonial produce to other European ports. This was established as a contrary policy to what was largely a policy of free trade with tariff differentials practiced by the Dutch at the time. Cromwell’s desire to create a much expanded British Empire in the South Atlantic also led to the first Anglo-Dutch war which the English won, which secured the continuation of the Navigation Act, although two more wars were fought between England and Holland.

The period of the Commonwealth and Restoration in England witnessed continued emphasis on the question of promoting industry through education, forced training and workhouses for the poor.⁹ And, although the era through to the 1690s was intellectually dominated by many scores of

⁹The key figure here was Samuel Hartlib and his circle (Slack 2014, pp. 98–108).

pamphlets written on the problem of credit and state finance, it was also a period when material consumption came to be discussed in a more positive light as the means by which home demand could also increase employment and national prosperity. Before this, overconsumption was seen as dangerous to one's credit, and luxury was generally considered immoral in comparison with frugality. But many writers from the late seventeenth century began to argue that home consumption could drive economic growth as successfully, or even more successfully than the export market. The first important figure to do so was Nicholas Barbon, and the most famous (or infamous) was Bernard Mandeville who mounted a satirical attack on the entire morality of frugality in favour of uninhibited luxury spending by the rich as a means of achieving wealth and employment (Slack 2014, Chapter 5). But a strong intellectual reaction arose to such thinking, arguing that such emphasis on the luxury of the wealthy would lead to military weakness, political corruption, inequality and, for Rousseau, inauthenticity (Reinert 2011, pp. 135–142; Hont 2006, pp. 379–418).

But, arguments in favour of consumption over frugality held sway because of a reversal in England's economic fortunes after the civil war. The cloth industry reoriented itself towards lighter woollen cloths known as the new draperies and exports more than doubled between 1650 and 1750. The English colonial project as it developed in Virginia and then Barbados of growing tobacco for export to England and Scotland had been a success attracting over 300,000 mostly male emigrants by 1660, many undoubtedly spurred into leaving by the civil wars. After this date, sugar production also became important in the Caribbean, and both slave and white colonial populations grew and became important markets for English manufactures and eventually for both Irish and Scottish linen cloth.

Many works were printed both analysing these changes and extolling how more wealth could be created, such as John Houghton's, *England's Great Happiness* by of 1677, William Petyt's *Britannia Languens* of 1680, or Joshua Child's *Discourse of Trade* of 1690. These works certainly had their inspiration in the nature of the tracts published by Malynes, Mun and Misselden in the 1620s, however now questions such as wealth, consumption and happiness were central and most often expressed in terms of the nation. There are many reasons why the nation should have become the locus around which writings on ways to increase people's material wealth should have occurred. There is wide literature describing how the 'nations' of England and Scotland developed in the sixteenth and early seventeenth centuries

in political and linguistic terms as states sought to unify their administrations (Lawrence 2012).¹⁰ But, both the exploitation of the gold and silver wealth of South America by the Spanish and the creation of the Atlantic trade to Asia by the Portuguese, when mixed with the increasingly expensive Counter-Reformation wars of Phillip II, meant that by the beginning of the seventeenth century, the enormous possibilities of wealth gained from new colonies and Asian trade were ineluctably linked to national strength. In the most important example, that of the northern Dutch Provinces, this was also much more crucially national survival which, as de la Court came to describe, had led to the Dutch success in overthrowing the Portuguese dominance of the spice trade and domination of the Baltic trade to protect food supply. Many English pamphlets, most famously that of William Temple, urged that the English had to improve to catch up with the Dutch and even fight them for an increased share of trade (Temple 1687).

While it is undoubtedly true that English authors such as Temple set the Dutch example of success as something which needed to be emulated, the English did not copy the Dutch in terms of either agriculture or trade policy. The English had much more arable land, and authors like Blyth focused on ways of increasing grain production together with mixed husbandry, and fish was never made a popular food in most of England. Most importantly for the question of political economy, though, was the fact that the majority of the best wool in Europe came from English sheep which gave the English woollen cloth industry a great potential advantage over the Dutch, Florentines, Venetians and French if the supply could be controlled. Also, the emphasis on colonies as a part of national economic success was something which, as we have seen, had long roots.

In addition, the stress on the nation as the locus of economic success in the English literature arose not as much out of a need for active defence, as in the case of the Dutch who faced 80 years of war with Hapsburg Spain and then subsequently France under Louis IV, but rather due to social change created by the success of trade and commercialisation since 1550. Most investment in the English navy from the time of Charles I onwards was for the pursuit of aggressive foreign policy against pirates, the Spanish and the Dutch rather than active defence. Rather, the concept of the nation became stressed to the degree that it was in order that merchants and tradesmen could justify the making of significant profits within a religious

¹⁰Rowan Lawrence, *Early Modern English Nationalism? The Uses and Connotations of the Term Nation in Elizabethan and Jacobean English-Language Printed Discourse* (University of Sidney PhD, 2012).

framework which stressed charity, neighbourliness and a classical political education with an emphasis on virtuous behaviour.

Apart from the period of the 1650s, England was a monarchy with a powerful and wealthy aristocracy with legal and political privileges consisting of their own house in Parliament, and an inherited assumption of cultural superiority. Wealthy 'tradefull merchants' and 'gainfull tradesmen' needed to justify themselves as a social group to obtain status outside their urban enclaves. To do this, they defined the activity of selling on the market for profit, which produced the social good of monetised wealth which, they argued, was every bit as advantageous to the common good as older notions of hierarchical gentry stewardship of agricultural land and local communities. They adopted the values of good credit and trust as opposed to aristocratic profligacy and martial honour. Also, most crucially, it was in towns that the idea of institutional redistribution of wealth was first undertaken. This was done through the dual process of defining those in need of relief through evaluation of character, and assessing proportionate rates of taxation on the wealthy to be redistributed. This was wealth not to be shared indiscriminately and wilfully, but wealth to be used proportionately, and with a moral purpose, to improve lives and create work (McVeagh 1981). Prosperous merchants and tradesmen, such as the draper William Scott, turned to writing pamphlets to morally justify trade to counter the older Christian ideas derived from Aristotle through St. Thomas Aquinas that profit was a dangerous temptation to self-interest against the common social bonds of a Christian community of all, both rich and poor, with reciprocal duties and obligations. Instead, they argued that increased trade would lead to more wealth for the nation which would then be available to be used in beneficial ways. In a tract such as William Petyt's *Britannia Languens*, the argument is presented that private interest needs to be governed in order that the national interest can be successfully created out of many private interests:

IT hath been the Common Design and Business of Individual Men in England, as elsewhere, to obtain sufficient Revenues in Money to the end they may secure themselves from Necessities and Shifting, and live plentifully; And yet it may be undeniably and uncomfortably observed, That whilst every one hath eagerly pursued his private Interest, a kind of Common Consumption hath crawled upon us... That it does much import all English Gentlemen, Owners of Land, and others, who take themselves to be sharers in the National Interest, to examine the past and present State of our Trade, and to seek for a

legal Regulation of it; And that all private Interests destructive to our Trade ought to be relaxed, and given up for the future.

...Trade is either *National* or *Private*: The *National Trade* doth influence the Wealth and Strength of a *whole* Nation, and therefore is not the only Concern of Merchants. (Petyt 1680, pp. 283, 289)

This social and intellectual justification led to the creation of a dominant paradigm which is important for the history of political economy. Such writings emphasised the importance of government legislation and policy to ensure that trade was conducted in such a way that it was beneficial to the wealth and happiness of the nation rather than simply the wealth and happiness of traders. As part of this process, the Lords Commissioners of Trade and Foreign Plantations were appointed in 1696 which has become known as the Board of Trade, as a separate body including the Secretary of State to advise on matters of trade and colonial policy. But a more important development was the rise of protectionist legislation designed to overtly benefit the English economy and protect both the interests of and employment provided by the enormous woollen industry, which employed upward of one million people. Although the Irish Cattle Bill with the aim of benefiting English landowners by prohibiting the import of cheap cattle from Ireland was introduced in the autumn of 1666, its passage through Parliament was enabled more by partisan politics than Privy Council policy.¹¹ The real rise of protectionist legislation was undoubtedly a result of the near calamity caused by the Nine Years' War against France after the Glorious Revolution, when the immense cost of the war came close to destroying the economy because of lack of cash to pay taxes. A new group calling themselves political arithmeticians attempted to calculate how much taxation the economy could afford in comparison with France (Muldrew 1998, p. 91). This was averted by the great recoinage of 1696 and the creation of the Bank of England to raise loans a year later, but even once the war ended, political concern about the pro-Catholic foreign policy by Louis XIV remained. The need to maintain trade to collect indirect taxes, and concern that the French economy was growing led to various acts of Parliament aimed at the prohibition of, or imposition of high tariffs against, imported French goods, and then the banning of the export of any raw wool or woollen thread in the 1690s.

¹¹<http://www.historyofparliamentonline.org/themes/economy/public-acts-and-private-interests%3A-irish-cattle-bill%2C-1666>.

As a Catholic nation, Ireland, although part of the British crown, was also targeted. Because its lower standard of living meant that goods were produced more cheaply there, policymakers became concerned that Irish yarn, and to a lesser extent woven cloth, would both compete with sales to the American colonies and when imported into England would lead to unemployment. Thus, in 1699, the exportation of any Irish manufactured woollen products outside of England was prohibited which, together with high duties on imports to England, effectively destroyed most of the industry there (apart from smuggling) in order to protect both English labour and merchants from low wage competition. In compensation, a project of imperial social engineering was embarked up to jump-start a linen industry in Ireland which would compete against continental producers rather than England, which had only a small production before the eighteenth century (Kearney 1959, pp. 484–496). The woollen industry was further protected against competition from what proved to be immensely popular Indian printed cotton calicos, which could imitate an embroidered gown or waistcoat at a much cheaper price. In 1700 Parliament, under the influence of the woollen interest, banned the importation of Indian cotton cloth, and then in 1721, another act went further to ban the sale of all pure cotton cloth to prevent smuggling (Lemire 1991, p. 41). The East India Company was successfully tarnished with the image of a self-interested monopoly which promoted luxury spending by people lower down the social scale who could afford chintz, while at the same time, drawing money out of the country to India to pay for it while not encouraging any reciprocal consumption in India of British goods. In contrast, the successfully expanding woollen industry was employing a vast number of people and exporting both to Europe and to the British colonial populations, and increasingly into the Spanish and Portuguese empires as well, where it could outsell locally-produced cloth on the basis of quality for the price (Muldrew 2011a, p. 623). At the same time, increasing home consumption of sugar led to the expansion of cultivation by African slave labour supplied by British slave trading ships. The slave trade began as a monopoly under the African Company but after its bankruptcy, the so-called triangular trade developed with slaves being traded for British manufactures such as iron and cloth. The Irish linen industry was also successful in providing cloths for the increasingly large slave population in the colonies, and a similar scheme was started in Scotland. This triangular trade involving the export of British manufactured goods, the slave trade and the import of American agricultural products was described as a 'free trade' as against monopoly, and was centred on the Atlantic and northern Europe.

The increasing consumer wealth of England and the cities of Dublin, Glasgow and Edinburgh was noticed and widely written about. By c.1760 exports of English woollens had doubled since 1700, and Britain was supplying much of Europe's tobacco through re-exports, and its subjects were consuming almost as much sugar as the rest of continental Europe combined, and British industry was exporting over three and one half million pounds worth of manufactured goods to its American colonies (Muldrew 2011a, pp. 629–631). This was a legislated trade policy and was seen to be successful both in making the life of its inhabitants happier and in allowing the nation to increase its colonial reach through successful naval warfare.¹² The success of this positive imperial manufacturing and consumption growth cycle was praised and contrasted with the experience of the Spanish Empire, where it was noted the import of gold and silver without the encouragement of manufacturing had led to decline (Cary 1745, pp. 65–70).

The enormous impact that British writings from the period from c.1690 to 1730 had on the formation of political economy in Europe during the enlightenment has been perceptively analysed by Sophus Reinert. By examining which works in different languages were translated most often he has shown that the most popular author was not, in fact, one of the great figures of the history of enlightenment thought, but a Bristol merchant named John Cary, who published *An Essay on the State of England in Relation to its Poor, and its Taxes* in 1695. In this work, he advocated aggressive legislation to protect and advance English trade as a national project. Reinert argues that those voices, such as Dudley North or Edmund Bohun and Charles Davenant, who suggested that the promotion of freer international trade could actually lead to greater wealth for all, were very much in the minority in this period (Reinert 2011, pp. 114–117). Instead, what Hume termed the 'jealousy of trade' predominated, as a positive trade balance was seen as an advantage to a nation through the extra taxable wealth it created which could be used to pay for armies and naval forces (Hont 2005, pp. 5–37). This was certainly the case between England, and then Britain, and France, who went to war against one another in the 1690s, and during the Wars of the Spanish (1702–14) and Austrian Succession (1744–48), and most eventually, the Seven years' War (1756–63).

¹²However, it was fundamentally underpinned by the misery of the slave trade, which was increasingly criticised with the rise of the Abolitionist movement.

The change of policy towards promoting exports can be seen in the nature of regulatory statutes passed in Parliament during this period. *The Act for Making Woollen Cloth* from 1552 (5&6 Edw VI c.6, Tomlins et al. 1810–1822, vol. 4.1, pp. 136–141) goes into minute detail about the process of manufacturing. In contrast, for instance, the act of Charles II, 1662: ‘for the better regulating of the Manufacture of Broad Woollen Cloth within the West Riding’ is primarily aimed at enabling the area’s clothiers to set up authority to police the quality of the spun yarn on the argument that poor quality was making exports uncompetitive (14 Car II Chapter 32, Tomlins et al. 1810–1822, vol. 5, pp. 425–428). Various prohibitions on the export of goods which competing countries could use such as fuller’s earth, or leather, yarn and even clay to make tobacco pipes were all passed (12 Car II Chapter 32, Tomlins et al. 1810–1822, vol. 5, pp. 293–296). Many import duties were raised during the early eighteenth century, and the woollen interest produced pamphlets exaggerating the threat of the increasingly sizable French woollen manufacture (Haynes 1715). This led to a ban on the export of English raw wool to France and other parts of the continent in addition to the prohibition on Indian printed cotton, to prevent them from competing with home produced woollen cloth (7&8 Will III Chapter 28, 14, Tomlins et al. 1810–1822, vol. 7, pp. 118–121). With all of these measures a British policy, centred on England, emerged which, while still maintaining the importance of providing employment to its subjects, also saw both competitive trade advantage and the indirect taxes raised from internal consumption as a necessary political tool to defend Protestantism in Europe and the national interest in global commerce.

But, while Parliament saw fit to increasingly interfere in foreign trade and to ignore freedom to trade in Ireland, in practice the internal trade within England and Scotland after the Union was allowed to be pursued by merchants with increasing freedom. While the old laws and rules governing grain markets discussed above remained unchanged, their enforcement became much more sporadic. The records of coastal shipping and investigations into price convergence of distant markets show that by 1700 an increasing amount of grain was available to be shipped to towns and areas where land quality was poorer (Chartres 1984, pp. 406–502). By the 1720s, Daniel Defoe went so far as to claim that much of the concentrated woollen cloth manufacture around Halifax needed to be supported by grain imports from the south (Defoe 1962 [1724–1726], II, p. 199). London was also successfully supplied by hundreds of shipments of coastal imports that were dominated by a small cartel of importers in the capital (Roseveare 1996, pp. 97–111).

The agricultural improvement advocated before the civil war was a success, and while England saw rising prices during the repeated bad harvests of the 1690s, there was no famine in contrast to France and Scotland. In the latter, it has been estimated that perhaps as much as 15% of the population perished (Cullen 2010, p. 2). Northern England which relied heavily on oats as its staple, like Scotland, was able to draw on imports from elsewhere in the country through private marketing. This involved making bargains between farmers and merchants often for future delivery outside of the public town marketplace, where the old legislation stipulated that transactions should take place. By 1697, England became a net exporter of grain which rose in volume until the 1760s when population growth reversed the trend (Ormrod 1985, p. 22). In addition, the English parish level poor rates were used by local elites to help poor families purchase grain at higher prices in these years. However, at the same time that this market integration was evolving without government policy, in years of high food prices, the so-called Books of Orders were still passed which banned foreign exports totally and allowed local magistrates to prohibit exports to other international destinations. However, the Justices of the Peace often neglected this to maintain supplies to London and the north, and on occasion when this happened local consumers rioted to force them to do so (Outhwaite 1981, pp. 389–406). Most of these riots took the law into their own hands in the form of confiscations and selling of the grain at a lower price. As long as violence was minimal, the Privy Council was little inclined to prosecute. The number of such riots was few compared to the number of market towns where grain could be sold for export, but they actually increased during the eighteenth century during years of high prices, most notably 1756 and 1765, as long-distance trade increased. This type of rioting has been described by the new-left historian E.P. Thompson as the expression of a non-capitalist moral economy, since the rioters placed local need over the profit which was driving local traders to export (Thompson 1971). But as far as the English state was concerned, it was much more politically important to feed the capital, where no riots occurred, in contrast to Paris, and so while it maintained the laws controlling grain marketing in years of dearth, it certainly did not press for their enforcement, and instead relied on the increasing administration of the parish poor law to deal with its responsibility to keep people fed. This worked well for most of the eighteenth century but the incredibly high food prices which were normal by the 1790s, as the population rose, led to much more incidence of rioting and an eightfold increase in poor law payments to working families. This, as we shall see below was a situation which changed the meaning of what political economy was about.

France, in the period of Louis XIV and Louis XV, saw the continuation of Colbertist economic management which successfully promoted specialised luxury industries such as the Gobelins tapestries. Lyon merchants were especially successful in competing with the Bolognese in silk production and in creating new fashion (Poni 1997, pp. 37–74). Commerce also expanded and the successful establishment on St. Dominique of sugar production matched, and eventually overtook British production (Muldrew 2011a, p. 627). But, in contrast to the practice in England of allowing private sales and future contracts and only policing grain markets in years of poor harvests, grain markets in seventeenth-century France remained highly regulated by a hierarchy of policing officials which firmly embraced a political–moral economy. In addition before c.1740, there was nowhere near the same amount of publications on the topic of commerce as occurred in England.¹³ The king was seen as a father who regulated the supply of bread to promote ‘public happiness’. Regulation was organised by the controller-general who was a deputy of the king, who organised intendants of the *généralités* who in turn issued orders to, and received reports from a whole series of local officers such as mayors *échevins*, jurats, lieutenants and commissioners of police and procurators. While grain was grown by private farmers and sold on to grain merchants, who in turn sold it to bakers, the purpose of this system of police was to ensure grain moved from farms to places of consumption equitably and also to prevent any merchants from hoarding or monopolising any market. This could involve prohibitions on movement or bounties and searches. In towns and villages, the concept of sale on the public market was maintained as part of the just price (Kaplan 1976, I, pp. 7, 15–18, 28ff., 47, 53–56).

It was, in fact, as a reaction to this system that the term ‘*laissez faire, laissez passer*’ was first used in a publication of the 1750s in an anecdote which claimed that in the 1680s a group of merchants had told Colbert to let them do what they knew best how to do. England’s wartime success in the early eighteenth century had led a number of French administrators and theorists to believe that England’s economy was growing as a result of both freedom of ideas and internal trade. The most significant of these figures was an intendant du commerce Jacques-Claude Marie Vincent de Gournay who, in the 1740s, did more than anyone to create political economy as an intellectual discourse. He did this by using his administrative authority to promote the printing of first translations of the outpouring of English pamphlets, and

¹³There were notable exceptions such as Jacques Savary’s *Le parfait négociant*, published in 1675 which was prepared based on his work for the commission revising the trade laws.

then of home-grown French tracts. The purpose of this was to offer criticism of Colbertist policies using English success as an argument of the need for reform. It was in this decade and the next that the term ‘*économie*’ came to be used to describe matters such as tariffs or industrial and trade policy, as well as the role of industry and agriculture in society (Reinert 2011, pp. 134–135, 148ff.). In the 1750s, the *Journal Economique* was published, and the terms *économie politique* and *philosophie économique* became popular.

In terms of the grain market, the main complaint was that regulation kept prices low, and a number of writers and then controllers generally believed that letting markets find a price without police would raise prices and effect agricultural improvement. Thus, twenty-five years before Smith published the *Wealth of Nations*, the same concepts as he promoted were being discussed, and in fact, it was during the 1750s that Smith travelled in France. Although Physiocracy stressed agrarian improvement over industry, and a strong anti-commercial Arcadian morality was promoted by Fenelon in his *Télémaque*, there was a much more broad-based support for internal free trade which did not reject the key role of industrialisation but which wanted to create a larger food supply (Kaplan 1976, vol. I, Chapters 3–4). Liberalisation was effected by the controller-general in the 1760s, but the ‘shock’ rapid introduction meant that prices rose while people did not have the means to afford them, which resulted in grain not being moved. This, in turn, led to grain riots all over the country, and when bad harvests hit after 1766 localised dearths occurred. As a result, the old system of police was reintroduced (Kaplan 1976, vol. II, pp. 491–516, Chapter 13).

Despite the failure of the implementation of liberalism in France, the concept of a ‘modern’ political economy survived. Already in the fifth volume of the *Encyclopédie* in 1755, Jean-Jacques Rousseau published an article on the subject, which was republished in pamphlet form as the *Discourse on Political Economy* in 1758. Here, he stated explicitly what had changed since Montchrétien. He began with a summary of the former’s position:

ECONOMY or OECONOMY (*Morals and Politics*). This word is derived from, οἶκος *house*, and, νόμος *law*, and originally signified merely the wise and legitimate government of the household for the common good of the entire family. The meaning of this term was later extended to the government of the large family, that is, the state. To distinguish these two usages, in the latter case it is called *general* or *political economy*, and in the former case it is called *domestic* or *private economy*. Only the first of these is the subject of this article. Regarding *domestic economy*, see FATHER OF THE FAMILY.

Rousseau, however, immediately went on to argue that there was, in fact, no similarity between the administration of a state with that of a family:

How could the government of the state be similar to that of the family, whose basis is so different? ...Even if there were as much similarity between the state and the family as many authors would have us believe, it would not follow as a consequence that the rules of conduct proper to one of these societies would be suitable to the other. They differ too much in size to be capable of being administered in the same fashion. (Rousseau 2011 [1758], pp. 123, 125)¹⁴

Writings of those now termed *économistes* including Turgot, Condorcet, Quesnay, Galiani and others continued to flourish in France before the Revolution. However, it was the Scot, Sir James Steuart, who fully systematised the new meaning of the term in his classic work: *An Inquiry Into the Principles of Political Economy Being an Essay on The Science of Domestic Policy in Free Nations. In Which are Particularly Considered Population, Agriculture, Trade, Industry, Money, Coin, Interest, Circulation, Banks, Exchange, Public Credit, and Taxes*, published in 1767, and written over the previous two decades while he was in exile in France and Germany. The term was undoubtedly chosen by Steuart because of the emphasis he placed on the importance of the role of government (his term was ‘a statesman’) in directing economic policy. Its overwhelming concern with the necessity of economic management shows the influence of the French discourse. Like them, he discussed the spirit of a people and the need to wisely adopt policies which fit the local spirit of any nation:

Oeconomy, in general, is the art of providing for all the wants of a family, with prudence and frugality.

The statesman (this is a general term to signify the legislature and supreme power, according to the form of government) is neither master to establish what oeconomy he pleases, or, in the exercise of his sublime authority, to overturn at will the established laws of it, let him be the most despotic monarch upon earth.

The great art therefore of political oeconomy is, first to adapt the different operations of it to the spirit, manners, habits, and customs of the people; and afterwards to model these circumstances so, as to be able to introduce a set of new and more useful institutions. (Steuart 1767, I, pp. 1–2)

¹⁴Much of the pamphlet was taken up with the need for a public economy being in conformity with general laws and legislators. He also discusses the **Spirit** of a people in relation to economic policy rather than policy itself.

Although his theory on how the economy functioned was based on the promotion of market production and economic liberty, Steuart still believed that the role of a governor was to promote the long-term competitive advantage of the national economy over others, so as to provide goods and employment for its own subjects:

The principal object of this science is to secure a certain fund of subsistence for all the inhabitants, to obviate every circumstance which may render it precarious; to provide everything necessary for supplying the wants of the society, and to employ the inhabitants (supposing them to be free-men) in such a manner as naturally to create reciprocal relations and dependencies between them, so as to make their several interests lead them to supply one another with their reciprocal wants. (Steuart 1767, I, pp. 2–3)

His very detailed proposals about foreign trade generally followed the goal of enriching the state through a positive balance of exports of manufactures. To do this, he argued against those who believed wages should be low to lower the cost of exports, believing that wages would come into an equilibrium based on the supply of labour and the cost of what labourers produced. Although he was happy to envision a totally free trade, this was presented as rather a utopian dream given the complex differences between the wealth and technical capabilities of different societies (Steuart 1767, II, Chapters IX–XIII, esp. pp. 206–209, 232–237, Chapters XXIII–XXXIV).

Adam Smith, as we have seen, provided a succinct definition of what he thought political economy should be that was similar to Steuart's but, in contrast, his aim was to discredit the argument that a positive balance of trade was the basis of the subject. Instead, he chose to call this attitude mercantilism, and emphasised that wealth was a product of labour augmented by machinery, and that the wealth of a nation was simply a sum of that wealth. In contrast to Steuart, he chose the *Wealth of Nations* as the title of his great work on political economy. He also wished to critique bullionist ideas that wealth was the amount of gold or silver flowing into or out of a nation. In doing this, he created something of a straw man, for as we have seen many other authors had already stressed the importance of labour as being the origin of wealth, but almost all placed the idea within a system of national advantage, where exporting more manufactured goods than one imported would lead to a net inflow of wealth, whether in the form of bullion or paper. Smith criticised this explicitly, arguing that it was the cause of many restrictions being put on trades:

it necessarily became the great object of political oecconomy to diminish as much as possible the importation of foreign goods for home-consumption, and to increase as much as possible the exportation of the produce of domestic industry. Its two great engines for enriching the country, therefore, were restraints upon importation, and encouragements to exportation. (Smith 1976 [1776], IV.i.35, p. 450)

Smith critiqued these restrictions imposed by national and urban governments to protect local interests and advantage against competition. He advocated the benefits of free trade leading to the mutual advantage of each trading nation, as he believed that protectionist regulations hindered efficiency gains brought about by the division of labour to the detriment of poorer consumers. In his famous digression against the restrictions imposed by the English Corn Laws in times of poor harvests, which limited merchants' freedom to trade grain freely, he argued that the merchant's desire for profit would lead to grain being sent from where it was most plentiful to where it was most scarce. Profits gained from higher prices would encourage improved production, thus in the long term, leading to reduced prices and fewer years of dearth. When discussing the proper duties of government, or what he termed the sovereign, he famously excluded most economic regulation:

All systems either of preference or of restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord. Every man, as long as he does not violate the laws of justice, is left perfectly free to pursue his own interest his own way, and to bring both his industry and capital into competition with those of any other man, or order of men. The sovereign is completely discharged from a duty, in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient; the duty of superintending the industry of private people, and of directing it towards the employments most suitable to the interest of the society. (Smith 1976 [1776], p. 687)¹⁵

He also claimed that, 'The private interests and passions of men naturally lead them to divide and distribute the stock of every society, among all the different employments carried on in it, as nearly as possible in the proportion which is most agreeable to the interest of the whole society', which is often taken to be an argument in favour of the spontaneous order of the

¹⁵However, he did advocate regulation to prevent the over issuance of paper credit by banks (Smith 1976 [1776], p. 324).

marketplace, or in more recent terminology, the self-regulation of the marketplace (Smith 1976, [1776], p. 360; Hamoway 1987, pp. 18–22). He undoubtedly thought that free trade amongst nations was the best policy:

There is no commercial country in Europe of which the approaching ruin has not frequently been foretold ...from an unfavourable balance of trade. ... after all the vain attempts of almost all trading nations to turn that balance in their own favour and against their neighbours, it does not appear that any one nation in Europe has been in any respect impoverished by this cause. Every town and country, on the contrary, in proportion as they have opened their ports to all nations; instead of being ruined by this free trade, as the principles of the commercial system would lead us to expect, have been enriched by it. (Smith 1976 [1776], pp. 496–497, 628)

But a broader reading of the entire argument of the *Wealth of Nations* shows that he was more concerned with the way in which merchants and master manufacturers used government regulation to enrich themselves at the expense of poorer artificers and workers, who were thus denied the full fruits of their labour, rather than an ideal of free trade. Town corporations and merchants with overt and legal combinations or monopolies, or employers with secret combinations all had the aim of enriching a privileged few through exclusion rather than competition, at the expense of consumers and workers. ‘Monopoly of one kind or another’, Smith claimed, was ‘the sole engine of the mercantile system’ (Smith 1976 [1776], p. 360). Nicholas Phillipson has suggested his special disapprobation towards merchants was a result of his experiences with the self-interested practices of the Glasgow tobacco merchants (Phillipson 2010, pp. 27–29). He even went so far as to blame ‘the monopolizing spirit of merchants and manufacturers’ on unnecessarily promoting war when they should logically be promoting peace:

By such maxims as these, ... nations have been taught that their interest consisted in beggaring all their neighbours. Each nation has been made to look within invidious eye upon the prosperity of all the nations with which it trades, and to consider their gain as its own loss. Commerce, which ought naturally to be, among nations, as among individuals, a bond of union and friendship, has become the most fertile source of discord and animosity. The capricious ambition of kings and ministers has not, during the present and the preceding century, been more fatal to the repose of Europe, than the impertinent jealousy of merchants and manufacturers. (Smith 1976 [1776], pp. 493–494)

A great empire has been established for the sole purpose of raising up a nation of customers who should be obliged to buy from the shops of our different producers, all the goods with which these could supply them. For the sake of that little enhancement of price which this monopoly might afford our producers, the home-consumers have been burdened with the whole expence of maintaining and defending that empire. For this purpose, and for this purpose only, in the two last wars, more than two hundred millions have been spent. (Smith 1976 [1776], p. 661)

His answer to this was, as shown above, to advocate freer competition. This, however, was not done primarily out of an abstract desire for liberty, but because he thought this would lead to a more equitable society of small producers.

Further, in the conclusion to his discussion of the mercantile system, Smith made a number of statements which clearly indicate he had no quibble with a government policy which promoted employment and cheaper prices. These occur when he discussed how, contrary to most tariffs and prohibitions, governments sometimes encouraged the importation of raw materials based on the fact that they could be used to advantage in home manufacturing. This had the object,

to enrich the country by an advantageous balance of trade. It discourages the exportation of the materials of manufacture, and of the instruments of trade, in order to give our own workmen an advantage, and to enable them to undersell those of other nations in all foreign markets ...It encourages the importation of the materials of manufacture, in order that our own people may be enabled to work them up more cheaply, and thereby prevent a greater and more valuable importation of the manufactured commodities.

The private interest of our merchants and manufacturers may, perhaps, have extorted from the legislature these exemptions, as well as the greater part of our other commercial regulations. They are, however, perfectly just and reasonable, and if, consistently with the necessities of the state, they could be extended to all the other materials of manufacture, the publick would certainly be a gainer. (Smith 1976, [1776], pp. 642–643)

Smith's support of free trade against the self-interest of monopolising merchants, and his argument against the logic of the Corn Laws, became used in debates to support free trade after his death, but, as mentioned at the beginning of this article, the momentous political, social and economic changes after 1780 changed the focus of political economy away from trade. In Britain, the main question of competitive trade advantage became redundant with Britain's naval dominance after the battle of Trafalgar in 1805.

At the same time, the expansion of spinning machinery and the rapid expansion of cotton cloth exports produced an unassailable trading advantage which did not need to be defended. But, this also led to the rapid unemployment of women and a loss of family earnings. At the same time, there was a huge rise in food prices caused by population growth from six million people in 1750 to ten million by 1815. Thus, poor law expenditure rose from less than £1,000,000 around 1750 to £8,000,000 by 1812 (Rule 1992, p. 129). The vast expense of the Napoleonic wars also led to the suspension of gold payments by the Bank of England, mandating a paper currency, and new forms of taxation. Even after the war's end, as exports expanded, the demobilisation of soldiers caused unemployment, and the conservative led return to a gold standard caused a banking crisis in 1825.

All of this produced a flood of work which fell under the rubric of political economy, but crucially, it evolved from being about the wealth of the nation, to the proper way to legislate about specific questions such as poverty, population, the currency or savings banks. The East India College created the chair of political economy in 1805, and the political economy club was formed in 1821. A search on *Google Ngram Viewer* shows a continual rise in the use of the term with its modern spelling (political economy) in English publications from 1790 to 1820. With France defeated and England's industrialisation of the cloth industry well advanced, there was no need to worry about any immediate competition. As a result, British writers and policymakers were able to turn inwards and focus on the rights and wealth of individual workers, and to take the profits of trade for granted. The result of this can be seen clearly in David Ricardo's *Principles of Political Economy* published in 1817 which was organised as a dissection of 'economical science' into 32 different topics beginning with value. In this work politics are pretty much absent. Its aim is understanding, rather than political advocacy.¹⁶ Here, Ricardo advocated free trade based, not on a consideration of political economy as something which concerned nations, but rather as something proceeding from social examples drawn largely from his experience as a businessman in England. From this, he outlined what has come to be known as the theory of comparative advantage of nations specialising in different goods based on climate and developed expertise such as French wine (Ricardo 1973 [1821]). Free trade suffered a setback in 1815 when new Corn Laws were introduced placing high tariffs and some restrictions

¹⁶As Stedman Jones has noted, a preceding work which influenced Ricardo, Jean Baptiste Say's *Traité d'économie politique*, published in 1803 also retreated from political advocacy, but for different reasons. For Say, it was because of the rise of Napoleon to become Emperor (Stedman Jones 2004, pp. 110–111).

on imported grain in contrast to the previous books of orders which had aimed to control exports. This was done to protect largely Tory landowners who paid the greatest share of direct taxation (although the land tax only formed 10% of government revenue in that year) (Mitchell and Deane 1971, p. 392). The campaign for their repeal would be the issue around which free trade would be organised, but this was only achieved in 1846.

Because of high food prices, the topics over which there was most debate were poverty and wages. This emphasis on the importance of labour meant that political economy as it developed in the early nineteenth century was dominated by Smith's labour theory of value as developed by Ricardo. For many commentators, it was felt that the current laws entailed far too much redistribution of wealth. The first essays of Thomas Malthus also worried about the effect which redistribution might be having in actually causing the unprecedented population growth at the turn of the century by providing resources to marry younger. This vast debate is far too large to go into detail here, but it had a profound, if indirect, effect on the political economy of markets in the way that it evolved into a set of arguments. The first stressed absolute individual responsibility for economic well-being by those such as Townsend, and by others who thought that redistribution produced profligacy and laziness.¹⁷ Much of this argument was tremendously influenced by Jeremy Bentham's utilitarian philosophy first published in 1780. As part of his desire to establish a convincing moral basis to criticise the acceptance of customary law, and to decide how to establish the justice of legislation, he made the individual's pleasure or pain the means of judgment, not community standards:

The community is a fictitious *body*, composed of the individual persons who are considered as constituting as it were its members. The interest of the community then is, what?—the sum of the interests of the several members who compose it. It is in vain to talk of the interest of the community, without understanding what is the interest of the individual. A thing is said to promote the interest, or to be for the interest, of an individual, when it tends to add to the sum total of his pleasures: or, what comes to the same thing, to diminish the sum total of his pains. (Bentham 1907 [1823], p. 3, Chapters I.5–I.6)

...the only interests which a man at all times and upon all occasions is sure to find adequate motives for consulting, are his own. Notwithstanding this, there are no occasions in which a man has not some motives for consulting the happiness of other men. In the first place, he has, on all occasions, the purely

¹⁷See above p. 3.

social motive of sympathy or benevolence: in the next place, he has, on most occasions, the semi-social motives of love of amity and love of reputation. The motive of sympathy will act upon him with more or less effect, according to the bias of his sensibility: the two other motives, according to a variety of circumstances, principally according to the strength of his intellectual powers, the firmness and steadiness of his mind, the quantum of his moral sensibility, and the characters of the people he has to deal with. (Bentham 1907 [1823], pp. 312–313, Chapters XVII.8–XVII.9)

This line of argument was taken up by critics of redistribution. Although Bentham went on to write extensively about the poor law, and believed himself in the validity of redistribution for humanitarian reasons, because of his philosophy, he believed it was necessary to convince potential rate-payers rather than to coerce them. He also believed that the labour of the poor could be rightfully claimed by those taxed (Bentham 2001, pp. 8–38). This was no longer a political economy of national governance, but of self-government and private property which would develop in opposition to early socialism (Claeys 1987).

As Frank Trentman has shown free trade became an aspect of national British culture by the end of the nineteenth century, but in terms of the current debates at the beginning of the twenty-first century outlined at the beginning of this essay, it was the development of Benthamite individualism which has become more important (Trentmann 2008). Bentham's focus on the ethical utility of the happiness or pain of isolated selves, of which society was only ever an aggregate, articulated an ethics where the idea of individual economic freedom and free trade could be morally linked (Hilton 1988, Chapter 5). Even more importantly William Stanley Jevons based his model of marginal utility directly on Bentham's notion of utility maximisation of individual actors assessed through mathematics. Restated by Ludwig von Mises and the Austrian school, it is this line of thinking which has led to our non-political economy.

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5

Historical Political Economy

Sophus A. Reinert

1 Introduction

Invited to deliver the first presidential address of the Economic History Association at Princeton University in the early Fall of 1941, the day after the *Wehrmacht* occupied Estonia, Harvard Business School's first Dean Edwin F. Gay (1867–1946) mused on the origins of his discipline, and how intellectual-historical vicissitudes had ensured that his audience was made up of “economic historians instead of historical economists”; why, in other words, history and economics in many ways had parted company in the halls of academia. Gay himself was a proud student of “[Gustav von] Schmoller in Berlin,” don of the so-called German Historical School of Economics in the second half of the nineteenth century and a powerful figure in German academia who, in turn, had been “a pupil of [Wilhelm von] Roscher... one of the first historical economists and the original formulator of a program for the new ‘school’ of economics.” And Gay happily agreed with his mentor and his predecessors in championing the cause of “historical relativity” in the face of the “absolutism of theory” (Gay 1941, p. 9).¹

¹These categories remain trenchant in the historiography of economics, see, for example, Eklund and Hebert (1997, p. 61). On Gay, see still Heaton (1952). The literature on Gustav von Schmoller is

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Yet this particular battle had, he thought, by the early years of World War II been largely won, though perhaps not in a way expected or indeed likely approved of by his forebears: Historical political economy had largely given way to separate disciplinary inquiries of history and economics, with the latter nonetheless generally grounded in the former.

The “tendency to abstract theorizing,” Gay continued, had first been inaugurated in the distant eighteenth century by the so-called Physiocrats, a French sect of political *économistes* and large-scale landowners believing in the primacy of *laissez-faire* and the sole ability of agriculture to produce wealth, but had later come to dominate political economy in the English-speaking world as well, and nowhere more so than in Great Britain.² Generations of historical economists had subsequently sought to offer robust alternatives to abstract theory that took account of the world’s complexity, most recently the so-called institutionalists, but they had never successfully navigated the tension between relevance and erudition to offer a meaningful “synthesis” of the “interaction of all manifestations of the human spirit, economic, legal, political, social and religious” (Gay 1941, pp. 9–10).³ It was a disconcerting realization, powerfully conveyed by Gay’s vivid memory of Schmoller leading his famous Berlin seminar on historical political economy and always ending his “suggestive commentaries... with an interweaving motion of his hands, by saying: ‘*Aber, meine Herren, es ist alles so unendlich kompliziert*’”—“But gentlemen, it is all so infinitely complicated” (Gay 1941, p. 13).⁴

Gay recognized that it was hard for such a Faustian approach, one that literally sought to embrace the dynamics of human life *tout court*, to compete with the seductive clarity and elegance of conjectural modeling, though, perhaps, it was neither possible nor altogether necessary to do so. “We can now see,” he argued, “that the full hopes of the historical economists have not been realized and are not realizable.” Consequently, “the historical economists have given place to the economic historians,” practitioners

growing, for which see still Peukert (2001, pp. 71–116). On the historical school in Germany, see Grimmer-Solem (2003). On Schmoller and his method, see furthermore Gioja (1990) and Priddat (1995). On Roscher, see Backhaus (1995).

²The literature on Physiocracy is extensive, but see Kaplan (2015a, b).

³See for similar arguments also Hodgson (2001) and Milonakis and Fine (2009, p. 111). On the similar fate of institutional economics, see Hodgson (2004, p. 391 and *passim*) and Rutherford (2011, p. 311 and *passim*).

⁴It is important to note, however, that such a “concern with complexity did not entail a blind attempt to reproduce reality on a one to one scale,” see Grimmer-Solem and Romani (1999, p. 342).

of an independent discipline whose “criticism,” Gay continued, had served not to displace but to inflect and to moderate the “absolutism of theory.” To his eyes, something akin to a division of labor had evolved between history and economics, one through which fruitful disciplinary dialogues could strengthen both fields. So though historical political economy had not prevailed in the form originally dreamt of by the German Historical School he so cherished, it seemed that the cause of historical awareness itself nonetheless had won a significant victory, because,

as the nineteenth century has moved on to the twentieth, economics has increased the range and depth of its contemporary observation; its use of the deductive method has become more guarded, its analysis more subtle. (Gay 1941, pp. 13–14)⁵

In short, historical experience had succeeded in anchoring and rendering more realistic and effectual the efforts of abstract economic analysis.⁶

In hindsight, of course, it is clear that Gay’s hopes were overly sanguine from the perspectives of the historical professions, with “economics” in effect increasingly leaving the past behind as the twentieth century progressed, both as a parameter internal to the discipline and as a valued external influence on the field.⁷ Historical political economy may well have contributed to the establishment of economic history as a discipline in English-speaking academia, but it is hard to disagree with Erik Grimmer-Solem and Roberto Romani that “historical political economy” itself for a long time has been, “as an economic discipline, without any doubt dead” (Grimmer-Solem and Romani 1999, pp. 353–354). But, as the pulp writer H.P. Lovecraft once put it, “that is not dead which can eternal lie,” and temporal awareness is about as close to the eternal as our species gets.⁸ Indeed, this essay will argue that the late twentieth century was hardly the first time that a historical approach to, and grounding of, the organization of material life seemed to

⁵I agree with Keith Tribe that “the study of history and economics” should be considered “part of the wider history of the social sciences, rather than a clash between inductive and deductive methods, or of historicism and rationalism,” but, given the arguments made by the historical actors in question themselves, it seems excessive to argue that the idea of a “historicist critique of economics” is “based largely on bad history.” See Tribe (2002, p. 20). Though far from the black-and-white situation suggested by much of historiography, historicist critiques of economics have been going on for centuries.

⁶For a relevant compass for this tumultuous period in the history of economics, particularly given Gay’s background, see Schefold (1999, pp. 378–391).

⁷There are many histories of this moment, but see among others Hodgson (2009) and Weintraub (2002).

⁸For a post-Hawkingian meditation on time and eternity, see Carroll (2010). On Lovecraft’s political economy, see S.A. Reinert (2015).

have died, just as our day and age is far from the first in which urgent calls are made for its resurrection.⁹ For though the fortunes of historical political economy may ebb and flow across the centuries, it has indubitably been a constant companion of economic thinking since the latter's incipience, "an underground river," as Kenneth Arrow once described the theory of increasing returns to scale in relation to the larger history of economics, offering a perspective of perennial importance on the management of human affairs (Arrow 1994, p. ix).¹⁰

2 The Continuity of Crisis

Cyclical challenges have again returned to the forefront of economic debates, and it is worth remembering that moments similar to that described by Gay too have come and gone many times in the history of political economy, a history peculiarly torn between the centripetal pull of theoretical elegance on the one hand and the centrifugal force of the world's complexity on the other, between periods of buoyant hubris and humbling calamity.¹¹ This is not the venue in which to summarize the excellent and growing literature on historical political economy in different times and places, but it might be worthwhile, in light of contemporary challenges, to meditate briefly on certain recurring themes at the intersection of history and economics.¹² Erik S. Reinert has referred to periodic turning points in the historiography of economics—and specifically the way in which political economy or economics has formalized to the point of eventual rupture and crisis, invariably with real-world consequences, only to return to more historical and empirical methods—as "1848 Moments," after the crisis of political economy around the time of the 1848 Revolutions that shook large parts of Europe at the time (E.S. Reinert 2011, pp. 23–38). And he has fittingly quoted John Stuart Mill's (1848) *Principles of Political Economy* to highlight the degree to which not merely intellectual fashion but what might be seen to constitute economic common sense itself is inflected by such paradigm shifts:

⁹For an intriguing take on the undead nature of economics, see also Quiggin (2012).

¹⁰Discussed also in E.S. Reinert (2016, p. 337 and *passim*). For a now striking meditation on how increasing returns for a long time was sacrificed on the altar of mathematical simplicity, see Krugman (1994, pp. 39–58).

¹¹See, from different perspectives, Perez (2003) and James (2009).

¹²For a remarkable recent selection of essays including a variety of historical approaches, see, however, Reinert et al. (2016).

It often happens that the universal beliefs of one age of mankind—a belief from which no one was, nor without an extraordinary effort of genius and courage *could* at the time be free—becomes to a subsequent age so palpable an absurdity, that the only difficulty then is to imagine how such a thing can ever have appeared credible... It looks like one of the crude fancies of childhood, instantly corrected by a word from any grown person. (Mill 1848, p. 3)¹³

What follows draws inspiration from this insight to reconsider the nature and, arguably, continuing—or, at least, yet again renewed—relevance of historical political economy. For again and again, specific ideas, suggestions, or observations are proposed, gain traction, and are ultimately elevated to the point of generalized, universal validity or even natural law and religious dogma before they frequently fail—sometimes with downright catastrophic consequences—in the face of real-life events and contextual differences, of black swans and swans that were long ago discovered, cataloged, and subsequently ignored or simply forgotten.¹⁴ There is one area where this has happened with remarkable frequency: the cluster of assumptions, models, and proposals unified around phrases and ideological constellations such as “*laissez-faire*,” “spontaneous order,” the exquisitely opaque yet all-round favorite slogan of “free trade,” and what one eighteenth-century writer, with striking assumptional transparency, called “the economic hand of God”; the sentiment, in short, that the social world quintessentially is characterized by providential harmony and that unmitigated individual self-interest therefore best can provide for worldly melioration *for everyone*.¹⁵ Deep down, our never-ending debate over the necessity or not of economic regulation masks one of the most fundamental questions facing humanity: Whether reality itself is imbued with an intrinsic, preordained tendency toward social advantage or improvement, or whether it results, however haphazardly and imperfectly, from purposeful human organization; and though this cannot be neatly generalized, it remains that many notable historical economists have tended to deeply distrust arguments for providential order.¹⁶

¹³On common sense in intellectual history, see Rosenfeld (2011). The literature on paradigm shifts has of course exploded in the wake of Kuhn (1962) on which see Isaac (2012).

¹⁴On black swans, see of course Taleb (2007).

¹⁵Most of these phrases are ubiquitous, but for “the economic hand of God,” in particular, see Facchini (1763). For different perspectives on invisible hands, see among others Harrison (2011, pp. 29–49), Samuels et al. (2011), and Sheehan and Wahrman (2015).

¹⁶The literature on this topic is as vast as the subject matter, but see also the classic Viner (1977). On the theme of religion and economics, see furthermore Nelson (2014, p. 346) and Agamben (2009). For concrete arguments that a divinity literally made the world so that markets should be free, see the long arc from Bencivenni (1774, pp. 292–294, 329–330, 342–345, 387–390) on the authorship of which see Pozzetti (1810, pp. 100–101), to McCloskey (2006, pp. 38, 438, 462). For providence-skeptical historical economists, see, for example, Balabkins (1988, p. 75).

Not surprisingly, scholars have written entire libraries about the rise and fall of moments such as that described by Gay: moments, that is, in which historically minded economic thinkers have warned of the gradual process by which abstractions may end up being confused with reality, of impending crises resulting from undue faith in the application of theoretical maxims, of excessive faith in what Gay called the “absolutism of theory” and the Austrian economist Friedrich Hayek later liked to laud as “the primacy of the abstract,” and more broadly in the salubrious consequences of “letting do,” or *laissez-faire* (Gay 1941, p. 9; Hayek 1978, pp. 35–49).¹⁷

Already at the very origins of coherent economic writing in early modern Europe, “history” and “experience” were frequently summoned as the ultimate arbiters of authority in debates regarding political economy, and if one accepts the verdict of the great Harvard economist Joseph A. Schumpeter, the first ever work of “economics” took the form of the lawyer from Cosenza Antonio Serra’s 1613 *Short Treatise on the Causes that Can Make Kingdoms Abound in Gold and Silver even in the Absence of Mines*, itself an analytical meditation on the relative values of “theory” and “experience” in formulating economic policy. Serra’s subsequent failure to impress Neapolitan authorities, who decided to follow the advice of his intellectual opponent Marc’Antonio de Santis, was a sign of things to come (Serra 1613/2011).¹⁸

Gay, however, chose to focus on the better-known and more consequential case of the French Physiocrats. A royal physician, the group’s leader François Quesnay first made a name for himself as a scholar of bloodletting, the practice of which, if nothing else, at least outlived the phlogiston theory (Quesnay 1730).¹⁹ Beginning in the 1760s, he began to attract a cohort of followers—most famously the Marquis de Mirabeau—to found one of the first and most coherent “schools” of economic thought in history.²⁰ Simultaneously a grandiose plan to pacify international relations in the wake of the global Seven Years War; a neo-feudal capitalist ideology lionizing landed elites; a path-breaking theoretical analysis of the circular flows

¹⁷On which see Romani (2004, pp. 37–65). That “economics” depended on the interplay of history on the one hand and theoretical abstraction on the other was mainstream at the time, see, for yet another example, Einaudi (2017, p. 1). For a timeless warning of ultimately believing the “fictive” nature of theoretical assumptions, see also Einaudi (1942–43, pp. 51–52) and Röpke (1942).

¹⁸On which see S.A. Reinert (2016, pp. 112–142). On Serra as the first economist, see among others Schumpeter (1996, p. 195).

¹⁹On which see among others Groenewegen (2001, pp. 93–115). On the phlogiston theory, once at the apex of scientific certainty, see among others the essays in Conant (1950).

²⁰The literature on Physiocracy is vast, but see, for a classic work on the subject Kaplan (2015a, b). More recently, see Shovlin (2007) and Sonenscher (2009).

of production, consumption, and investment; and a clarion call for “legal despotism” and *laissez-faire*, Physiocracy, which literally means the “rule of nature,” gained extraordinary fame and notoriety throughout Europe in the 1760s and early 1770s. Yet at its conceptual core lay a series of bold but unrealistic assumptions that, though justifying the theoretical architecture and legitimacy of the movement, turned out to be catastrophic when tested in practice. Not only did the Physiocrats argue, against the experience and example of the world’s wealthiest realms and cities, that agriculture was the sole source of a state’s wealth, but they also, and more immediately dangerously, assumed that buyers and sellers inevitably would find each other at the right price in a world of frictionless transactions beyond time and space—a world very different from the logistically still developing and regionally diverse France of the eighteenth century. Nonetheless, Quesnay believed that historical precedents presented merely “an abyss of confusion” from the perspective of political economy, in many ways establishing a conceptual tension between history and theory that periodically comes to dominate economic analysis, and offered Physiocracy as an alternative to temporal awareness applicable “everywhere.”²¹ Given the stakes were nothing less than the people’s subsistence, this would prove to be a perilous gambit.

Close to individuals in power in the French state apparatus, Quesnay’s group stood behind the great French liberalization experiments of the period, revolutionizing not merely the regulation of the grain trade but the very social contract itself. To borrow the phraseology of Oscar Wilde, people overnight “found themselves indeed so absolutely free that they were free to starve” (Wilde 1891/2001, p. 131). For though entrepreneurs were incentivized by the deregulation, French markets were simply not integrated enough, territorially or socially, for ideal market mechanisms to do their job at the time, which, when combined with bad harvests, resulted in veritable subsistence trauma (Kaplan 2015a, pp. 689–690).

Though critical of the Physiocrats’ endeavor, Adam Smith also considered them “perhaps the nearest approximation to the truth that has yet been published upon the subject of political economy,” thus seemingly giving them his blessing as founders of economics; a position they still enjoy in most histories of the discipline (Smith 1776/1976, vol. II, p. 199).²² In the words of the brilliant Neapolitan political economist Ferdinando Galiani, however, who expressed what many across the European world felt, Quesnay

²¹On Physiocracy and history, see S.A. Reinert (2011, p. 284).

²²On Smith’s decidedly critical stance on Physiocratic reforms, see Hont (2005, p. 100).

was nothing less than “the Antichrist,” Physiocracy a deeply dangerous and ahistorical theory that, as he explained in his bestselling 1771 *Dialogues on the Grain Trade*, was based on such absurd assumptions that it inevitably *had* to create real suffering when put into practice. It was not just that some economic ideas turned out to be bad in certain situations, it was that lives were lost as a result of them as the Physiocratic reforms ended in dearth, civil disorder, and, as Galiani reported, even death (Galiani 1770/1818; Galiani 1979). The remedy, he argued, could only be a grounded, historically aware political economy, one for which the hardest part was not the theoretical elegance of its “economic” aspect but rather the practical applicability of its “political” counterpart; as Galiani’s mouthpiece in the *Dialogues* put it, “the example of the past indicates what lies in the future” (Galiani 1770, p. 283).²³ Some of the greatest minds of the period subsequently lent their pens to the cause of Antiphysiocracy instead, and it is by now evident that in practice Physiocracy was subject to a massive backlash in the later eighteenth century, becoming *far* less influential in eighteenth-century Europe than many hitherto have assumed, all while it undeniably greatly affected the development of economic theory as such.²⁴

But there have been numerous other such moments in which theory has overshot the possibilities of practice, causing varying degrees of damage and inviting historicist critiques, and though it of course would be far too simplistic to reduce the history of political economy to just this, the dynamic certainly represents a significant pattern in the discipline’s past. Friedrich List’s epochal 1841 *National System of Political Economy*, the influence of which is difficult to exaggerate, did something similar to Galiani on the eve of the 1848 Revolutions, offering a devastating attack—in the name of historical experience—on the assumptions and consequences of what has come to be called British free-trade imperialism.²⁵ As List showed large parts of the world, there simply turned out to be very limited correspondence between the trade theories promoted by British economists throughout much of the nineteenth century on the one hand and the ruthlessly interventionist practices that had led the British Empire to global supremacy on

²³See for a discussion also Kaplan (2015a, p. 683) and S.A. Reinert (2011, p. 283).

²⁴On European Antiphysiocracy, see now the essays in Kaplan and S.A. Reinert (2018, forthcoming).

²⁵See the frequently translated and republished List (1841). The literature on List is massive and growing in light of the recent crisis, but see still Tribe (1995, pp. 32–65) and Hont (2005, pp. 148–155). For an example of the recent flurry of publications, see Wendler (2015). On British free-trade imperialism, see still Semmel (1970). For the geographical limits to List’s argument, see Boianovsky (2013, pp. 647–691).

the other.²⁶ So, as José Luís Cardoso and Michalis Psalidopoulos recently have argued about the European world at the time, “the more in need of catching up, the more the historical method was put to use to work out strategies of deliberate industrialization and development in various countries,” a strategy later emulated with great success by the likes of Japan, Singapore, South Korea, and Taiwan in the twentieth century.²⁷

Numerous “historical schools” in any case emerged in the later nineteenth century across the Old and New Worlds, as well as in Japan, spearheaded by the most famous one of all, the German Historical School of Economics.²⁸ This school is, in turn, habitually divided into the “Older School,” which included the likes of Wilhelm Roscher, Karl Knies, and Bruno Hildebrand, and the “Younger School” represented above all by Gustav von Schmoller, Karl Bücher, and Adolph Wagner, with recognized antecedents in List as well as in the deeper academic and practical traditions of German Cameralism, and crowned with luminary successors like Werner Sombart and Max Weber.²⁹ Any reference to “historical political economy” today will, in one way or another, draw on the disputed legacy of this complex and multifaceted tradition, which, it is worth noting, never constituted a “sect” in the sense that the Physiocrats formed one. If many historically minded economists have shared certain approaches and perspectives across different times and places, they have seldom demonstrated great intellectual homogeneity or, for that matter, durable and coherent institutional hierarchies; there has never been only *one* mainstream method of historical political economy, any more than historians share *one* uncontested historical narrative, and this

²⁶For an extended meditation on this tension, see S.A. Reinert (2011), but this is by now a mainstream argument. See, from very different perspectives, Brewer (1990), E.S. Reinert (1999, pp. 268–326), developed in E.S. Reinert (2007), Chang (2002), Nye (2007), and Pincus (2009).

²⁷Cardoso and Psalidopoulos (2016, p. xxvii). See also Johnson (1982), Wade (2003), Austin (2009), and Woo-Cumings (1999).

²⁸The literature on the German Historical School is vast, but see, in addition to the previously mentioned Grimmer-Solem (2003), Tribe (2002) as well as the essays in Shionoya (2005). On its wider influence see the essays in Cardoso and Psalidopoulos (2016), and for the American case the classic Balabkins (1988) as well as Herbst (1965) and Bateman (2011, pp. 108–124). For the Norwegian case, see Fasting (2014). For the case of Japan, see Nishizawa (2003, pp. 155–172), Yanagisawa (2003), as well as the essays in the classic Sugiyama and Mizuta (1988). On the larger transformation of economics in academic life in the period, see the project described in Claeys et al. (1993, pp. viii–x), and the literature there addressed. From the perspective of the history of political thought, see now McDaniel (2018).

²⁹For a brief overview, see Hagemann (2016, pp. 223–235). For caveats regarding the chronology of the German Historical School, see Lindenfeld (1993, pp. 405–416). The literature on German Cameralism is also flourishing, but see particularly Tribe (1988), Wakefield (2009), and S.A. Reinert (2011, pp. 233–245).

may simultaneously be one of the greatest strengths as well as weaknesses of historical awareness in the social sciences.³⁰

The historiography of the German Historical School has, indeed, long emphasized the importance of the *Methodenstreit*, or “Battle of Methods,” between the historicist Schmoller and the Austrian marginalist economist Carl Menger, a supposed Manichean battle between history and theory, darkness and light.³¹ More recently, Keith Tribe has argued that the actual debate was less about the virtues of historicism as such than over the direction of social sciences in the second half of the nineteenth century (Tribe 2002, p. 23; Tribe 1995, pp. 74–76 and *passim*). As the British economist John Neville Keynes, father of the better-known John Maynard Keynes, described the tensions of his discipline already in his 1891 *The Scope and Method of Political Economy*,

the main points involved in controversies about economic method may be indicated in outline by briefly contrasting two broadly distinguished schools, one of which describes political economy as theoretical, abstract, and deductive, while the other describes it as ethical, realistic, and inductive. (Keynes 1891, pp. 9–28)³²

History would continue to inform a wide spectrum of approaches to political economy in the European world and beyond into the twentieth century, and increasingly so in the wake of economic crises and uncertainty, though individual practitioners put divergent and frequently idiosyncratic emphases on the weight of past experience.³³

3 Cycles of Globalization

It was in such a context that the eminent historical economist and later Archdeacon of Ely William Cunningham, lecturer at Harvard and fellow of Gonville & Caius College, Cambridge, recorded one of the most

³⁰Grimmer-Solem and Romani (1999, p. 353). The question of whether or not the German Historical School was ever a “school” even was recently raised. See Pearson (1999, pp. 547–562), for rebuttals against which see Caldwell (2001, pp. 649–654) and Tribe (2002, p. 2n3). On objectivity and history more generally, see still Novick (1989).

³¹The literature on this is, again, vast, but see Schumpeter (1996, pp. 814–815).

³²On John Neville Keynes, see Deane (2001).

³³On the explicit use of historicism to criticize more theoretical economics in the USA, for example, see Barber (2003, pp. 231–245, particularly pp. 240–241).

famous moments of historicist vindication in his 1904 *Rise and Decline of the Free Trade Movement*, a funeral oration of sorts for nineteenth-century globalization (Cunningham 1904).³⁴ Driven by the solidification of Western imperial structures and by key technological developments like the telegraph, the world had embarked on an unprecedented (quantitatively if nothing else) period of galvanized trade, travel, and investment during the Victorian era.³⁵ Yet, as List and others had warned, the benefits of these dynamics were rather unevenly distributed from a planetary perspective, and internal dynamics eventually led to the unwinding of this first great period of modern globalization; indeed, both trade and international capital flows—in many ways litmus tests of global capitalism—peaked around 1914 and would not recover again until the 1970s.³⁶ According to Cunningham, who reiterated earlier peripheral critiques from the very core of the world economy, it was thus high time in the early twentieth century to reconsider “the conduct that is *expedient*, with reference to the material prosperity of human beings,” for it seemed clear to him that many of the “economic principles” that long had been ascendant in Britain and elsewhere “might be fitly relegated to Saturn” (Cunningham 1904, pp. 2, 4).³⁷ Most pressingly, he argued,

There is indeed a wide-spread superstition that if things are only left alone they are sure to work out in the best possible way and to the greatest happiness of the greatest number. Reliance on unrestricted individual competition—the war of all with all—as the essential condition of improvement appears to derive some support from the Darwinian doctrine of the survival of the fittest. But physical nature and human society are so far distinct spheres that we cannot argue directly from one to the other. (Cunningham 1904, pp. 149–150)³⁸

³⁴Though Cunningham himself felt he was changing his mind in light of recent events, p. [vii], he had always been oriented toward a historical political economy generally speaking, see, for example, Kadish (1993, p. 81 and *passim*).

³⁵See from different perspectives on this moment O’Rourke and Williamson (1999), Harper (2002, pp. 141–166), Mattelart (2000), Wenzlhuemer (2013), Osterhammel (2014), and Rosenberg (2012). For a popular account, see Wilson (2016). For an insightful theoretical take on the mechanisms of this, see again Perez (2003).

³⁶See among others the classic Bairoch and Kozul-Wright (1996). On this first grand moment of globalization, see among others O’Rourke and Williamson (1999).

³⁷The relocation of *laissez-faire* to distant planets is old news, see, for example, Genovesi (1764, vol. I, pp. 292–93n).

³⁸On the history of Darwinian influences on economics, see among others Hodgson (2004).

Historical experience had made clear that though the economic transformations of the recent century—the onset of real development in parts of the world—had been extraordinary, there in practice *were* some “malign effects of cosmopolitan competition” that had to be addressed politically for globalization to be sustainable (Cunningham 1904, p. 161). First of all, Cunningham followed List in identifying “the deadening influence” of “English industry and commerce” on other countries, the uneven playing field at the beginning of this period of globalization having allowed “an economically strong country to crush others that were, at the time, economically weak,” systematically dividing the world into industrializers on the one hand and providers of raw materials on the other (Cunningham 1904, p. 160). In real time, then, perspicacious observers noted that, as Jeffrey G. Williamson would put it much later, the first modern period of globalization truly was “when the Third World fell behind,” though a gradual divergence had begun to materialize already in the early modern period (Williamson 2011).³⁹

Equally importantly, however, Cunningham believed there were mechanisms internal to the nature of international competition that eventually could turn against core countries as well. Britain’s heyday as the proverbial workshop of the world had undeniably brought “the standard of comfort of the Lancashire factory operatives to a very high plane,” but Cunningham found it “doubtful” whether this could “be maintained in the face of cosmopolitan competition” (Cunningham 1904, p. 162).⁴⁰ The relentless pressures of cost competition between countries with vastly different wage levels and expectations with regard to living standards would eventually hurt the working classes in the world’s wealthiest countries, and, as he argued, “there is a danger that the position of the labourer in civilized countries will be seriously injured, if the Englishman is not careful to protect himself against the malign results of cosmopolitan competition.” That said, given the nature of globalization, Cunningham saw “even greater danger of the oppression of coloured labour by European capitalists in tropical lands” (Cunningham 1904, pp. 162–163).⁴¹ In his bleak vision, global labor would increasingly

³⁹The construction of a worldwide dataset of such estimated GDP values had been the brainchild of the late Angus Maddison, now continued by an international team of scholars. See The Maddison Project, <http://www.ggd.net/maddison/maddison-project/home.htm>. On recent updates to the dataset, see Bolt and Van Zanden (2014, pp. 627–651). For a rather different argument, see a literature best represented by Pomeranz (2000, pp. 165, 276 and *passim*).

⁴⁰On the vast difference between Gross Domestic Product per capita in the UK and the rest of Europe, let alone the world, in the late nineteenth century, see Maddison (2007, p. 382).

⁴¹On the much longer history of theorizing about cost-competition, see Hont (2008, pp. 243–323).

suffer as a small elite reaped the profits of world trade, and geopolitics rendered more uncertain as individual countries eventually realized that “English interests had led to the adoption of Free Trade, and declined to admire this country as an exponent of international morality” (Cunningham 1904, p. 181).⁴²

However eerily Cunningham’s words reflect some of the turmoil of our own time, it is worth clarifying that he did not wish—the way many do today—for the enterprise of globalization (or for that matter many of the findings of past economic inquiry) to collapse; he was not one of history’s “grim prophet[s] of national isolation,” far from it.⁴³ Rather, he hoped that past experiences might lead to a more measured approach to international political economy—one focused more explicitly on inequalities of wealth and power—so that the process itself might be managed to benefit a wider constituency and thus remain viable over time; and he was deeply worried about the dangers of throwing the baby out with the proverbial bath water:

Are we forced either to follow economic authorities blindly, or to repudiate them altogether? Is there no mean between the exaggerated deference which was shewn to the maxims of Political Economy in the middle of last century, and the undue disparagement to which it is exposed in the present day? (Cunningham 1904, p. 4)

Much of what Cunningham feared would indeed come to pass in the next few decades, and the contemporary resonance of his observations as the last grand period of globalization began to unwind cannot fail to catch our attention. The Great Depression again galvanized the study of a more historically grounded political economy and of economic history generally—the way crises had done before and have done since.⁴⁴ Not unlike Cunningham, Gay’s former student William T. Jackman also relished the renaissance of “the historical economist” at the time, but he, too, quickly observed that there

⁴²On the truth of this analysis, in the complex history of labor conditions under globalization, see among others Bonanno (2013, pp. 21–41, particularly p. 37).

⁴³The phrase was used to compare Gunnar Myrdal and, by reflection, large parts of early development economics, to Johann Gottlieb Fichte by Heilperin (1960, p. 149). On Fichte’s actual political economy, see Nakhimovsky (2011). More recently, isolated states are seen as nothing less than cancers in the global body; as Harold James argues, if countries “cannot export goods and participate in international society, they will not remain simply self-contained in a ghetto of misery and inhumanity. They will export their problems: their terrorism, their violence, and even their diseases.” See James (2001, p. 217).

⁴⁴See, for example, Boldizzoni (2011, p. 3 and *passim*) and Kadish (1989, pp. 221–245). On popular turns to history in the face of crises, see also James (2001, p. 65).

was a real danger that, in overreacting to the perceived practical failures of economics, a proposed remedy might make things even worse. Jackman was quite clear, for example, that one would not “obtain an answer in the crashing of great business organizations, which were built up in years of prosperity and were supposed to be invulnerable” (Jackman 1932, pp. 4, 15).⁴⁵ Similar fears and preoccupations of course drove John Maynard Keynes’s project to save liberal democratic capitalism from the clutches of fascism during the Great Depression; “to cure the disease,” as he put it, “whilst preserving efficiency and freedom” (Keynes 1933, p. 350).⁴⁶ And his solution was precisely to prudently step back from bold yet untenable assumptions and reground political economy in experience, in what his colleague Joan Robinson would call “historical time” (Robinson 1978, pp. 126–136).⁴⁷

Mark Twain may never actually have claimed that “history does not repeat itself, it rhymes,” but the sentiment is worth quoting nonetheless (O’Toole 2014).⁴⁸ For though the exact details of moments such as those described by Gay of course differ greatly across time and space, their underlying mechanisms, and sometimes terrible consequences, cannot but illuminate. Today, the world’s bookstores are again lined with historical warnings and explanations—Thomas Piketty’s unlikely global publishing phenomenon *Capital in the Twenty-First Century* being a sure sign of our times—and academic work and political debates alike resound once more with calls for a historical political economy (Piketty 2014).⁴⁹ Indeed, even laymen now claim knowledge of the history of economics is necessary for informed citizenship.⁵⁰ Though this trend was evident for years before the economic crisis of 2008, there can be no doubt that this renewed interest in historical economics was galvanized by the ongoing consequences of the so-called Great

⁴⁵On Jackman, see Innis (1952, pp. 201–204). On the no less relevant Innis, see Watson (2007).

⁴⁶See, for example, Keynes (1936, p. 381). The literature on Keynes also exploded with the financial crisis of 2008, but see Skidelsky (1983–2000) as well as the aptly titled Skidelsky (2009) and Backhouse and Bateman (2011).

⁴⁷On Robinson see Harcourt and Kerr (2009).

⁴⁸The first variation of the quote may have been in “Art. I. [Review of A. N. Mouravieff’s *A History of the Church in Russia*],” *The Christian Remembrancer*, October 1845 [vol. 10, London: Burns, 1845], pp. 245–331, p. 264: “*history repeats her tale unconsciously, and goes off into a mystic rhyme; ages are prototypes of other ages, and the winding course of time brings us round to the same spot again.*”

⁴⁹On which see among others Hudson and Tribe (2017).

⁵⁰Barnard (2013, p. 9) claiming someone ignorant of the history of economics risks being a “cittadino coglione,” a less vulgar but also less colorful rendition of which would be “stupid citizen.”

Recession.⁵¹ Yet again, leading economists are drawing inspiration from Alexander Hamilton's dictum that, in matters of political economy, "the practice of mankind ought to have great weight against the theories of individuals" (Hamilton 1791, p. 132).⁵² And global trade has once more begun declining in volume, unequal gains from trade over the preceding decades of widespread and often very rapid deregulation having roused inequality and incited social unrest on a planetary scale, leading us to another period of renewed populism in the old core of the world economy.⁵³

If *The Economist* claims it "fatuous" to compare our times to the 1930s, the legendary hedge fund manager Ray Dalio recently argued that precisely that decade offered a mirror for our own times, reminding us that "although circumstances like these have not existed in our lifetimes, they have taken place numerous times in recorded history," while the economic historian Niall Ferguson suggests we are rather experiencing a period similar to that following the global financial crisis of 1873. Either way, an increasing number of observers have again begun to engage with the politics of economic rhythms and the rhymes of historical political economy.⁵⁴ Calls for political economy to be more clearly grounded in historical experience, and more attentive to contextual differences in its application as policy, are, in other words, about as old as the broadly defined discipline itself, and what is surprising is less the fact of their recurrence than how quickly the need for temporal awareness fades.

4 Approximate Accuracy

The great Chicago economist Jacob Viner once considered naming one of his essays "Why has economics always had a bad press?" though after listing endless jeremiads against his discipline across the centuries he nonetheless

⁵¹"The financial crisis of 2008," Cardoso and Psalidopoulos (2016, p. xiv) have rightly observed, "has revived interest in economic scholarship from a historical perspective." For an earlier, similar statement, see, for example, Peukert (2001, pp. 73–74), and even the memorable warning that "graduate programs may be turning out a generation with too many *idiot savants* skilled in technique but innocent of real economic issues" in Krueger et al. (1991, pp. 1044–1045).

⁵²Though they do not quote that particular passage by Hamilton, it deeply influences Cohen and DeLong (2016) and similarly Rodrik (2016).

⁵³On current trade flows, see Appelbaum (2016). For just two examples of what undoubtedly will become a cottage industry, see Judis (2016) and Mishra (2017).

⁵⁴"League of Nationalists" (2016) and Dalio (2016). On Dalio see still the portrait by Cassidy (2011) and, for a more academic use of comparisons with the 1930s, O'Rourke (2016, pp. 110–114) and Ferguson (2016).

concluded that, “on average’... the American economist has been dealt with fairly by the American public” (Viner 1963/1991, p. 227). Therein lay the rub, for the dominant word here is “average.” Indeed, there have been long periods in which economics has enjoyed a far better press, not to mention greater social status, pecuniary recompense, and access to power for its practitioners, than most if not all other disciplines in the humanities and social sciences.⁵⁵ Yet Viner was indubitably right that economics *has* enjoyed periods of very bad press, and the deeper question might be why it continues to experience such fluctuating extremes of opinion, good and bad (Viner 1963/1991, pp. 246–247). The media seldom turns *en masse* to sociology say, or for that matter to archaeology, in either adulation or vilification, and this is of course also because economics, as the ostensible science of humanity’s material organization, is thought to matter *more* for the majority of human beings, therefore by necessity playing a game of much higher stakes that most other disciplines can lay claim to.

The methodological musings of Nobel Laureate Paul Krugman, in a classic article on the decline of “high development theory” as championed by people like Paul N. Rosenstein-Rodan, Gunnar Myrdal, Raul Prebisch, and Albert O. Hirschman in the postwar period, may be illuminating from this perspective. The group, he lamented, had chosen to remain wedded to approximate, historical methods in political economy and reject the renewed “drive towards rigor” embraced by the “mainstream” of economics since the late 1950s. The crux of the matter lay in the question of whether to engage with economies of scale in economics; Krugman’s “mainstream” preferred to assume away differential returns because they were too difficult to model with the mathematical tools of the time, while “high development” theorists thought them too important for understanding the process of comparative economic development to ignore simply because methodologically elusive (Krugman 1995, p. 40).⁵⁶

As a metaphor for the development of economics in this case, Krugman drew on the experience of European mapmaking in Africa. Early maps of the continent were replete with cities, mountains, rivers, and the strange creatures cataloged by Pliny the Elder. Gradually, however, as technological tools improved and empirically sounder observations of Africa became available during the so-called age of exploration, the map of Africa was first

⁵⁵See recently Fourcade et al. (2015, pp. 89–114).

⁵⁶On the continuing relevance of this moment though, see Meier and Stiglitz (2001) and Sunna and Gualerzi (2016).

emptied entirely before gradually being repopulated with a more trustworthy topography. The same, Krugman has argued, is true of economics, which sometimes necessitates a “loss” of real knowledge regarding a subject matter before it can gain more: “Model building, especially in its early stages, involves the evolution of ignorance as well as knowledge.” Increasing and diminishing returns to scale were, similarly, put aside until they could be understood with better tools (Krugman 1995, p. 50).⁵⁷

Two recent examples of this mechanism can help both justify Krugman’s point and underline some of its collateral consequences. For, sometimes, it takes a very long time indeed to prove with rigor what once was known intuitively. Though the languages for describing this have evolved over time, a core assumption of economics has, for example, for centuries been that markets adapt, self-correct, and tend toward equilibria. One of the most influential statements of this doctrine can be found in Smith’s passages in favor of “freedom of trade,” among which he argued that “though a great number of people should... be thrown all at once out of their ordinary employment and common method of subsistence,” for example by exposure to international competition, “it would by no means follow that they would thereby be deprived either of employment or subsistence.” Why? Because, looking to the example of the last great war, Smith noted that “more than a hundred thousand soldiers and seamen, a number equal to what is employed in the greatest manufactures, were all at once thrown out of their ordinary employment,” yet they were absorbed by other occupations, and “not only no great convulsion, but no sensible disorder arose” (Smith 1776/1976, vol. I, p. 492).⁵⁸ Gradually, over time, Smith’s argument became ever more formalized as the Pareto-optimizing nature of international trade, while critics, who often appealed to common sense, largely were ignored. Yet, as David H. Autor, David Dorn, and Gordon H. Hanson recently have argued, the entrance of China into the World Trade Organization indeed caused substantial and durable unemployment in the USA, at the very least demonstrating, like Galiani did centuries before them, that markets may need more *time* to adapt than ordinary people are willing to put up with, and that this may have unfortunate human and political consequences (Autor et al. 2016, pp. 205–240).

⁵⁷For a rather less forgiving reading of the story, see Chitonge (2015, pp. 1–3 and *passim*).

⁵⁸For a transparent restatement of the argument, see Smith (2015, p. 279) and Evensky (2015, p. 118).

From a slightly different perspective, scholars have for centuries suspected that Napoleon's continental system contributed to the more rapid industrialization of France as British imports were substituted with domestic products.⁵⁹ As an anonymous French planter in Venezuela succinctly put it in 1851, "the blockade, which was for the continent in general, but for France in particular, a source of prosperity, by favoring the several nations of Europe in the development of their manufacturing industry, gave a fatal blow to the commerce of Great Britain" (Anonymous 1851, p. 259). Contemporary observers had noted these effects, and subsequent scholars gathered this had been the case on the basis of qualitative measures of analysis. It was an example of infant industry protection by default, a policy measure not unlike those later proposed by the likes of Hirschman and early development economics. Yet it long went against a standard theoretical argument regarding the fallacies of protectionism, and very much suffered the fate of Krugman's hypothetical rivers in Africa, the whereabouts of which were roughly known but still exorcised until it eventually was reintroduced with more sophisticated methods at a later date. In this case, the industrializing consequences of the Napoleonic Blockade were only shown with sufficient rigor to be reconsidered by Réka Juhász more than two centuries later (Juhász 2014).

One can, of course, just as easily fetishize paralyzing complexity as one can mathematical elegance, and the deeper methodological problem of political economy may be our seeming need to pick one or the other. It cannot be doubted, for example, that we now have answers to many old questions that are incomparably superior because of ever more sophisticated theoretical tools. Yet, at the same time, one must be allowed to question and assess the costs of such an unforgiving approach to economic mapmaking. In relation to the specific examples mentioned above, plausibly effective policies have not merely been sidelined but ridiculed for long periods of time, with very real human consequences. And the issue of course remains how to engage with questions for which one may *never* have the appropriate tools to produce sufficiently rigorous answers, or for which such methods ultimately are inappropriate; as Abraham Maslow warned, "it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail" (Maslow 1966, p. 15). Because of the way in which it shapes public policy and administration, such questions are far more pressing for matters of political economy than for most other fields of learning. Few people will prosper or flourish in material terms based on a revolutionary reading of Shakespeare's

⁵⁹On these events, see now the essays in Aaslestad and Joor (2014).

Othello or the discovery of a new long-extinct *hominid*, no matter what previous intuitions have to be discarded and for how long, but the same is simply not true with regard to the economic realm, where life literally is on the line in the contest of knowledge, and where the consequences of willful ignorance are infinitely more consequential. And if the above examples are indicative of anything, it may safely be argued that intuition fruitfully can continue to be considered while methodological tools are sharpened; to return to Gay's point, the relationship between experience and theory ought to take the form less of an antithesis than of a profitable division of labor.

There are, however, further ways in which Krugman's geographical analogy remains apt for appreciating the relationship between history and economics. In the eighteenth century, theorists often fell back on stadial theories of history, which offered frameworks not merely for understanding time but also space; traveling to other continents from Europe meant, for many in the early modern world, voyaging between different historical evolutions of human institutions.⁶⁰ One could not, some began noting, very easily project one's assumptions, for development differed temporally as well as geographically. This was the essence of the great Neapolitan philosopher Giambattista Vico's historicist critique of natural law in the early eighteenth century; for too long writers had assumed that man in the state of nature was like "modern man," whereas rigorous historical analysis made clear that humans, languages, laws, and societies had developed together over time. Economic and political interventions had necessarily to take account of the diverse trajectories of various times and places (Vico 1744/1984, p. 95 and *passim*).⁶¹ In conscious opposition to the contemporary vogue for Cartesian mathematical reductionism, and deduction from axioms, Vico instead suggested a genetic approach to knowledge emphasizing the crucial importance of "history" and "context" for "science."⁶²

Similar critiques have often lingered behind calls for historical political economy as well, as evident even from the title of Nobel Laureate Gunnar Myrdal's (1957) *Economic Theory and Under-Developed Regions*; economic theories produced in the so-called first world could not simply be translated to regions with extremely divergent developmental paths (Myrdal 1957).⁶³ He expounded upon this in his essay "An Economist's Vision of a Sane World,"

⁶⁰See among other works on this tradition Meek (1976) and Palmieri (2016).

⁶¹On Vico, see Robertson (2005). On Vico and economics, see still Tagliacozzo (1969, pp. 349–368).

⁶²Vico even applied these methods to himself in his Vico (1725–28/1944, pp. 113, 120 and *passim*). See also Vico (1708–9/1990).

⁶³For context, see also Appelqvist (2014, p. 72).

In regard to the development problems of underdeveloped countries, I feel that we have been living, and are still living, in a fool's paradise. We have formed opinions which are heavily biased in an optimistic direction. The careless application of Western economic theories and models that are not adequate to reality in underdeveloped countries has contributed to this by making it possible to disregard levels and modes of living, and attitudes and institutions—that is, the social facts which raise obstacles and inhibitions to development. (Myrdal 1973, p. 99)

This was precisely the sort of guarded, approximate approach to political economy that, as Krugman explained, increasingly fell out of favor over the subsequent decades. This came, however, at a cost, for if Milton Friedman famously defended his approach to “positive economics” by way of John Neville Keynes’ dictum that it dealt with “‘what is’, not with ‘what ought to be’,” the problem was that many common assumptions of economics derived from reality as it “was” perceived to be somewhere entirely different from where it often was deployed; in short, what “is” in matters of political economy varies greatly across time and space, and scholars are today again beginning to emphasize the degree which academic scholarship tends to reflect the realities of so-called WEIRD countries, that is, those that are “Western, Educated, Industrialized, Rich, and Democratic.”⁶⁴ If axiomatic assumptions of economics such as “perfect information” seem exaggerated even from the perspectives of Oxford and Palo Alto, for example, they take on a nearly surreal air when considered from the banks of Angola’s Okavango River or in the shadow of Bhutan’s majestic Gangkhar Puensum.

In this vein, Krishna Palepu and Tarun Khanna have suggested the concept of “institutional voids” to address the palpable and consequential differences between member states of the Organization for Economic Co-operation and Development, in which so much of our economic and business knowledge is generated, on the one hand, and the reality on the ground in so-called emerging markets on the other hand. On the basis of experiences in WEIRD countries, for example, one may risk assuming the existence of efficient infrastructure, regulatory frameworks, credit card systems connecting buyers and sellers, or for that matter market research firms where no such things exist in large parts of the world (Palepu and Khanna 2010). Yet such differences of course go far beyond the mere functioning of

⁶⁴Friedman (1953, p. 4) drawing on Keynes (1891, plausibly pp. 4, 49, but also *passim*), recalling the famous distinction lionized by Hume (1739, p. 335). The acronym “WEIRD” was popularized by Diamond (2012, pp. 8–9 and *passim*).

markets, embracing our most basic assumptions regarding the mechanisms and dynamics of human coexistence as well.⁶⁵ The academic debate over whether certain countries are nation-states or state-nations is, to name one further example, significant, but it is useful to remind ourselves that many post-colonial political communities are struggling with both at once, a process which invariable changes many of the proverbial rules of the game.⁶⁶ Historical political economy might be understood to apply a similar historicist caveat more widely, and though the phrase offers no definitive signifier and no institutional or even sociological home, it still suggests a fruitful orientation for appreciating possible relations between economic theory and practice.

5 Present Pasts

The remarkable Italian economist, journalist, wine-maker, and Prime Minister Luigi Einaudi, for example, whose preference was decisively for economic liberalism while steadfastly maintaining that economics remained a “humanistic discipline,” nonetheless argued vehemently against what he called “religious” faith in “*laissez-faire*.” Since “pure economic reasoning cannot solve concrete problems,” with regard to policy “the economist can never be a liberalist or an interventionist or a socialist at any cost.” Rather, economists had to rely on contextualization, interpretation, and calculated choices in the face of complex situations, which was why economic “science” had to bow down to political realities and historical awareness alike; “the hiatus between abstract construct and reality,” Einaudi insisted, “remains unbridgeable for science; it can only be bridged by the politician’s instinct and the historian’s vision” (Einaudi 2006, p. 74).⁶⁷ Similarly, as Gay had concluded his inaugural address, “the economic historian knows something of the long trends of the productive energies and social pressures that have brought us where we are. The statesmen who are to guide the future should use that knowledge. It is one of our major tasks to see that he does” (Gay 1941, p. 16). Historical knowledge, in short, was a necessary mediator between economic ideas and political practices.

⁶⁵See, on economic assumptions, among others Mankiw (2014, pp. 21–22) and Schlefer (2012).

⁶⁶See, for example, Baycroft and Hewitson (2006, p. 3 and *passim*) and Stepan et al. (2011).

⁶⁷The literature on this remarkable figure is ever-growing, but see the classic biography by Fauci (1986). On the importance of historical knowledge for Einaudi’s economics, see among others Schumpeter (1996, p. 855) and Forte and Marchionatti (2012, pp. 599–608).

Needless to say though, the question of historical objectivity in such a process is no easier to resolve than modeling is; in this endeavor, we can only place our faith in historical conscience and critical debate, for history too is contested ground (Eichengreen 2014, p. 382). Hayek, to return to one of the preeminent intellectual architects of our present moment, however obliquely, held that truthful historical work only could occur with

the rise of a generation of economic historians who no longer regarded themselves as the opponents of economics, intent upon proving that the economists had been wrong, but who were themselves trained economists who devoted themselves to the study of economic evolution. (Hayek 1954, p. 26)

As Hayek argued, economic history and the history of political economy could only be produced internally to the discipline of economics, by practitioners loyal to the object of their study. Given the inherently politicized natures of both history and economics, however, one might instead argue, from a Nietzschean point of view, that a more insightful and *useful* historical political economy perforce must draw on a greater plurality of perspectives (Nietzsche 1989, p. 119).⁶⁸ Even Hayek, after all, admitted in his correspondence with Joan Robinson around the time when Gay gave his lecture that their differences regarding relevant assumptions in economics ultimately were “philosophical” in nature, deriving not from empirical disagreements but rather from the respective visions they brought to the debate (Hayek 1941, 2r).

Today, of course, the category of historical political economy has no natural institutional home in our current academic and professional landscape. Like its subject matter, it bridges history, political science, and economics, not to mention certain departments of anthropology, business, economic sociology, public policy, science and technology studies, and so on and so forth. Even in the absence of an institutionalized historical political economy, however, historians can contribute to economic debates in important ways through proactive engagements with their empirical as well as philosophical parameters. The question of whether interdisciplinary dialogues are possible given this generalized professional segregation of course remains, and Donald Winch, one of the greatest historians of economics in the second half of the twentieth century, was certainly right to note that “we lis-

⁶⁸For a discussion of which see Fredona and Reinert (2017). See, for a similar point, Peukert (2001, p. 97f61).

ten to them [economists], but they do not return the compliment” (Winch 2002, p. 11). Institutions and foundations like the Cambridge-Harvard Joint Center for History and Economics and Duke University’s Center for the History of Political Economy thus do important work by bridging communities of scholars that otherwise have limited occasion to communicate and by highlighting the historical aspects of political economy outside of traditional academic departments. Even so, historically inclined scholars may, simply by doing their work, eventually shape public debates over matters of political economy. As Keynes so timelessly put it, “I personally despair of results from anything except violent and ruthless truth-telling—that will work *in the end*, even if slowly” (Keynes 1919, vol. 17, p. 8).

Yet it may be useful to remind ourselves that academic trends change over time; the job market may never have been better for mathematically focused economists than today, but things have not always been this way (Crawley 2016, p. 21). During the summer of 1934, for example, the Yale economist Irving Fisher found himself forced to explain to the members of The Econometric Society why he had suggested making a donation to Léon Walras’ impoverished daughter Aline Walras, noting that “hundreds of econometricians are out of work” and that while she was a special case, he would not “suggest that the Econometric Society should raise money for the relief of distressed econometricians” more generally (Fisher 1934).⁶⁹ From a birds-eye perspective, the idea of distressed econometricians is no less fanciful than that of historical political economy, and, in light of recent events, one cannot entirely discard the possibility that the latter may see a renewed institutionalization—not in the form of a resurgent historical “school,” perhaps, as much as of an acceptance of the need for historical awareness and methodological pluralism in economic analysis.

It is, though, important to restate that, however illuminating, inspiring, and even pragmatic historical insights can be, they cannot be asked to provide blueprints for the future, and “Historical Political Economy” remains an elusive category of analysis. Perhaps it might best be defined as an orientation, a scholarly sentiment, more than a precise set of tools, techniques, or sectarian sets of ideal questions and answers. Axiomatically, it does not offer universally applicable methodologies, instruments, or proposals, nor, for that matter, easy solutions to our problems.⁷⁰ Like much historical work,

⁶⁹On Walras and his contribution, see now Tribe (2015, pp. 255–295).

⁷⁰Richard Whatmore recalls Istvan Hont proclaiming that “methodology is for stupid people,” in Whatmore (2015, p. 10); my recollection is of him arguing that “methodological work has never said anything interesting.” The point remains.

a historically aware political economy can serve as a “tool of skeptics,” challenging problematic “assumptions and beliefs” and allowing us to ask new questions, better questions, and of course questions we long have forgotten we should ask (Hont 2005, p. 156; Skinner 1997, p. 108; Schumpeter 1996, pp. 4–6 and *passim*). Indeed, from the perspective of the DuPont economist and historian Edmond E. Lincoln in the 1930s, it seemed clear that “a careful study of economic history reveals surprisingly few *new* ‘problems,’” or, as the late Istvan Hont more recently put it, “the globalization debate of the late twentieth and early twenty-first centuries lacks conceptual novelty.” As such, history can help us avoid “reinventing the wheel.”⁷¹ Some, including luminaries such as Schumpeter and Eichengreen, have even warned that an argument may be made that historical lessons should *not* be fully heeded, for unless crises run their own courses their consequences will not be evident enough for appropriate actions to be taken.⁷² Whatever one’s approach to these matters, in short, history, politics, and economics cannot but remain inexorably intertwined.

Many have argued that we now find ourselves at a proverbial crossroads of capitalism, and that central assumptions regarding the nature, purpose, and future of political economy are being actively rethought across the world.⁷³ Whether with respect to long-term dynamics, like the recent decline in volume of aggregate international trade flows, or to singular yet momentous events such as Britain’s decision by popular referendum to leave the European Union and the election of Donald Trump to the US Presidency—symptoms and causes of what some have come to call “the Rage of 2016”—much suggests that we are living through a period of long unprecedented change as neglected economic forces, which scientism long failed to identify and address, trigger surprising political dynamics with real and widespread social consequences (Appelbaum 2016; Cohen 2016). In a world of online individualized echo chambers, of “fake news” and the ascendancy of 140-character forms of communication, one is reminded of George Orwell’s warning that “the very concept of objective truth is fading out of the world” (Orwell 1981, p. 198). As human beings, we are hardwired to approach the world through analogies, and it is not surprising that history returns to the

⁷¹Lincoln (1932, p. 665) and Hont (2005, p. 155). See similarly S.A. Reinert (2011, p. 12) and Tribe (2015, pp. 311–312).

⁷²See the recollections of Schumpeter’s equation of the Great Depression with a “good cold *douche*” in Heilbrunner (1999, p. 291) and Eichengreen (2014, pp. 385–386).

⁷³For a salutary reminder of the relationship between economics and the public sphere, see Maas (2014, p. 174).

forefront during periods of seemingly unprecedented change (Eichengreen 2012, pp. 289–307). Yet, as should now be clear, this is hardly the first time we find ourselves in this position, nor, bar the direst of recent predictions coming to pass, will it be the last.⁷⁴ As the previously mentioned DuPont-economist Lincoln put it in the midst of the last Great Depression,

We of the United States are fond of phrases and superlatives. Whenever the results of our own mistaken judgments become distressing, it is easy for us to say that ‘capitalism is on trial’ and ‘civilization itself is at stake’. In a similar manner not many years ago we talked about a ‘war to end war’ and a ‘war to make the world safe for democracy’. What of it? Civilization always has been and always will be at stake. Capitalism always has been and always will be on trial. The world never has been and never will be safe for democracy; nor has democracy ever been safe for the world. (Lincoln 1932, p. 643)

This was in the very nature of capitalism; “thus it has been from the earliest days of recorded history,” Lincoln ventured, “and thus it probably will be so long as mankind makes material progress” (Lincoln 1932, p. 643).

Such vistas can of course inspire both dejection and resolve, not to mention a certain world-weariness.⁷⁵ Perhaps though, in light of this tension, the overarching category of historical political economy may best be related to what once used to be known as wisdom, or sound judgment in the face of dynamic complexity. However impalpable the concept of wisdom may be in light of current methods, we after all still follow Linnaeus in holding it to be a categorically defining feature of our species—*homo sapiens*—and it is not incidental that wisdom and judgment were the exact virtues that Gay himself had hoped to instill through the gradual adoption of practical, case-method pedagogy at his institution.⁷⁶ Wisdom is intrinsically hard to formalize, but the question of judgment has again returned to the core of political philosophy, and has of course always remained a quotidian element of statecraft and, as Friedman and others emphasized, at times even of formal economics.⁷⁷ To quote Luigi Einaudi, political economy cannot *but* rely

⁷⁴See, among others, Rees (2003), Lynas (2008), and Kolbert (2014).

⁷⁵See on this theme S.A. Reinert (2010, pp. 1395–1425).

⁷⁶On the origins of the term “*homo sapiens*,” see among others Broberg (1975), and for its history Harari (2015). On the elusiveness of wisdom, see Hall (2010).

⁷⁷On the case method, emphasizing the virtues of wisdom and judgment, see still Gragg (1951), and the classic essays in Christensen et al. (1992). On political judgment, see recently the essays in Bourke and Geuss (2009). For Friedman’s point, see, for example, his argument that there “inevitably” would be a need for “judgment” in economics in Friedman (1953, p. 25).

on “historical judgment” in practice, and it is rather its sustained absence than its presence in economic debates that demands our interrogation and explanation (Einaudi 1939, pp. 234–237).⁷⁸ Then as now, however, accepting this requires coming to terms with the fact that, indeed, “*es ist alles so unendlich kompliziert*” (Gay 1941, p. 13).

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⁷⁸On which see Silvestri (2017, pp. 23–24).

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6

Classical Political Economy

Ivano Cardinale

1 Introduction

This chapter aims to outline the worldview, analytical principles and modern implications of Classical Political Economy (CPE henceforth). However, I do not intend to provide a comprehensive historical reconstruction of CPE or to do justice to the nuanced differences across its main exponents. The aim is rather to reconstruct its fundamental principles. I therefore focus on the analytical coordinates of the two main Classical Political Economists—Adam Smith and David Ricardo—in view of extracting their contribution to understanding the key features of industrial economies.

Specifically, I aim to extract key analytical features that make it possible to appreciate how classical theories, which were developed to understand the economy emerging from the first industrial revolution, can be generalized to all industrial economies. Several modern theories, inspired by CPE, could be used to illustrate such analytical features in more general settings. This chapter makes reference to the representation provided by Pasinetti (1981, Chapter 2), thus focussing on an industrial economy that might be defined as “abstract” from natural constraints such as non-produced resources or institutional forms such as a capitalist economy.

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2 The Classical Worldview

CPE developed as a theorization of the nascent industrial economy. This is arguably a central reason why the economic phenomenon that CPE tries to explain is the “wealth of nations”, or, in modern terms, a country’s income, that is, what it produces annually. In fact, by the time Adam Smith wrote, it had become clear that the source of increases in “wealth” is not given by improvements in exchange, but by increases of production. And whilst exchange is certainly necessary, it is seen as taking a subsidiary role, both analytically and factually. In particular, it is chiefly the exchange of *produced* goods.

How is production understood? Except in the simplest economies, production is carried out not only by means of labour, but also by means of commodities that are themselves produced. In Sraffa’s (1960, Chapter 1) example, production of wheat requires wheat—for the subsistence of agricultural workers as well as for seeds—and iron for tools; production of iron requires wheat for the subsistence of workers employed in that industry, and iron for tools. Therefore, the economy is made of interdependent activities. In fact, farms (i.e. agricultural firms) need the product of manufactures and vice versa. This insight, which was already present in Political Arithmetic and Physiocracy, was incorporated by the Classics. However, whilst classical models presuppose productive interdependencies, these are not always explicitly analysed.¹

Because means of production are themselves produced, they must be reintegrated at the end of each period. We thus obtain a “circular” representation, based on periods of production.² This is again a Physiocratic insight, which is central to the classical theoretical edifice, to the point that an important interpretive line takes it to be the cornerstone of the difference between the classical and marginalist understandings of the economy (Sraffa 1960, p. 111; see also Sraffa 1951).

¹There are divergent interpretations as to the extent to which Classical theories explicitly consider interdependencies. For example, whilst Sraffa (1960) interprets Ricardo’s theory in terms of interdependencies between industries, Hicks (1985) believes that Ricardo had in mind vertically integrated sectors, that is the set of all activities necessary for the production of final goods, irrespective of the industry in which they are performed. As I discuss later in this essay, it is possible to switch from one to the other of the above representations (Pasinetti 1973). Hence, I will only discuss whether the Classics adopted one or the other representation when doing so is directly relevant for the analysis at hand.

²Whilst these periods are typically referred to as “years”, they need not correspond to calendar years.

Except in cases of simple reproduction, in which a year's product is just about sufficient to reintegrate the means of production, at the end of the process there will be a *net product*. In other words, the net product is what remains after reintegrating the means of production at the end of the "year". How is the net product distributed? Answering this question requires addressing three related (sub-)questions. First: *how much* is the net product? In other words, how do we measure the growth of the economy (i.e. by how much does the economy grow year on year)? I shall go back to this question below. Second: *among whom* is the net product distributed? In other words, what are the relevant socio-economic aggregates? CPE assumes that it is distributed among classes, defined on the basis of the type of income. These classes are "the proprietor of the land, the owner of the stock or capital necessary for its cultivation, and the labourers by whose industry it is cultivated" (Ricardo 1951 [1st edn. 1817], p. 5), that is landlords, capitalists and workers. After answering the above sub-questions, it is possible to ask the question about distribution in a more precise way: *which part* of the net product does each class receive? This is the problem of distribution *stricto sensu*.

The measurement and distribution of net product pose a key problem: heterogeneity. In fact, since CPE deals with aggregates, especially the "wealth of nations", which is the product of the whole economy, the problem of the composition of the net product (i.e. how to aggregate heterogeneous commodities) is central to the theory. In fact, the product is normally made of heterogeneous commodities. How can one measure it? To illustrate the problem, it is useful to compare two cases.

In the first case, we can assume that net product has the same composition as capital advances. In other words, capital advances and net product are made up of commodities in the same proportion. In this case, distribution can be worked out in purely physical terms. A simple case, often referred to as the "corn model", is discussed by Sraffa (1951) in his edition of Ricardo's works. In this model, there is only one commodity ("corn"), which constitutes capital advances and net product. Because there is only one commodity, the composition of the net product is necessarily the same as capital advances. Hence, we can measure how much the economy has grown, or more precisely how much has been produced as a proportion of means of production, in purely physical terms.

However, as analytically convenient as the "corn model" may be, the net product does not normally have the same composition as capital advances. This is typically the case if the product is heterogeneous. When this is the case, a key analytical problem becomes apparent: a *theory of value* becomes

necessary in order to assign a “weight” to each commodity that makes up the net product. The Classics adopt an “objective” approach to value, based on the cost of production. This is coherent with classical theories’ focus on production and is different from the “subjective” approach to value, which is typical of marginalist theories and depends on the utility of goods for individuals (Arrow and Starrett 1973; Hicks 1976; Pasinetti 1986). However, cost of production depends on the remuneration of factors of production, i.e. labour, capital and land. Therefore, determining value requires knowing distribution. But recall that explaining distribution is the purpose for which the theory of value emerges in the first place. There is a risk of circularity here, which was the source of much dispute in the construction of the classical edifice and, for a long time, one of its key unresolved issues. I shall go back to this when discussing Ricardo. In any case, we can note that, on the classical view, value and distribution emerge as closely related problems.

Allowing for a heterogeneous net product is important not only for the sake of realism, or because it compels us to study the connection between value and distribution. It is also necessary in order to appreciate a key feature of industrial economies: structural change, i.e. the change in proportions between sectors.³ In fact, heterogeneity is a logical prerequisite for structural change: in its absence, there can only be proportional growth. A growing industrial economy, characterized by structural change, thus displays two features. First, as I discussed above, the production process is circular: at the end of the “year”, the product reintegrates means of production, and what remains is distributed among classes. However—and this is the second feature—because of accumulation, the conditions for starting a new production cycle are not the same as in the previous year. For example, in Smith’s theory, at each new period, there is a higher proportion of productive workers vis-à-vis unproductive ones. In Ricardo’s theory, over time more land is cultivated, so that the proportion of net product appropriated by rent is higher. I shall return to this point below, but what matters at this stage of our argument is that production is circular, but the conditions under which it takes place are different in each period. This view is in stark contrast to a “linear” (i.e. unidirectional) but static (i.e. atemporal) view, which emerges from the marginalist framework, which can be seen as “a one-way avenue that leads from ‘Factors of production’ to ‘Consumption goods’” (Sraffa 1960, p. 111). In this sense, the classical worldview implies structural

³See Landesmann (2018, this Handbook) for an analysis of structural change in CPE and its ramifications in economic theory.

change, and classical theories display an intuition of it. However, as I discuss below, they do not address it systematically.

The foregoing reconstruction of the worldview of CPE provides some cues into the key questions that the Classics asked. These were fundamentally questions about the dynamics of the “wealth of nations”. For example, what are the key factors regulating the income of a country? Is an economy able to grow indefinitely? How is net product distributed? These questions are not any less relevant now than they were at the time of their original formulation. The remainder of this essay shows how CPE and its modern formulations provide fundamental coordinates to address such questions.

3 The Two Key Classical Political Economists

3.1 Adam Smith

The title of Adam Smith’s main economic work, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1976 [1st edn. 1776]; *WN* henceforth), is an accurate description of the aims and scope not only of Smith’s work, but also the whole of CPE. The object of study is the “wealth” of a nation or, in more modern terms, its income, that is national product. This is the *nature* of the wealth of nations. And although Smith emphasizes that what matters for standards of living is income per capita, its *causes* have to do with aggregate phenomena, rather than the behaviour of individual agents. More specifically, two fundamental causes of the wealth of nations are singled out: “first [...] the skill, dexterity, and judgment with which [...] labour is generally applied; and, secondly, [...] the proportion between the number of those who are employed in useful labour, and that of those who are not so employed” (*WN*, p. 10). In modern terms, these sources are productivity of labour, which results from division of labour, and accumulation of capital. Let us analyse them in turn.

Division of labour is the source of the “greatest improvement” in a nation’s production capacities (*WN*, p. 13). It influences productivity through three effects: “first [...] the increase of dexterity in every particular workman; secondly, [...] the saving of the time which is commonly lost in passing from one species of work to another; and lastly, [...] the invention of a great number of machines which facilitate and abridge labour, and enable one man to do the work of many” (*WN*, p. 17). As this passage makes

clear, Smith concentrates his attention on division of labour at the plant level. However, division of labour can also be interpreted, remaining faithful to Smith's idea, as taking place between workers, between firms, between sectors and even between countries. In fact, as division of labour deepens, some tasks of production are performed not by other workers in the same plant but by a different firm altogether; at some point, diversification may be such that a group of firms can be classified as a different sector, and some processes take place in a different country. All of these changes can be seen as instances of division of labour.

Division of labour is therefore the source of productive interdependencies:

Observe the accommodation of the most common artificer or day-labourer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part, though but a small part, has been employed in procuring him this accommodation, exceeds all computation. The woollen coat, for example, which covers the day-labourer, as coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must all join their different arts in order to complete even this homely production. How many merchants and carriers, besides, must have been employed in transporting the materials from some of those workmen to others who often live in a very distant part of the country! how much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour too is necessary in order to produce the tools of the meanest of those workmen! (*WN*, pp. 22–23)

Smith is aware of interdependencies, as is clear in the passage above. However, they do not take centre stage: the emphasis remains on division of labour at the plant level.

Let us now turn to the other cause of the “wealth of nations”: accumulation. This is understood as the productive investment of surplus, that is the increase in capital that derives from investing the portion of product that exceeds what is needed to reintegrate means of production, including wage advances for the subsistence of workers. Because wage advances are considered as capital, the possibility to advance wages for a higher number

of workers, and hence to increase the proportion of *productive* workers, is a form of accumulation.⁴ This increases “the proportion between the number of those who are employed in useful labour, and that of those who are not so employed” (*WN*, p. 10).

The increased production resulting from higher productivity and larger number of productive workers needs to be absorbed. This is where the sphere of exchange comes into the picture, and in particular the concept of “extent of the market”. In fact, “[when] the market is very small, no person can have any encouragement to dedicate himself entirely to one employment, for want of the power to exchange all that surplus part of the produce of his own labour, which is over and above his own consumption, for such parts of the produce of other men’s labour as he has occasion for” (*WN*, p. 31). The place that markets hold in Smith’s theory suggests that his defence of “free markets” is largely based on the fact that they allow division of labour to deepen, rather than to any intrinsic superiority of free markets over other ways of organizing exchange. In other words, the extent of the market is necessary for division of labour and further stimulates the latter, but is not the main object of analysis.⁵

Improvements in the division of labour, accumulation and increases in the extent of the market are seen as mutually reinforcing; they are the key components of the cumulative process that explains the wealth of nations. For Smith, the development process could, in principle, continue indefinitely. To be sure, he does think of potential limits, such as the idea that agriculture has less potential for increasing returns than manufacture (*WN*, Book I, Chapter 9). However, he is far from attributing the same importance to this circumstance as Ricardo; in fact, he believes that division of labour will more than compensate any diminishing returns arising in agriculture.

⁴Although the interpretation of Smith’s distinction between productive and unproductive labour is a contentious one, for the purposes of this essay I will take the distinction to be that productive workers are those whose work reintegrates wage (capital advances) and generates a surplus: “There is one sort of labour which adds to the value of the subject upon which it is bestowed: there is another which has no such effect. The former, as it produces a value, may be called productive; the latter, unproductive labour” (*WN*, p. 330).

⁵It must, however, be said that Smith, like many Enlightenment thinkers, is also interested in markets for their “civilizing” effects (see Hirschman 1982). And although it might be interesting to consider whether such effects should be interpreted as pertaining to the sphere of exchange alone, or more generally to the interaction between the sphere of exchange and that of production (especially the deepening of the division of labour), these issues are beyond the scope of this chapter and I shall not pursue them further.

Smith's dynamic view of production requires a way for net product to be compared over time (and across countries). Hence, it calls for defining a way to measure net product. Because net product is heterogeneous, both over time and across countries, a theory of value is needed to add up the different commodities. Smith distinguishes between two situations. One is the "early and rude state of society", before accumulation of capital and appropriation of land. In this situation, the value of a commodity depends on the labour that is necessary for its production.

In that early and rude state of society which precedes both the accumulation of stock and the appropriation of land, the proportion between the quantities of labour necessary for acquiring different objects seems to be the only circumstance which can afford any rule for exchanging them for one another. If among a nation of hunters, for example, it usually costs twice the labour to kill a beaver which it does to kill a deer, one beaver should naturally exchange for or be worth two deer. It is natural that what is usually the produce of two days or two hours labour, should be worth double of what is usually the produce of one day's or one hour's labour. (*WN*, p. 65)

However, in more "advanced" societies, in which accumulation of capital and appropriation of land has taken place, Smith uses the more general notion of *labour commanded*.

Every man is rich or poor according to the degree in which he can afford to enjoy the necessaries, conveniences, and amusements of human life. But after the division of labour has once thoroughly taken place, it is but a very small part of these with which a man's own labour can supply him. The far greater part of them he must derive from the labour of other people, and he must be rich or poor according to the quantity of that labour which he can command, or which he can afford to purchase. The value of any commodity, therefore, to the person who possesses it, and who means not to use or consume it himself, but to exchange it for other commodities, is equal to the *quantity of labour which it enables him to purchase or command*. Labour, therefore, is the real measure of the exchangeable value of all commodities. (*WN*, p. 47)

In such societies, because accumulation of capital and appropriation of land has taken place, the price of a commodity needs to also pay profit and rent. This calls for a joint analysis of prices and distribution. But Smith does not do that; at least, not explicitly. In fact, rent seems to be understood as a "monopoly price" for the use of land, but little indication is given concerning how it is determined (*WN*, Book I, Chapter 11). Analogously,

profit is seen as decreasing with accumulation, although there is no explanation for why this is the case. And whilst Smith believes that there usually is, in each historical and geographical context, a maximum and minimum rate of profit (*WN*, Book I, Chapter 9), he does not provide a theory of its determination.⁶

To conclude, Smith's work puts division of labour at the centre of the cumulative process of economic development. To this extent, his theory was seminal and remains just as relevant for understanding modern industrial economies. However, it is controversial whether the problem of value and distribution was formulated in an explicit fashion, let alone solved. This problem takes centre stage in Ricardo's contribution, to which I now turn.

3.2 David Ricardo

The object of Ricardo's analysis is the same as Smith's: understanding production in an industrial economy. And, just as Smith, Ricardo is especially interested in long-term dynamics.

However, already in the opening lines of the *Principles of Political Economy and Taxation* (1951 [1st edn. 1817]; *Principles* henceforth), Ricardo introduces a fundamental analytical difference: the focus on distribution. As we have discussed above, Smith's dynamic theory is based on increasing returns from division of labour; accumulation does play a role, but not the central one. For Ricardo, instead, growth is driven by accumulation, which depends on profit: it is profit that provides a motive for capitalists to invest in order to produce. Hence, the key problem to be solved is the distribution of surplus between profit and rent. Therefore, unlike in Smith, in Ricardo there is a vital connection between growth and distribution (and value, as we shall see below).

Ricardo's society is divided into two sectors (agriculture and manufacture) and three classes: "the proprietor of the land, the owner of the stock or capital necessary for its cultivation, and the labourers by whose industry it is cultivated" (*Principles*, p. 5), or in modern terms, landlords, capitalists and workers. Classes are defined on the basis of functional income, i.e. wage, profit and rent. As in Smith, profit is a residual: it is what remains to

⁶A different interpretive line attributes to Smith a treatment of value and distribution based on the "adding up" theory of natural price (Dobb 1973; see also Sraffa 1951, p. xxxv). Smith's approach has been a matter of controversy since shortly after his formulation (e.g. Storch 1823 [1st edn. 1815]; Ziber 1871; see Scazzieri 1987). On the problem of value in CPE and its connection with the dynamics of production, see also Sinha (2018, this Handbook).

capitalists after paying wages and rent. In order to calculate profit, then, rent and wages must be determined first.

How to determine rent? Ricardo defines rent as “that portion of the produce of the earth, which is paid to the landlord for the use of the original and indestructible powers of the soil” (*Principles*, p. 67). Ricardo adopts the differential theory of rent, which had been laid out by Malthus (1815), but casts it within an original, more comprehensive framework. The idea is that, with accumulation, it becomes necessary to cultivate increasingly less fertile land. Hence, rent on the other land rises.

On the first settling of a country, in which there is an abundance of rich and fertile land, a very small proportion of which is required to be cultivated for the support of the actual population, or indeed can be cultivated with the capital which the population can command, there will be no rent; for no one would pay for the use of land, when there was an abundant quantity not yet appropriated, and, therefore, at the disposal of whosoever might choose to cultivate it. [...] When in the progress of society, land of the second degree of fertility is taken into cultivation, rent immediately commences on that of the first quality, and the amount of that rent will depend on the difference in the quality of these two portions of land. When land of the third quality is taken into cultivation, rent immediately commences on the second, and it is regulated as before, by the difference in their productive powers. (*Principles*, pp. 69–70)

Rent, therefore, derives from scarcity. However, it is important to note that scarcity is addressed within a production framework, for its implications for distribution, accumulation and growth. This is different from the marginalist framework, where scarcity is analysed from the viewpoint of exchange, and specifically of the allocation of given (non-produced) resources.

How to determine wages? Following Malthus’s views on population, whereby wage above subsistence is unsustainable in the long run, Ricardo states that “[the] natural price of labour is that price which is necessary to enable the labourers, one with another, to subsist and to perpetuate their race, without either increase or diminution” (*Principles*, p. 93). Hence, wage can be taken as being exogenously given and determined by the level that guarantees subsistence of workers. This is to be understood in a social, not merely biological sense. In fact, “[it] is not to be understood that the natural price of labour, estimated even in food and necessaries, is absolutely fixed and constant. It varies at different times in the same country, and very materially differs in different countries. It essentially depends on the habits and customs of the people. An English labourer would consider his wages under their natural rate, and too scanty to support a family, if they enabled him

to purchase no other food than potatoes, and to live in no better habitation than a mud cabin; yet these moderate demands of nature are often deemed sufficient in countries where ‘man’s life is cheap’, and his wants easily satisfied. Many of the conveniences now enjoyed in an English cottage, would have been thought luxuries at an earlier period of our history” (*Principles*, p. 96).

Once rent and wages are determined, profit can be calculated by difference. More specifically, what matters is the *rate* of profit, that is the ratio between net product and capital advances. The rate of profit is assumed to be uniform, because of competitive pressures in the economy. The economy’s rate of profit is determined on the marginal land, on which there is no rent; hence, rent is ignored in the remainder of the analysis.

With accumulation, rent increases because increasingly less fertile land is cultivated. Since wage is given, the rate of profit on the marginal land, and hence in the whole economy, decreases. It is important, however, to note that this depends on the assumption of diminishing returns in agriculture (see Pasinetti 2015). Whilst conceding that improvements do take place in agriculture, Ricardo assumes that they are not sufficient to compensate for the diminishing returns due to decreasing fertility of land. Given this assumption, even increasing returns in manufacturing would not be sufficient to counteract diminishing returns in agriculture (see Pasinetti 1960). As a result of the tendency for profit to decline, the growth impulse tends to subside: a capitalist economy tends towards a *stationary state*. This prediction, though (yet) unsupported by historical events, has been a very influential one in the history of economic thought. In different forms, it features in the writings of economists as diverse as Marx, Keynes and Schumpeter. However, we must note that it crucially rests on the assumption of diminishing returns in agriculture. In Ricardo’s framework, diminishing returns in agriculture are a bottleneck that constrains accumulation and growth independently of any improvements in manufacturing. However, in the light of historical evidence, we should question to what extent this assumption is justified, and, even if it were, whether diminishing returns in agriculture may actually be compensated by increasing returns in manufacturing.

Keeping aside the (controversial) implications for long-term dynamics, we can note that Ricardo’s theory is centred on distribution, and specifically on the *rate* of profit. The rate of profit is obtained by dividing net product by capital advances. Being a ratio between physical quantities, it incurs the problem of heterogeneity, which had already been encountered by Smith. In fact, if net product has the same composition as capital advances, the rate of profit can be calculated in *physical* terms. But if composition is not the same, it is not possible to divide two heterogeneous bundles of commodities by one another.

The development of Ricardo's thought on the matter illustrates the problem very clearly. In *An Essay on the Influence of a low Price of Corn on the Profits of Stock*, published in 1815 and often referred to as *Essay on Profits*, corn is both input and output. There is only one commodity, and hence no problem of heterogeneity: the profit rate can be found by dividing the two magnitudes in physical terms.

But already in 1817, in the *Principles*, following criticism received on the previous model, Ricardo tries to generalize the analysis to situations in which net product does not have the same composition as capital advances. Hence, there is the need for a theory of value, i.e. a theory of the relative prices of commodities. Ricardo suggests an approach based on the relative difficulty of production, i.e. their relative cost. A satisfactory measure of the difficulty of production would have to be independent of changes in distribution; this is what Ricardo defines as an "invariable standard" of value (*Principles*, p. 14). He proposes embodied labour as such a measure. Hence, he takes it as being a valid measure not only in Smith's "early and rude" hypothetical society, but also in general. This is a significant conceptual leap: in an industrial society, capital and land need to be remunerated. By considering the formation of prices on the marginal land, which yields no rent, Ricardo is able to focus on labour and capital. In order for prices to be proportional to quantities of embodied labour—the central claim of the labour theory of value—it is necessary that the proportion between capital and labour be equal across sectors. This is, of course, not true in general. But Ricardo maintains that variations in such proportions will only generate deviations of small magnitude, and that embodied labour will therefore be a valid measure at least as an approximation. This solution received several criticisms (see Pasinetti 1960 for a concise discussion). The gist of these criticisms is that, in Ricardo's solution, relative prices still depend on distribution, and there is no guarantee that the "approximation" is an acceptable one.

Ricardo recognized the validity of the criticisms and started looking for a measure of value (i.e. of relative prices) that is independent of changes in distribution. Despite working on this problem until the end of his life, he never felt he had solved it. A solution was eventually offered by Sraffa (1960) through the analytical construct of the "standard commodity", which is a composite commodity whose value can indeed be shown to be independent of change in income distribution.

It is important to note that Ricardo's theory of value emerges in the analytical context just discussed. Two aspects are central. First, Ricardo's prices are not market prices, but prices that depend on the difficulty of production (labour embodied). Second, relative prices are not an index of scarcity,

but the weights through which one can value the different commodities that make up a heterogeneous product.

To conclude, for Ricardo economic dynamics is essentially driven by accumulation, rather than by increasing returns from division of labour. Combined with the assumption of diminishing returns in agriculture, this approach led him to predict a tendency towards a stationary state. This prediction has been influential in economic thought but has not found historical support. Arguably, the great contribution of Ricardo's theory derives from the importance of distribution, which in turns requires a theory of value and thus highlights the deep connection between value, distribution and growth in industrial economies.

4 A Generalization of the Classical Framework

The foregoing discussion has highlighted the key analytical features of CPE and their continuing relevance for modern economies. Many of these features stand in stark contrast to the exchange-based paradigm that emerged from the Marginal Revolution of the 1870s. However, classical theory has had a revival since the mid-twentieth century, especially starting with the work of Leontief (1941), von Neumann (1945–46) and Sraffa (1951, 1960). The revival of classical theories has made analysis more sophisticated, opened it to empirical study, and addressed some of its key aspect with new technical tools. Among the approaches that could be used as formalizations of the core of classical analysis in order to illustrate some distinctive features of industrial economies, the model provided by Pasinetti (1981, Chapter 2) is particularly useful for our purposes, as it represents an economy that is unaffected by natural constraints such as non-produced resources (which are addressed in models like Quadrio Curzio 1967, 1986; see also Quadrio Curzio and Pellizzari 2018, this Handbook), and is considered separately from its institutional forms such as a capitalist economy (which is assumed by e.g., Sraffa 1960; Garegnani 1960).

Pasinetti's (1981, Chapter 2) model analyses production in an industrial ("well-diversified") economy. It generalizes classical theories by allowing for $(n-1)$ sectors, instead of just two. This can be seen as a purely formal generalization, but also as something that takes into account the deepening of division of labour, resulting in the emergence of a higher number of sectors. The institutional form is that of a capitalist society, in which net prod-

uct is divided between wages and profit. Rent is not present because scarce resources are not considered.

We have seen that, in classical theories, there often is an implicit assumption of vertical integration. In this model, vertical integration is made explicit. Following the algorithm of vertical integration (Pasinetti 1973), it is possible to switch from a circular to a vertically integrated representation at each moment. Hence, productive interdependencies (and intermediate commodities) are not ignored, but explicitly put in the background. By abstracting from interdependencies, vertical integration makes it possible to study *dynamics* in a multisectoral setting (i.e. in a well-diversified economy). Hence, it makes it possible to study *structural dynamics*, i.e. the process whereby different sectors grow at different rates, which results in changes in the composition of output over time. Structural dynamics has proved to be a central aspect of industrial economies, and CPE displays an intuition of some of its aspects. For example, as I said above, an important element of Smith's cumulative process is the expansion of productive labour relative to unproductive labour. For Ricardo, the need to cultivate increasingly less fertile land brings about an increase in the share of labour devoted to agriculture, as well as an increase in the share of net product appropriated by rent. Despite the importance of these insights, the Classics did not provide a systematic treatment of structural dynamics, and many of their key analytical results were obtained under restrictive assumptions concerning structural dynamics (e.g. Ricardo's theory of value only holds if capital and labour are assumed to be employed in uniform proportions across sectors; see Pasinetti 1993, Chapter 1, for a discussion). However, it can be shown that structural dynamics can be addressed systematically. In Pasinetti's (1981, 1993) models, changes in technology, due to human learning, and in tastes/preferences of consumers, bring about changes in proportions between sectors. It thus becomes possible to account for the systematic changes in proportions between sectors that have characterized industrial economies since the first industrial revolution.

This theoretical framework makes it possible to explore the key insights of CPE in a more general setting. I will mention two aspects. The first is the objective theory of value, and specifically the theory of value based on cost of production. It can be shown that this is a pure labour theory of value, analogous to Smith's labour embodied theory, until capital goods are introduced.⁷ At that point, the pure labour theory of value does not hold,

⁷Pasinetti (1981, p. 132) shows that, under certain conditions, a pure labour theory of value can be shown to hold even in a capital-using economy.

because other factors need to be remunerated. But it remains based on the cost of production (Pasinetti 1981, Chapter 2). This approach also makes it possible to address, in a situation of structural change, Ricardo's problem of finding an invariable measure of value. As I discussed above, in a static context Ricardo's problem was addressed by Sraffa's (1960) "standard commodity", which is constructed for a given technology and is independent of income distribution. In a dynamic context, an invariable standard of value is provided by Pasinetti's "dynamic standard commodity", which is constructed for a given income distribution and is independent of changes in technology over time. In this sense, this approach is symmetrical to Sraffa's: whilst Sraffa assumes the absence of technological changes and finds a measure that is invariant to distribution, Pasinetti assumes that there are no changes in distribution and provides a measure which is invariant to changes in technology.

The second feature is that this model explicitly considers conditions concerning effective demand. This too can be seen as a generalization of classical theories. In fact, Ricardo's theory assumes Say's law, ruling out shortages of demand on the grounds that production would either be consumed by workers or saved and hence invested by capitalists. Malthus objected that savings and accumulation could lead to producing volumes that may not be sold at prices sufficient to cover costs. However, he was not able to provide an analytical framework in which those observations could be cogently argued. The development of classical theory thus proceeded without an explicit consideration of conditions concerning demand. Following Dasgupta (1985), it is possible to conjecture that Ricardo's acceptance of Say's law might depend on the early stage of development of the economy he witnessed. In fact, in a situation in which workers are paid subsistence wages that they spend in full, and investment opportunities abound, it can be appropriate to assume that all savings are invested. It was only in 1936, observing a mature economy facing prolonged stagnation, that Keynes successfully demonstrated that effective demand cannot be taken for granted in a mature economy, in which the "marginal efficiency of capital" may not be sufficient to justify productive investment.

By explicitly considering conditions concerning effective demand, the model discussed above can therefore be seen as a generalization of classical theories beyond the early stages of development for which they were formulated. Specifically, effective demand is captured by a macroeconomic condition whereby the sum of the output of each sector (potential national income) must equal total expenditure in order for there to be full employment. In other words, the savings of some economic units must compensate the dissaving of others, so that there are no savings in the aggregate.

However, unlike in Keynes's analysis, which is based on the Marshallian short period and hence on the whole economy as a single (vertically integrated) industry, here effective demand has a sectoral structure.

5 The Legacy of Classical Political Economy

I have argued that CPE provides a framework that captures the essential features of industrial economies. In its modern formulations, it offers a fully formed model for analysing production, growth and distribution in modern industrial economies.

Classical theories have also provided fundamental coordinates for subsequent traditions of economic analysis that have addressed similar questions. For example, Karl Marx started from largely Ricardian premises and, despite finding profoundly different answers, he asked many questions of classical character, such as those concerning accumulation and the dynamics of capitalist economies. Keynes's macroeconomic analysis, as well as much macroeconomic thought after Keynes, shares with the Classics both the key questions (the interest in the long-term tendencies of industrial economies) and the units of analysis, as shown by its focus on aggregate variables such as national product and employment. And although Keynes's own formulation displays elements of synthesis with Marginalism, for example in the adoption of the Marshallian short run, it has been argued that Keynes's fundamental coordinates are in line with classical analysis and can help generalize it (see previous section). Moreover, as discussed earlier in this essay, the various strands of multisectoral analysis developed since the mid-twentieth century can be seen as a revival of classical theory, which has emphasized the industrial interdependencies that were typical of the Physiocratic representation but often only implicit in classical analysis.

As a way of conclusion, I will emphasize two key analytical issues that emerge from the classical understanding of industrial economies. The first is the theory of value. The Classics' objective theory of value emerges in response to a problem of aggregation. Value is a way to assign weights (relative prices) to the different components (commodities) of the product of society as a whole (net product). This theory is based on the idea that aggregation can be performed on the basis of fundamental causes of value, beyond the apparent ones (i.e. markets). Specifically, this is an approach based on cost of production in economies based on division of labour. The Classics' aggregation problem can be seen as typical of any view of the economy that considers the key units (e.g. sectors) as well as aggregate features

(e.g. net product) (see Cardinale 2017, 2018, this Handbook; Cardinale and Scazzieri 2018, this Handbook; Scazzieri 2018, this Handbook). It is interesting to note that even approaches that would appear to be far from classical analysis, such as Pigou's welfare economics, face similar problems of aggregation (Hicks 1975). For example, Hicks shows that Pigou's "welfare" is actually the social product, and analysing it in terms of individual needs, as the marginalist approach would suggest, leads to unsurmountable problems. This suggests that the problem of aggregation described above is central to any theory that studies the product of the economy as a whole.

The second issue is the need to study production and distribution in the context of an economy with structural change. Structural dynamics, resulting from division of labour and accumulation, has been a central feature of industrial economies. In the classical worldview, structural dynamics plays a key role, although the key classical analytical results were formulated in its absence. I have discussed how those results can be generalized to take into account structural dynamics, thus providing an indispensable framework to study industrial economies.

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Part II

Research Themes



7

Political Economy of Economic Theory

Roberto Scazzieri

1 Introduction

Political economy deals with the economic arrangements needed for the material life of the polity *and* with the political arrangements supporting the working of the economy (see the chapters by Cardinale and Scazzieri in this *Handbook*). This feature of political economy is already manifest in its formative period, when the emergence of the modern state goes hand in hand with increasing awareness of the need to provide a systematic framework to discussions concerning the material life of the polity (Botero 1558; de Montchréstien 1889 [1615]; Mun 1664; Serra 1613).¹ At the same time, political economy became increasingly interested in the political conditions

¹Istvan Hont emphasizes the intertwining of politics and economics at the core of Montchréstien's programme by recalling his belief that 'every society, in general, appears as consisting of government and commerce' (de Montchréstien 1889 [1615], p. 137, as quoted in Hont 2010, p. 137, my translation).

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making the material life of the polity viable and improving (Steuart 1966 [1767]). Antonio Genovesi's definition of political economy as 'the political science of economics and commerce' (Genovesi 1767) pointedly emphasizes the interface between politics and economics, while shifting the object of economics from the sphere of practical reasoning to the scholarly analysis of relevant political arrangements.

It is in the course of this evolution that economic theory developed as a specialized branch of knowledge concerning the organization of interdependent production and consumption activities. Mid-eighteenth century works such as those by François Quesnay (1758, 1766), Antonio Genovesi (1767), James Steuart (1966 [1767]), and Adam Smith (1776) signaled a conceptual shift whereby the structural condition of interdependence within the material sphere became a central focus of attention and triggered seminal advances in understanding the process of formation of national wealth. The questions arising from this interdependence have been a distinctive feature of economic theory since its formative period, and are directly relevant to political economy in its twin attention to the material life of the polity and to the political requirements of the economy. The aim of this chapter is to address the political economy of economic theory by focusing on the three following related issues: (i) which economic arrangements economic theory suggests for organizing the material life of the polity?; (ii) which political arrangements economic theory considers to be essential for the working of a viable economy?; and (iii) are the economic and political arrangements under (i) and (ii) mutually consistent or not?

To address the three above questions, this section takes up a distinction between two different ways of representing the fundamental relationships of the economy (plutology versus catallactics) and builds on that distinction a classification scheme for economic theories. Section 2 discusses the implications of plutology and catallactics, respectively, for question (i) and examines whether the *economic arrangements* involved in the two types of economic theory are mutually consistent or not. Section 3 discusses the implications of plutology and catallactics for question (ii) and examines the *political arrangements* involved in the two types of theory with the aim of assessing whether they are mutually compatible or leading towards alternative organizations of the political sphere. Section 4 examines the interface between economic and political conditions as highlighted in plutology and catallactics respectively and investigates the role of this interface in explaining the role of economic theory with respect to *policy decisions*.

2 Plutology and Catalactics

Theories simplify the architecture of complexity by circumscribing the type and number of relevant units of analysis and by highlighting relationships assumed to be of greater causal significance (Simon 1962). Economic theories are means to reduce the complexity of economic systems allowing their description in terms of a manageable number of relationships. Different economic theories adopt different criteria of complexity reduction depending on which units of analysis, patterns of interdependence and causal relationships they highlight. The distinction between economic theories centred on the interdependencies between production units at intermediate levels of aggregation (such as industrial sectors) and economic theories centred on the coordination between individual actors within a system of interdependent markets highlights a cleavage between two fundamentally different ways of addressing complexity reduction in economic theory. Luigi Pasinetti describes that distinction by referring to theories focusing on commodities ‘of the production type’ in the former case and to theories focusing on commodities ‘of the scarcity type’ in the latter case (Pasinetti 1965, p. 576). He also emphasizes the role of learning, dynamics and structural change in theories of the former type and that of given resources and rational allocation of resources between alternative uses in theories of the latter type. Production-oriented theories are inherently dynamic as production involves ‘the engagement and the application of human ingenuity to make and shape the products that people want. But since, by doing and experiencing, mankind learns, it is implicit in the very nature of carrying on a production activity that new and better methods will be discovered. Of course, to find new methods takes time, and takes time in a persistent way. The economist is faced here [...] with a process of learning’ (Pasinetti 2007, p. 253). On the other hand, exchange-oriented theories are considered to be inherently static as they start off ‘with a situation in which a plurality of economic systems (or of individuals) is endowed with particular resources or products and tries to gain advantages through exchange ... We may imagine a situation in which a plurality of economic systems has reached an internal equilibrium, but the systems do not trade among themselves, and then another situation in which the same economic systems, besides having reached an internal equilibrium, also trade with one another. It is easy to show that the passage from the first to the second situation - i.e. a *once-and-for-all* change from no trade to trade, to be maintained thereafter - normally brings about gains for all. What is involved is a problem of rationality, which may be expressed by a mathematical function to be maximized under certain con-

straints' (Pasinetti 2007, p. 253). What is most distinctive in Pasinetti's argument is his association of each type of theory with the conditions characterizing different phases of economic history. This is done by distinguishing between two different stages in the 'process of unprecedented increase in material wealth' (Pasinetti 2007, p. 251) that started off at the beginning of the early modern age and continued as a long-term tendency ever since. One is the 'phase of trade', the other the 'phase of industry' (Pasinetti 2007, pp. 251–252). The phase of trade 'is the first to break through' (Pasinetti 2007, p. 251) and is characterized by improvements in transportation techniques opening up 'new possibilities of trade' and leading to an increase in material wealth 'just by exchange, by a better spatial allocation of existing resources and products' (Pasinetti 2007, p. 252). The phase of industry was 'much slower to reveal itself' (Pasinetti 2007, p. 252), as its resilience presupposes improvements achieved with the phase of trade. The phase of industry, which is associated with 'a process of augmenting wealth through a material increase in the quantity and number of products' (Pasinetti 2007, p. 252), maintains a complementary relationship with trade, even if 'as a cause of further increases in wealth, [trade] is bound to subside' (Pasinetti 2007, p. 252). Indeed, '[i]ndustry [...] is bound to remain a permanent cause of increase in wealth and to become preminent as time goes on, owing to the very nature of its cumulative process' (Pasinetti 2007, p. 252). In Pasinetti's view, exchange-oriented and production-oriented theories are suitable focusing devices for the fundamental economic relationships in the phase of trade and in the phase of industry, respectively. However, this analytical complementarity breaks down with the conceptual shift associated with the marginalist revolution, as the latter led to a return to 'the pre-industrial age concept of wealth considered as a set of given endowments of scarce natural resources (a stock concept)' (Pasinetti 2007, p. 261). The stock concept of wealth is at the root of the reformulation of economic theory as a theory dealing with the efficient management of existing resources. This type of theory would have been 'capable of dealing with the problems of a simpler society' (*ibidem*), but ended up being out of tune with the features of economic systems that had entered the phase of industry and the associated cumulative process of structural change. In short, Pasinetti not only emphasizes the duality between exchange- and production-oriented theories, but also stresses the possible mismatch between theory and context and highlights that theory, if selected independently of context, may divert attention from the most fundamental characteristics of the economic system under consideration.

John Hicks outlines a partially overlapping distinction by using the term 'Plutology' to denote theories of the production type and the term 'Catallactics' to denote theories of the exchange type. Hicks starts his

reconstruction of ‘revolutions’ in economic theory highlighting that each type of economic theory embeds a selective concentration of attention:

Our theories, regarded as tools of analysis, are blinkers in this sense. Or it may be politer to say that they are rays of light, which illuminate a part of the target, leaving the rest in darkness. As we use them, we avert our eyes from things which may be relevant, in order that we should see more clearly what we do see. It is entirely proper that we should do this, since otherwise we should see very little. But it is obvious that a theory which is to perform this function satisfactorily must be well chosen; otherwise it will illumine the wrong things. (Hicks 1975, p. 320)

Hicks emphasizes the heuristic role of theories in directing the economist’s attention to one or another set of units of analysis and patterns of interdependence and thus to a specific causal mechanism in lieu of others. In this way, theory is not only an instrument for explaining evidence but also (and primarily) a way to *organize* evidence in view of looking ‘more clearly’ into certain aspects of it. This attitude to the role of economic theory suggests that ‘a theory which illumines the right things at one time may illumine the wrong things at another’ (Hicks 1975, p. 320) and that scientific revolutions in economics, in Thomas Kuhn’s sense of shifts from one conceptual paradigm to another (Kuhn 1962, 1977; Thagard 1992), ‘are not clear advances in the scientific sense’ (Hicks 1975, p. 320). As a consequence, the trajectory of theoretical development in economics shows switches between different standpoints (‘systems of thought’) whereby the shift from ‘system of thought’ A to ‘system of thought’ B (Hicks) is not always such that ‘B should be able to cope with [new facts with which A could not cope]’ as well as ‘with all those facts which were already coped with by A’ (Hicks 1975, p. 319). In Hicks’ view, the transition from classical to post-classical economic theory is a clear instance of this type of conceptual dynamics. The classical economists (from Quesnay and the other Physiocrats to Adam Smith and David Ricardo) identified the wealth of any given economic system with the flow of annual production in that system, and thought it necessary ‘to identify the values which were needed for the weighing of the social product’ (Hicks 1976, p. 211). To achieve that, they had to bring about ‘the reduction of the heterogeneous commodities [composing the annual flow of production] to a common measure’ (Hicks 1976, p. 211), thus making the latter ‘so far homogeneous that it can be greater or less’ (Hicks 1976, p. 210). The purpose, and the point of view, of the economists who triggered the Marginalist Revolution is different. For those economists ‘instead of basing their economics on production and distribution, they based it on exchange [...]. It was possible, they found, to construct a “vision” of economic

life out of the theory of exchange, as the classics had done out of the social produce' (Hicks 1976, p. 212). To account for the different theoretical standpoints of the classical and marginalist economists, Hicks suggests that two different names should be used, calling plutology the classical system of thought (from the Greek word 'ploutos' for wealth) and catallactics the marginalist system of thought (from the Greek word 'katalatto', for the action of exchanging). In Hicks' view, plutology and catallactics are only partially overlapping as either system of thought does not fully cope with all facts encompassed by the other. This explains why plutology and catallactics have remained distinct ways of looking at the economy, with either system of thought showing phases of strength or relapse, and a remarkable ability to achieve comebacks under changing historical conditions. For instance, even after the conceptual revolution associated with marginalism, 'there were occasions when it was necessary to think about the whole economy [...] Partly as a result of the Keynesian revolution, but more (perhaps) because of statistical labours that were initially quite independent of it, the Social Product has now come right back into its old place. Modern economics [...] is centred upon the Social Product, the Wealth of Nations, as it was in the days of Smith and Ricardo, but as it was not in the time that came between' (Hicks 1975, p. 324, my emphasis).

The relationship between theory and context is central in Alberto Quadrio Curzio and Roberto Scazzieri's reconstruction of the dynamics of economic theory in terms of the exchange–production duality (Quadrio Curzio and Scazzieri 1986). This reconstruction connects that duality with the historical dynamics of industrial economies by introducing a distinction between phases of industrial dynamics that highlight the role of the interdependencies within the industrial structure itself (structural apparatus) and phases that highlight the one-way relationship between productive infrastructure (produced and non-produced resources) and final consumption goods (transformation apparatus). One distinctive feature of Quadrio Curzio and Scazzieri's analysis is that the two above configurations of the productive system are not mutually exclusive but may coexist side by side. However, the structural apparatus and the transformation apparatus may alternatively take priority in the working of the economic system depending on the dynamic condition of the system: 'during periods of rapid growth, the inter-industry network gains priority, whereas in the periods of decline in growth, the apparatus of transformation comes to the fore. It could also be said that the transformational feature is typical of economies where the growth potential is being exhausted, of economies perhaps characterized by a high level of welfare, but in a 'climacteric' phase of

development. Conversely, the structural aspect is typical of more dynamic economies (although these latter might be under the pressure of particular scarcities)' (Quadrio Curzio and Scazzieri 1986, p. 380). Quadrio Curzio and Scazzieri suggest that the coexistence of the structural and transformation apparatus in most industrial economies, and their changing weights in different historical phases, provides a cue into the reasons for the rise to dominance of exchange- or production-oriented theories in different periods: 'the dynamics of political economy can be considered to be the result of an interaction between a dichotomy internal to the manner of thinking of economists (due mainly to a different understanding of productive phenomena), and an external dichotomy, based on the antagonism-coexistence between the fundamental apparatuses of transformation and structure)' (Quadrio Curzio and Scazzieri 1986, p. 403). The joint utilization of the two dichotomies suggests a heuristic to explain the relative weight of exchange- and production-oriented theories in different phases of system dynamics. Accelerated growth (even if under constraints concerning the availability of primary resources) highlights the interdependencies between components of the production structure and gives prominence to theories focusing opportunities and constraints within that structure, while growth deceleration or stagnation highlights the relationship between resources and final consumption, and tends to give prominence to theories focusing opportunities and constraints external to the production structure (Quadrio Curzio and Scazzieri 1986, pp. 403–4). For example, it is suggested that the continental blockade against the United Kingdom in the early nineteenth century might have triggered attention to the interindustry configuration of the economic system (the structural apparatus) under conditions of sustained capital accumulation and limited land availability. In the latter part of that century, the situation had changed. Economic growth had slowed down in some of the old industrial countries while deep structural changes were taking place in countries that had later entered the industrial phase. This situation brought different features of the production system into focus, highlighting the transformation apparatus and the structural apparatus, respectively. The decline of interest for objective interdependencies within production structure in the United Kingdom of Alfred Marshall (1890) and the contemporary attention given to those interdependencies in Germany or Russia may be seen as instances of the way in which context influences theory (Quadrio Curzio and Scazzieri 1986, pp. 389–394). Different contexts can make theory to respond differently to the task of selecting the mechanisms of greater causal significance for understanding the material life of the polity. The catallactics–plutology distinction identifies alternative structural

specifications of the economy and highlights that patterns of interdependence that are visible, say, under plutology are not always visible under catalactics, and vice versa. Each structural specification provides a distinct focus, which may or may not be consistent with the relevant historical context. As a result, 'there is, there can be, no theory which will do for us everything we want all the time' (Hicks 1975, p. 320). Three distinct issues arise in this connection. First, changes of context may require a change of theoretical focus. Second, a mismatch between theory and context is possible. Third, the context compatible with a given theoretical focus may reappear under different conditions along the dynamic trajectory followed by any given economic system. In the latter case, the recurrence of theoretical focus may be a consequence of the persistence of certain fundamental economic mechanisms over time.²

3 The Material Life of the Polity

Plutology and catalactics identify two distinct sets of conditions for the material life of the polity. Each set of conditions presupposes a distinct set of units of analysis and a distinct type of interdependencies between those units. Plutology starts with a focus on socio-economic groups and/or productive sectors and focuses on the proportionality conditions to be satisfied by the interdependencies between those groups and/or sectors in order to achieve a viable mechanism for the formation of national wealth. The central idea, common to the different formulations of plutology, is that a viable economic system must be capable of reintegrating the produced means of production needed to achieve the current levels of output. In other words, in a viable economy production cannot lead to depletion of productive capacity. To achieve this condition, the interdependencies between productive sectors (as well as between socio-economic groups) must be such that the output of each sector (group) is at least sufficient to provide what is needed for that sector (group) and for the sectors (groups)

²Recurrence of economic issues and contexts may be considered as 'the outcome of the working of the economic system's basic structure [...] The nature of this recurrence is of the causal type, since it is the expression of objective properties of the system, quite independently of how often any event is repeated through time' (Baranzini and Scazzieri 1986, pp. 67–68). The recurrence of economic contexts may explain the recurrence of analytical foci in economic theory, as the 'recurring periods of vitality and lethargy' of each research line 'could be related with recurrence of certain phenomena in actual economic dynamics' (Baranzini and Scazzieri 1986, p. 68).

depending on its supply. When this condition is satisfied, the economy is in a *self-replacing state* (Sraffa 1960). The viability condition may be expressed in two different, but mutually compatible, ways depending on whether we consider the interdependencies between productive sectors or those between socio-economic groups. The earliest explicit formulation of the self-replacing condition is due to Quesnay (1758). In Quesnay's *Tableau économique* the self-replacing condition is expressed in terms of proportionality requirements for the production and expenses of the different and interdependent socio-economic groups that make up a national economy. As a result, the achievement (or not) of the viability condition depends not only on the mutual compatibility of the technology in use in the different productive sectors, but also on the compatibility of the income and expenditure flows that are generated within the economic system. Simonde de Sismondi took this approach one-step further by questioning whether the viability condition can be satisfied in an industrial economy characterized by increasing utilization of labour-displacing machinery (Sismondi 1819). The possibility of technological unemployment led Sismondi to argue that there would be increasing asymmetries between production and income flows, and increasing difficulties in maintaining income and expenditure flows at the levels needed for the economic system's viability (as defined above). Subsequent literature has seldom addressed again the viability of the economic system in terms of income and expenditure flows between socio-economic groups. However, Stanislav Strumilin explicitly considered the issue of the economic system's viability in terms of a 'complex social structure' (Strumilin 1963 [1927], p. 114). In particular, Strumilin pointed out that viable interdependencies between productive sectors should reflect 'the equilibrium state generated by these competing social forms, the specific weight of each one of them *within the common system*, and the distribution of these weights, as it may be detected during the time period under consideration' (Strumilin 1963 [1927], p. 114, our emphasis). The more recent work by Richard Stone on social accounting matrices (SAM) belongs to this analytical tradition, as it is motivated by the idea that 'a complete system of social accounts must be able to handle transactors in all their aspects: as producers, consumers and accumulators' (Stone 1962, p. 230). To achieve this, it is necessary 'to reduce the number and variety of transactors to manageable dimensions' and thus 'to classify them' (Stone, *ibid.*). However, Stone also maintains that 'it is impossible to find a single classification which will be equally suitable for each aspect' (Stone, *ibid.*) and suggests a pragmatic approach to the

study of social interdependencies, which makes the selection of relevant units to depend on the analytical and policy purpose in view.³

The study of the viability requirements for a system of interdependent product flows is a central feature of the plutology analytical tradition since the reformulations of Quesnay's *Tableau économique* by Karl Marx (1983 [1867]) and Mykhaylo Ivanovich Tugan Baranovsky (1913 [1894, 1900]). A distinctive feature of Marx's and Tugan Baranovsky's viability analysis is the consideration of intermediate product flows in a circular economy independently of income and expenditure flows between socio-economic groups (social classes). This approach allows Marx and Tugan Baranovsky to identify the internal consistency requirements for a circular economy to be in a self-replacing state (with or without capital accumulation), but leaves the consistency of income and expenditure flows outside the scope of 'technical' viability analysis. Differently from Quesnay's original formulation of viability as a *social condition*, Marx and Tugan Baranovsky address viability as a *technical requirement* for the system of intermediate product flows in an industrial economy. This point of view identifies proportionality conditions in the technical sphere but leaves open the issue of whether existing social structures would generate the income and expenditure flows consistent with technological viability. Both Marx's analysis of the long-term dynamics of a capitalist economy and Tugan Baranovsky's medium-term analysis of periodic industrial crises highlight the separation between technical and social viability conditions. At the same time, they contribute to clarifying the dual dimension of viability in the technological and social spheres. What becomes apparent with Marx's and Tugan Baranovsky's researches is that technical viability requirements are not sufficient to ensure that the economy is in a self-replacing state (under stationary or expanding conditions). For Marx, self-replacement presupposes the maintenance of a proportionality between the share of net product value going to the capitalists' class and the value of the overall social product that would be structurally compatible with the maintenance of capitalist economic conditions. For Tugan Baranovsky, self-replacement involves the maintenance of proportions between capital goods industries and consumer goods industries that would be compatible with the full utilization of the productive capacity generated from within the economic system. In either case, technical viability is a nec-

³Stone emphasizes that, in principle, one could introduce as many classifications of transactors as it is convenient for the purpose in view. However, a set of classification converters should guarantee the over-all consistency of the different classifications adopted (Stone 1962; see also Johansen 1985; Marangoni and Rossignoli 2014).

essary but not also a sufficient condition for the economic system to be in a self-replacing state.

The emphasis on technical viability conditions is a characteristic feature of the more recent literature on the material conditions for the existence of a coherent (self-replacing) set of interdependent production and consumption activities. Wassily Leontief's *Tableau* of the American economy is a seminal contribution to this analytical development (Leontief 1941). In Leontief, differently from Quesnay, the relevant interdependences are between industrial sectors rather than between socio-economic groups, and social structures (such as net product distribution between different categories of income receivers) appear as conditions *external* to the core set of interdependent industries. Piero Sraffa (1960) also follows this approach in his discussion of self-replacement conditions for the case of 'an extremely simple society which produces just enough to maintain itself' (Sraffa 1960, p. 3). A society satisfying this condition is considered to be 'in a self-replacing state', and any system capable to maintain itself from one production period to another can be transformed into a self-replacing one 'merely by changing the proportions' between its constituent industries (Sraffa 1960, p. 5n). On the other hand, '[s]ystems which are incapable of doing so under any proportions and show a deficit in the production of some commodities over their consumption even if none has a surplus do not represent viable economic systems' (Sraffa 1960, p. 5n). The standard means of representing the material structure of an economy supported by a core set of interdependent production and consumption/utilization activities is by means of a technology matrix such as A , whose elements are the 'production coefficients' denoting the quantity of intermediate good i needed for the production of any unit of good j :

$$A = [a_{ij}]$$

The technology matrix describing the material structure of a simple two-sector economy in which all sectors depend on each other for the provision of necessary inputs will be as follows:

$$A^* = \begin{matrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{matrix}$$

A self-replacing economy may or may not produce a net output over and above what is necessary for maintaining its productive capacity intact. The case of an economy capable of producing a positive (or semi-positive) net output vector (that is, a vector of net output in which at least some elements

are greater than 0) provides additional insights into the role of viability conditions. In particular, production technology determines which total outputs are needed to support the production of any given set of net outputs (outputs over and above what is needed for self-replacement), and which price ratios are consistent, under the self-replacement condition, with any given distribution of total value added between productive sectors (or groups of income receivers). The two conditions may be respectively expressed as follows (see also Pasinetti 1977a, Chapter 4):

$$\mathbf{q} = (\mathbf{I} - \mathbf{A})^{-1} \mathbf{n} \quad (1)$$

$$\mathbf{p} = (\mathbf{I} - \mathbf{A})^{-1} \mathbf{v} \quad (2)$$

In expression (1),^{4,5} \mathbf{q} is the vector of the total quantities produced in the system, \mathbf{n} is the vector of net outputs produced in the same system, and $(\mathbf{I} - \mathbf{A})^{-1}$ is the so-called Leontief inverse allowing the computation of the total quantity requirements (expressed by vector \mathbf{q}) needed to deliver the net output vector \mathbf{n} .

Expression (1) shows that, given viable production technology \mathbf{A} , we may choose a given net output vector, say \mathbf{n}^* , and compute via $(\mathbf{I} - \mathbf{A})^{-1}$ the total outputs that would deliver \mathbf{n}^* after satisfying the self-replacement requirements for maintenance of productive capacity. Expression (2) shows that, given viable production technology \mathbf{A} , we may choose a vector of (sectoral) value added quantities, such as \mathbf{v}^* , and then compute via $(\mathbf{I} - \mathbf{A})^{-1}$ the prices that would be consistent with \mathbf{v}^* while satisfying the self-replacement requirements for maintaining productive capacity intact. The two expressions point to conditions constraining, respectively, the physical and the value structure of the economy without explicitly addressing the reasons why the net output vector and the value added vector should be taken as given. This approach reflects the distinction between technological and social interdependencies that characterizes the literature on the viability conditions of economic systems. At the same time, expressions (1) and (2) draw attention to the fact that exogenous changes in the level and/or composition of the net output vector \mathbf{n} , or of the value added vector

⁴Expression (1) may be obtained from $\mathbf{q} - \mathbf{A}\mathbf{q} = \mathbf{n}$, from which we have $\mathbf{q}(\mathbf{I} - \mathbf{A}) = \mathbf{n}$, then $\mathbf{q} = (\mathbf{I} - \mathbf{A})^{-1} \mathbf{n}$.

⁵Expression (2) may be obtained from $\mathbf{p} - \mathbf{A}\mathbf{p} = \mathbf{v}$, from which we have $\mathbf{p}(\mathbf{I} - \mathbf{A}) = \mathbf{v}$, then $\mathbf{p} = (\mathbf{I} - \mathbf{A})^{-1} \mathbf{v}$.

\mathbf{v} , would require/trigger a complex constellation of changes in the system of total physical quantities or in the system of prices respectively. These latter changes would make the attainment of target vectors \mathbf{n}^* and \mathbf{v}^* feasible. The argument rests on the possibility to separate technological and social constraints, so that for example we could address the technological feasibility of certain social objectives (as expressed by a target net output vector \mathbf{n}^*) without explicitly examining the causal mechanism behind those social objectives. Alternatively, we could address the social feasibility of certain technological arrangements by asking, say, if a switch from technology \mathbf{A} to technology \mathbf{A}^* would be consistent with the given distribution of value added between productive sectors or social groups as expressed by vector \mathbf{v} .⁶ In short, the distinction between technological and socio-institutional constraints allows a better understanding of the extent to which one set of constraints involves the other and of the extent to which constraints in one sphere leaves degrees of freedom in the other sphere.⁷ On the other hand, the same distinction calls attention to the cases in which the intertwining of *different* constraints highlights the need to address *at the same time* the interdependencies in the technological and the social spheres.⁸

Differently from plutology, the original focus of catallactics was the coordination between individual actors in a system of interdependent markets. This approach developed side by side with plutology and was triggered by the latter's investigation into the interdependencies at the root of national wealth. However, the specific conditions governing those interdependencies when exchanges take place within the framework of a market economy gradually became a major focus of attention. Achille-Nicolas

⁶The switch from \mathbf{A} to \mathbf{A}^* may or may not allow the maintenance of the *existing* value added vector.

⁷Luigi Pasinetti emphasizes the heuristic effectiveness of distinguishing between different layers of interdependence in the economic system by explicitly discussing what he calls 'a *separation theorem*' (Pasinetti 2007, p. 275), according to which 'we must make it possible to disengage those investigations that concern the foundational bases of economic relations—to be detected at a strictly essential level of basic economic analysis—from those investigations that must be carried out at the level of the actual economic institution, which at any time any economic system is landed with, or has chosen to adopt, or is trying to achieve' (Pasinetti 2007, p. 275). Expressions (1) and (2) above entail that it may be useful to examine structural constraints from the technological *or* the socio-institutional sphere depending on which interdependencies are relatively 'more invariant' and on which are the purposes of the analysis at hand (see Landesmann and Scazzieri (1990) for a discussion of the relative invariance criterion).

⁸In this connection, Alberto Quadrio Curzio emphasizes the role of non-produced resources (natural or technological scarcities) in combining material and socio-institutional constraints (and thus in highlighting the close relationship between the material structure of the polity and the political dimension of the economy) (Quadrio Curzio 1980, 1996; Quadrio Curzio and Pellizzari 1999, 2018).

Isnard, a French engineer-economist, strongly criticized Quesnay's *Tableau* and outlined in his *Traité des richesses* the first mathematical formulation of a general equilibrium system of market exchanges (Isnard 1781). This work expresses the interdependence between competitive market equilibrium prices through a system of simultaneous equations. Isnard's formulation of economic interdependencies as *market* interdependencies side-stepped a central point of Quesnay's scientific programme (which was *not* to confuse market exchanges with economic transactions at the structural level)⁹ and started a new analytical tradition in which the allocative procedures of market exchanges become the central focus of attention. This switch is already apparent in Destutt de Tracy's belief that the economic system is 'purely and only a continuous series of exchanges' (Destutt de Tracy 1823, p. 68), and that 'this is the greatest praise one could express of society, for exchange is an admirable transaction, in which the two contractors are both always obtaining an advantage: as a result, society is an uninterrupted series of advantages that are continuously renovate for all its members' (Destutt de Tracy 1823, p. 68). Following this line of argument, Richard Whately, in his Oxford Lectures, criticized the use of the term 'political economy' and proposed 'catallactics' as a substitute for it: 'The name [...] of Political Economy is most unfortunately chosen [...] The name I should have preferred as the most descriptive, and on the whole least objectionable, is that of catallactics, or the 'Science of Exchanges'. Man might be defined, 'An animal that makes Exchanges' [...] And it is in this point of view alone that Man is contemplated by Political Economy' (Whately 1847, pp. 3–6). This focus on exchange as the outcome of a transaction in which both contractors seek and obtain an advantage triggered research on the motives of human actions leading to exchange. Francesco Ferrara explicitly attempted a new definition of economic science based on a theory of deliberate choice. In his view, economic science ought to study 'voluntary acts, and this not all: they have to be acts by which Man is seeking means of improving his own existence' (Ferrara 1859, p. 82). This point of view led Ferrara to criticize classical political economy for its emphasis on 'material things rather than [on] actions' (Ferrara 1859, p. 81) and to *move beyond* exchange relationships

⁹Quesnay writes that 'the new science of economics does not confuse *Trade* with the profession of the Merchant, who buys in order to sell; by Trade it means the transaction between the original seller and the consumer; this type of transaction can be direct or indirect: in the former case, Trade or exchange is effected without any intermediary Agent, i.e. without the service of a Merchant' (Quesnay 1767, pp. 167–168). To make the point clearer, Quesnay adds that 'Trade consists of Production and Consumption, whereas Traffic consists only of purchase, transport and sale' (Quesnay 1767, pp. 176–177).

per se by maintaining that ‘value in its most complex form, as exchange value, has all its constituent elements [...] in the individual man, *independently of any exchange relation with other men*’ (Ferrara 1854, p. 49; added emphasis). The relationship between ends and means within an instrumental rationality framework came to be seen as the central feature of catallactics, so that the latter gradually gave way to the view of economics as ‘the study of the general principles of administration of resources, whether of an individual, a household, a business, or a State’ (Wicksteed 1933 [1910], p. 17). There is a direct link between Wicksteed’s conception of economics in its ‘widest scope’, that is as ‘a study of the principles of administration of resources and selection between alternatives, conceived without any formal or conventional limitation’ (Wicksteed 1933 [1910], p. 17) and Lionel Robbins’ definition of economics as ‘the science which studies human behavior as a relationships between ends and scarce means which have alternative uses’ (Robbins 1932, p. 15).¹⁰ In fact, both Wicksteed’s and Robbins’s definitions of economics are consistent with the conception of economics as a science of instrumental rational action, that is, as a component of the general theory of human action: ‘the economic or catallactic problems are embedded in a more general science, and can no longer be severed from this connection [...] [E]conomics becomes a part, although the hitherto best elaborated part, of a more universal science, praxeology’ (von Mises 1949 [1940], p. 3).

The switch from catallactics to a general theory of human action (praxeology) triggered the analysis of allocation criteria independently of specific configurations of exchange. Francis Ysidro Edgeworth’s and Vilfredo Pareto’s investigation of the properties of optimality conditions for bilateral exchange (Edgeworth 1881) and resource-constrained transformations (Pareto 2014 [1906]) opened the way to Bruno de Finetti’s formal analysis of optimality conditions for the case of multiple-objective maximization (de Finetti 1937, 1952). De Finetti moves from the consideration of multiple objective functions, which he describes as ‘partial objectives’, and asks which conditions should be satisfied for the joint maximization of those functions under given limitational constraints. Formally, de Finetti introduces a ‘global’ objective function defined as linear convex combination of manifold partial objective functions:

$$F(u) = \lambda_1 F_1(u) + \lambda_2 F_2(u) + \dots + \lambda_k F_k(u), \quad \text{subject to} \quad \sum \lambda_k = 1, \quad k = 1, \dots, n \quad (3)$$

¹⁰Robbins acknowledged his debt to Wicksteed’s view of economics in his Introduction to Wicksteed’s *Common Sense of Political Economy*, in which he wrote that Wicksteed’s approach cast ‘the whole corpus of economic science into an entirely new light—a light in which Economics is seen to be a discussion not of the nature of certain *kinds* of behaviour arbitrarily separated off from all others, but of a certain *aspect* of behaviour viewed as a whole’ (Robbins 1933, p. xxii).

De Finetti envisages a solution criterion by which the attainment levels of any collection of $k - 1$ partial objectives are given, while the value of the k th objective is maximized. This operation is repeated for any combination of $(k - 1)$ partial objectives in order to obtain the set of all possible feasible combinations of achievement levels that allows maximization of all partial objectives taken one by one. A distinctive feature of the latter set is that no further improvement of attainment level for any partial objective is possible without compensatory losses for some other partial objective. De Finetti's algorithm generalizes Edgeworth's exchange postulate beyond the institutional setting of an exchange economy, and allows identification of the value judgements implicit in the multiple-objective maximization exercise. For the λ_i s multipliers denote the different degrees of importance (the different weights) assigned to the partial objectives in the construction of the global objective $F(u)$. De Finetti's analysis of optimality conditions highlights both the compensation principles at work behind transfers from one optimal allocation to another and the central role of weights in moving from partial to global objective functions. Compensation principles presuppose trade-offs between different allocations based on limitationality constraints, while weighing criteria call attention to the fact that different allocation patterns can have hugely different consequences for any global objective function depending on how skewed the global objective is towards any one of its partial objectives (or collection thereof). The combined attention for compensation criteria and weighing systems highlights the potential of allocation theory in investigating the complex trade-offs involved when transferring resources from one use to another (as well as from one social group to another) under a given limitationality constraint. Maurice Allais's analysis of economic surplus and loss is an explicit attempt to address allocative trade-offs between different individuals or social groups and their relationship with the optimality conditions for the economic system as a whole: '[t]he search for a representative indicator for the efficiency of an economy [...] boils down to a search for an indicator to represent its inefficiency. The main conditions which such an indicator must fulfil are that it be nil for any situation of maximum efficiency, that it be positive for any situation which is not of maximum efficiency, and that it decreases when one passes from a given situation to one where certain preference indexes are found to be raised without any corresponding decrease in the other preference indexes. Such an indicator, when associated with a given situation, can be considered as representative of the loss [...] which the economy is undergoing in that situation' (Allais 1986,

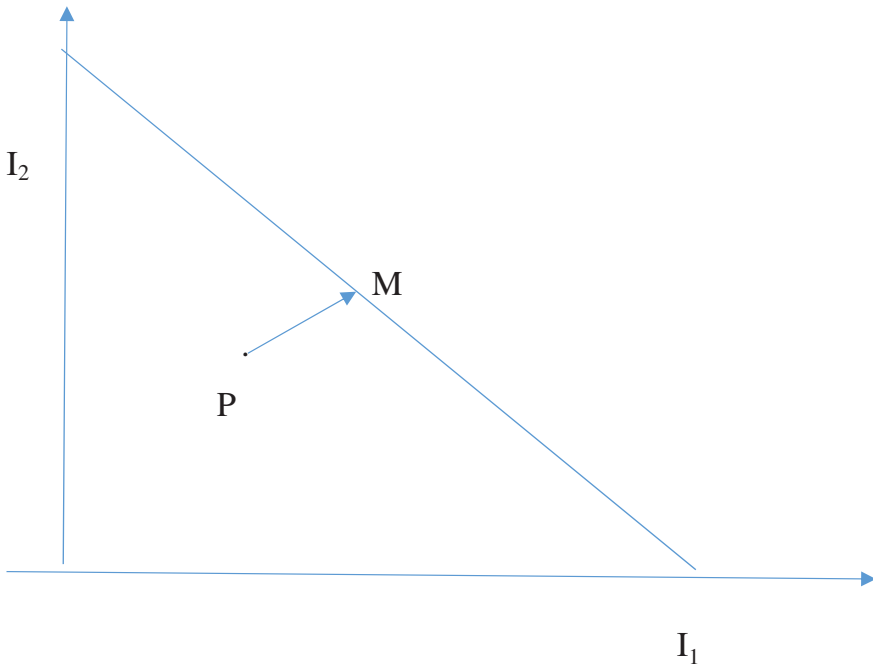


Fig. 1 Optimality frontier and distributional trade-offs

p. 137). Figure 1 represents the frontier of possible allocations that satisfy the de Finetti-Pareto optimality condition for multi-objective maximization:

Line I_1I_2 represents the alternative combinations of attainment levels for the separate objective functions of individuals (or groups) 1 and 2 consistently with the given limitationality constraints and the de Finetti-Pareto optimality condition. Any global objective function $F(I_1, I_2)$ would attain a maximum by fixing the attainment level of either I_1 or I_2 and finding the corresponding attainment level for the objective function of the other individual or group. The global objective function $F(I_1, I_2)$ can be seen as a linear convex combination of the partial objective functions I_1 and I_2 :

$$F(I_1, I_2) = \sum \lambda_1 F_1(I_1) + \lambda_2 F_2(I_2) \quad (4)$$

For given values of weights λ_1, λ_2 , any increase/decrease of either I_1 or I_2 entails a corresponding decrease/increase of the attainment level for the other objective. A change of weights λ_1, λ_2 modifies the impact of any distributional change on the value of the global objective function. As a result, the same distributional change may have different consequences depending

on which weighing system we are considering. For example, a society assigning equal weights to the objectives of different groups (say, 'rich' and 'poor') would be indifferent to whether a distributional change makes the 'poor' group better off or worse off. On the other hand, a society assigning different weights to different groups would react differently to distributional changes depending on which weights are assigned to which groups.

The above argument draws attention to a complex intertwining of means and objectives and has manifold consequences for the way to assess the material life of the polity. First, any given allocation of resources between social groups may contribute differently to any global objective function depending on the distribution of weights associated with different social groups. Second, the maximum value of any global (social) objective function may be compatible with different allocations between groups if society is prepared to modify their respective weights accordingly. Third, a concern for the relative positions of groups may lead to the entrenchment of sub-optimal patterns of allocation even if all groups would be better off by moving to an allocation on the optimum frontier.

To conclude, plutology and catallactics highlight two distinct sets of conditions for the material life of the polity: viability conditions in the former case, efficiency conditions in the latter case. Either set of conditions can be identified independently of the other. For *viability conditions* denote a property of the economy as a set of interdependent production processes if the latter is to be in a self-replacing state. On the other hand, *efficiency conditions* denote a property of the economy as a collection of resources directly or indirectly fulfilling human needs. An economic system may be viable without being efficient in the de Finetti-Pareto sense (for example, a system can be in a self-replacing state even if it may be possible to shift to a technology requiring less inputs per unit of output). Moreover, an economic system may be efficient without being in a self-replacing state (for example, a system may be unable to introduce improvements without compensatory losses even if it requires non-reproducible resources and is thus unable to replace its own means of production). In spite of the distinction between viability conditions and efficiency conditions, there may be cases in which both conditions highlight relevant features of the economy under consideration. For example, the physical and distributive trade-offs revealed by viability conditions (1) and (2) may be different from the allocation trade-offs revealed by the efficiency condition, and the policies dealing with those trade-offs may be correspondingly different. The material life of the polity involves both viability and efficiency issues, and different political arrangements may be required for the two sets of issues.

4 The Political Life of the Economy

The economy is a sphere of interdependent practices mutually constrained by the explicit or implicit acceptance of a common condition (which may be the maintenance of the field as such). This view of the economy encompasses both the practices of actors following independent objectives but mutually constrained by existing customs and rules, as well as the practices of actors who are explicitly coordinating with each other in view of a common objective.¹¹ Economic theory provides different perspectives on the economy depending on whether it emphasizes viability over efficiency, or vice versa. The viability approach highlights proportionality conditions for the self-replacing state. It also addresses the proportionality conditions for the economic system to achieve systemic objectives such as a given growth rate or a given level of overall employment. Political conditions are instrumental to the achievement of a self-replacing state, and of any additional objective in terms of growth or employment. On the other hand, the allocation approach highlights optimality conditions for the economy to be on the maximum efficiency frontier. It also addresses the shifts in relative allocation of resources that may take place when a sub-optimal economy moves towards that frontier. Political conditions are instrumental to the achievement (or maintenance) of optimal allocation, and are directly concerned with the mutually compensating gains and losses that are involved in shifting from one optimal allocation to another.

Viability conditions are central to the political arrangements addressed in Quesnay's economic writings (Quesnay 1766, 1767). Both unproductive expenses by the landed social groups and the advocacy of a single tax raised on agricultural net product (*impôt unique*) reflect Quesnay's concern for the

¹¹This distinction recalls Max Weber's duality between 'economic system' (*Wirtschaft*), defined as 'an autocephalous system of economic action' (Weber 1947 [1922], p. 158, and 'economic organization' (*Wirtschaftsbetrieb*), defined as 'a continuously organized system of economic action' (Weber 1947 [1922], p. 158). The continued existence of the *Wirtschaft* presupposes the viability of mutual constraints independently of any explicit sharing of objectives between economic actors. On the other end, no *Wirtschaftsbetrieb* may exist without the sharing of certain objectives between the relevant actors (so that their actions can be considered as 'tasks' relative to the fulfilment of those objectives). Michael Oakeshott draws a complementary distinction between two different views of human association, which he calls 'human association' and 'enterprise association' or, following Roman private law, *societas* and *universitas* respectively. The former (*societas*) is defined by membership of a field in which possible (acceptable) actions are 'neither definitive principles of conduct nor explicit injunctions addressed to assignable agents commanding or prohibiting substantive actions or utterances' (Oakeshott 1975, p. 128). The latter (*universitas*) is defined by membership of a field in which actions (as tasks) must follow 'definitive principles of conduct' in the instrumental pursuit of a shared objective.

necessary proportionality between the sectors of a self-replacing economy. Unproductive consumption, even if not directly needed for commodity production, is necessary to ensure the reproducibility of the circular flow from one agricultural cycle to another, while *impôt unique* makes it possible to levy taxation directly on surplus produce over means of production, and thus allows the State to provide its needs without endangering self-replacement. In this view, *laissez faire* (free trade) allows unencumbered expenditure flows between agriculture, industry and the landed groups consistently with the proportionality requirements of self-replacement (obstacles to free trade being seen as directly encroaching on the viability of the economy). Adam Smith (1776) and David Ricardo (1951 [1817]) address the relationship between triggers of change (increasing and decreasing returns) and viability conditions along a structural dynamics trajectory. Smith highlights the relationship between viability and the economy's growth potential when division of labour is the principal mechanism driving structural change. In this case, maximum growth can be achieved by shifting accumulation of capital from agriculture to industry, and eventually from industry to 'carrying trade', along a trajectory describing the 'natural progress of opulence' (Smith 1776). In this case, two complementary requirements drive structural change: (i) the single-period condition for self-replacement and (ii) the multi-period condition for expanding productive capacity in the productive sectors in which productivity gains are most likely as the overall scale of production increases. A distinctive feature of Smith's analysis is the existence of upper bounds on increasing returns within any given technological regime, and the consequent stage-structure of structural dynamics along the maximum path of expansion. For this reason, net product accumulation should switch from agriculture to industry as soon as the limited potential for agricultural improvement is exhausted, and then from industry to carrying trade whenever the potential for manufacturing increasing returns is slackening. This approach highlights the relationship between single-period and multi-period viability: (i) single-period viability makes self-replacement possible but does not guarantee maximum growth at any given time while (ii) multi-period viability guarantees economic expansion at the maximum rate consistently with fulfilment of the self-replacement condition. Smith's natural dynamics highlights the growth potential of increasing returns while at the same time ensuring that the economic system is structurally able to replace used up means of production. This explains the sequence characterizing Smith's dynamics: the manufacturing stage does not start before agricultural improvements have fully worked themselves out, and the carrying-trade stage does not start before the

formation of a manufacturing base. In short, the increasing returns-economic growth nexus presupposes fulfilment of the self-replacement condition at any stage of natural dynamics, and determines the tempo of economic expansion. The political implications of Smith's natural dynamics are far reaching. In particular, natural dynamics suggests that systemic coherence may require a specific sequencing of the stages of economic growth, and that for this to be possible the relative weight of agricultural, industrial and commercial interests should be such as to allow the economic system to follow that particular sequence. Ricardo investigates a different aspect of the relationship between viability and growth by considering the dynamic trajectory of an economic system subject to natural resource constraints and decreasing returns from the use of capital and labour. This analytical exercise is carried out by assuming an exogenously given population growth and changes of technology in use due to the need to overcome scarcity bottlenecks (Ricardo 1951 [1817]). It is possible to cast the central features of Ricardo's contribution in more general terms by considering the dynamic trajectory of a multi-sectoral, resource-constrained economy achieving maximum growth under the viability condition (Quadrio Curzio 1986, 1990; Quadrio Curzio and Pellizzari 1999, 2018). This formulation highlights the existence of upper bounds on the maximum growth that the economy can achieve at any given time due to the need of using less and less productive technologies (that is, technologies requiring increasing inputs per unit of output) as the upper limits on activity levels of the more productive technologies are reached. This sequence involves that it is not always possible to invest the net outputs delivered by the most efficient techniques in expanding the productive capacity of the less efficient techniques (due to mismatches between the input requirements of different techniques). This situation brings about the formation of residuals, which might however become usable again if further technical changes reduce the mismatch between the input requirement structures of 'new' and 'old' techniques (Quadrio Curzio 1986). In this case, structural bottlenecks generate both upper thresholds, above which it is no longer possible to use the most efficient techniques so that less efficient techniques need to be introduced (decreasing returns) *and* lower thresholds above which input residuals become usable again, thus triggering a spurt in the economy's maximum growth rate. This type of analysis highlights the role of structural differentiation and structural fits (or mismatches) in determining the character of dynamic trajectories. Structural differentiation is a direct source of differential incomes (rents) and these incomes acquire a central position in determining the maximum possible growth of the economy at any given time.

In particular, the internal differentiation of productive structures generates productivity differentials. These differentials are the source of 'structural rents' that may or may not translate into ordinary rent incomes depending on the appropriation arrangements governing the distribution of production. The relationship between net products and structural rents is of central importance in assessing the way in which the material configuration of the economy interacts with political arrangements in triggering *one path or another* of economic dynamics. Structural rents signal technological differentiation and highlight the existence of a share of net product generated within a particular subsystem of the economy. They may advance or retard the maximum growth rate of the economy depending on the way they are distributed and used to expand productive capacity (Quadrio Curzio and Pellizzari 2018; Scazzieri, Baranzini and Rotondi 2015).

The viability requirements for self-replacement intertwine with the political and institutional conditions under which those requirements must be satisfied. Karl Marx (1983 [1867]) and John Maynard Keynes (1936) consider two different aspects of that relationship, while Luigi Pasinetti (1977b) investigates it in terms of a vertically integrated representation of a self-replacing economy. Marx focuses on the 'social equilibrium' requirements for self-replacement in a capitalist economy characterized by a given configuration of relative power between social classes. The ratio between the value of the economy's net product, or surplus (s), and the value of the workers' necessary consumption, or variable capital (v), expresses the relative position of capitalists and workers under given historical conditions (both magnitudes are measured in terms of the corresponding quantities of directly and indirectly embodied labour). If we take this ratio (*rate of surplus value*, or *rate of exploitation*) to be given from outside the circular flow, it follows that either production technology or income distribution should adjust in order to maintain the given configuration of relative positions between social classes. A situation in which v is fixed from the technological and social point of view (subsistence wages) is one in which a given s/v ratio can be maintained by changes of production technology (that is, by changes that modify the viability condition for self-replacement). On the other hand, a situation in which v is flexible (for instance because one fraction of workers' remuneration reflects contingent arrangements independently of technological constraints) is one in which changes in income distribution might be sufficient to maintain a given s/v ratio. In the latter case, there will be no need to adjust production technology in order to maintain given relative positions between social classes. Keynes draws attention to a different aspect of the

relationship between self-replacement and social equilibrium by considering the way in which a scale constraint external to the circular flow, such as the level of aggregate employment, brings about production and expenditure flows compatible with it. Keynes's analysis is not explicitly concerned with the viability condition for self-replacement, even if the crisscross causal mechanism determining sectoral employment responses to a given exogenous increase of expenditure reflects the same network of interdependencies that also find expression in the viability condition. However, Keynes foregrounds the macroeconomic consistency between employment targets and expenditure without explicitly addressing the issue of the intersectoral consistency of the expenditure and production flows that are thereby generated. In fact, the multiplier mechanism at the root of Keynes's analysis highlights the sequential causality governing the propagation of exogenous variations in expenditure (see also Kahn 1931) but overlooks the mutual consistency requirements of production flows in a self-replacing state. This means that, in principle, we might have a sequence of expenditure and employment impulses that is consistent with a full employment target even if, at no stage of the sequence, the economy is in a self-replacing state (nor can it be reduced to such a state). Pasinetti investigates the relationship between macroeconomic employment and structural viability conditions by means of his vertically integrated representation of sectoral interdependencies. In his formulation, it is possible to partition any given circular economy into a set of vertically integrated sectors (or subsystems) such that any given subsystem includes one element of the system's net output vector and the whole set of physical and labour inputs that are directly and indirectly needed to produce that particular net output component (Pasinetti 1977b). In a subsequent formulation, Pasinetti constructs vertically hyper-integrated sectors, in which each sector also includes the physical and labour inputs needed for the corresponding net output component to grow at a given rate (Pasinetti 1988). The vertical integration, and vertical hyper-integration, of sectoral magnitudes highlights two complementary aspects of the relationship between the viability of the economy's internal structure and the consistency of this structure with macroeconomic or systemic objectives (such as full employment or full capacity utilization). One aspect of this relationship concerns the physical quantities produced in the economy, the other aspect concerns the values at which these quantities should exchange with one another in view of systemic constraints:

$$S^{(i)} = \mathbf{H}Y_i \equiv h_i Y_i, \quad i = 1, 2, \dots, m \quad (5a)$$

$$L^{(i)} = \mathbf{v}\mathbf{Y}_i \equiv v_i Y_i, \quad i = 1, 2, \dots, m \quad (5b)$$

$$\mathbf{p} = \mathbf{v}w + \mathbf{H}\mathbf{p} \quad (6)$$

Expressions (5a) and (5b) denote, respectively, the vertically integrated stocks of produced inputs (vertically integrated productive capacity) and vertically integrated labour inputs needed to produce each unit of commodity as an element of the net output vector.¹² Expression (6) denotes the relationship of the price of each commodity to the value of the vertically integrated labour and capital inputs entering the production of one unit of that commodity with the given technology in use. The generalization to vertically hyper-integrated sectors allows expressing the relationship of a net output vector growing at a given rate, say g^* , to the corresponding quantities of labour and capital inputs. It also allows expressing the relationship of the price of each commodity to the value of vertically integrated labour and capital inputs needed to produce one unit of that commodity, inclusive of the unit mark-up needed to allow *expansion* of productive capacity in the corresponding vertically hyper-integrated sector. This formulation highlights the link between the viability requirements of any given production economy (the requirements for this economy to be in a self-replacing state) and the ‘external’ (macroeconomic) targets or constraints that any given economy is trying to achieve or is subject to.¹³ Political objectives may find expression in those targets and constraints. Their pursuit may or may not be consistent with the viability requirements of a given technology in use depending on whether conditions (5a, 5b) and (6) are satisfied. This property highlights a possible conflict between specific political objectives and the systemic coherence expressed by the viability condition for self-replacement.

¹²Pasinetti calls ‘each coefficient v_i ... *the vertically integrated labour coefficient* for commodity i ($i = 1, 2, \dots, m$)’ (Pasinetti 1977b, p. 20), whereas ‘each column vector h_i ... expresses in a consolidated way the series of heterogeneous physical quantities of commodities 1, 2, ..., m , which are directly and indirectly required as stocks in the whole economic system, in order to obtain one physical unit of commodity i as final good ($i = 1, 2, \dots, m$). This is another particular composite commodity, which we shall call *a unit of vertically integrated productive capacity* for commodity i ($i = 1, 2, \dots, m$)’ (Pasinetti 1977b, pp. 20–21).

¹³Pasinetti expresses this link contrasting ‘the point of view of the circularity of the production process’ and ‘the point of view of final demand’: ‘[t]he point of view of the circularity of the production process is evinced by the construction of the hyper-subsystems (which now acquire completeness by inclusion of the relations concerning the expansion of the means of production, besides those concerning their replacement). The point of view of final demand is evinced in an even sharper way. Even in a growing economic system, consumption appears at one extreme of the production process and labour appears at the other extreme, and the two are immediately and directly put into relation with each other. The complex circular (expanding) production process, which is in between, is taken for granted, as it is closed onto itself and merely fulfils an intermediate and ancillary function’ (Pasinetti 1988, p. 133). The duality between ‘the point of view of circularity’ and ‘the point of view of final demand’ has interesting implications for the analysis of the relationship between the economy and the polity, which are discussed in Cardinale (2018).

Interdependent processes are not always synchronized. For example, production processes may be of different time lengths and yet they may require each other's products as intermediate inputs. Under these conditions, ad hoc coordinating devices are necessary so that mutual input requirements can be met in spite of temporal asymmetries (Scazzieri 2017). This property highlights an additional feature of viability, which is primarily associated with the stage-structure of production activity. John Hicks addresses this issue in his treatment of the dynamic viability condition for a successful transition from one technical structure to another (a successful traverse) (Hicks 1973). In his treatment, capital-using production processes include a construction phase in which productive equipment is built, and a utilization phase in which final products are delivered. Lack of material synchronisation over time requires ad hoc coordination providing what may be described as *structural liquidity* (Cardinale and Scazzieri 2016). Both material and monetary debt-credit relations may be adequate to provide this type of liquidity but, in the latter case, monetary policy needs to be tailored to accommodate the specific conditions arising from lack of synchronization of interdependent but asymmetrical processes (Amendola and Gaffard 1998). Conditions in which the provision of structural liquidity may be necessary highlight a possible tradeoff between the proportionality requirements and the scale requirements for viability (Cardinale and Scazzieri 2016). The former are needed for self-replacement in the single period, while the latter ensure the coordination of processes of different time-lengths. A system scale ensuring time coordination may be incompatible with self-replacement, or self-replacement may be incompatible with time coordination. This situation highlights a potential conflict between viability and coordination, and thus a potential conflict between the social groups supporting one or the other approach to economic system's coherence.

The allocation approach to the political conditions for the effective working of the economy starts from different premises. As we have seen, a strand of writings in the age of classical political economy highlights the features of the economy as a collection of exchanges (Isnard, Destutt de Tracy, Whately). Destutt de Tracy explicitly acknowledges the constitutive role of exchange in the formation of human society. His argument is developed in a sequence of steps. First, human society is considered as a collection of agents 'who are capable of feelings and of acts of will as we are, whenever they are in contact and *in an established relation with other agents of their kind*, who are similar to them, and with whom they can have full intercourse' (Destutt

de Tracy 1823, p. 65; author's emphasis). Second, the economic condition of society is seen to be relative 'to our own most immediate needs and to the means we have to provide them' (Destutt de Tracy 1823, p. 68). Finally, Destutt de Tracy considers exchange as an essential element of the social condition itself. For he describes the 'formal or tacit' convention of not harming each another as 'a real exchange', seeing as 'everybody gives up a certain manner of using one's own power, and receives back the same sacrifice from everybody else' (Destutt de Tracy 1823, p. 69). This argument involves that 'commerce is the whole society' (Destutt de Tracy 1823, p. 78; author's emphasis) and suggests a definite political agenda in support of exchange relationships: 'the true utility of society is to make possible among ourselves a multitude of [exchange] arrangements' (Destutt de Tracy 1823, p. 71).

The emphasis on exchange as a *political condition* (exchange as a condition for the making of covenants and thus for the existence of the body politic) highlights the emergence of an interface between the economic dimension of the polity and the political dimension of the economy. This interface is based on the belief that *both* the economy and the polity are instances of a 'society of exchange' (Lowe 2010 [1935]), Chapter IV). In this view, the catallactic (market) features of the economy are intertwined with emphasis on 'civil liberty, private property rights, free decision of the individual as to his bargaining' (Lowe 2010 [1935]), p. 58). This provides the template for a *laissez faire* economy that is at the same time a *market polity* (a polity in which the covenant between citizens is based on the same contractual principles governing an economy of markets). Economists and economic writers such as Frédéric Bastiat (1845, 1850), Charles Dunoyer (1846), Francesco Ferrara (1859) and Richard Cobden (1867) highlight the complementarity between market economy and market polity. They started a line of thinking that stretches to twentieth-century contributions such as those by Friedrich von Hayek (1948, 1960), Ludwig von Mises (1949 [1940]), James Buchanan and Gordon Tullock (1962), James Buchanan (1977), and more recently by Douglass North (1990), Douglass C. North, John Joseph Wallis and Barry R. Weingast (2009), Daron Acemoglu and James Robinson (2006, 2012).¹⁴

¹⁴The beginnings of this intellectual tradition are steeped in classical political economy, and particularly in the contributions by Smith and Ricardo. However, the emphasis on exchange as the fundamental analytical template for economic theory distinguishes this approach from classical theory (Scazzieri 2008; Todd 2015), while the committed advocacy of free trade policies also distinguishes most contributions in this tradition from the more nuanced approach to free trade of the Classical Economists (Grampp 1960).

Exchange situations make allocation principles clearly visible, but the fundamentals of rational allocation are also manifest independently of exchange (see Sect. 3). This feature of allocation theory makes it a useful instrument in investigating the allocation criteria characterizing different institutional arrangements, and in comparing the relative efficiency of those arrangements. The de Finetti-Pareto optimum principle highlights the distinction between general optimality conditions and specific allocation mechanisms, and draws attention to the possible application of allocation theory to contexts different from that of market exchanges. Thus, it has been possible to investigate the political-institutional prerequisites for the allocative efficiency of different institutional arrangements, and to highlight which context is needed for any given institutional mechanism to meet optimality conditions. The discussion on the compensation transfers needed to move from one optimum allocation to another under market economy conditions (Arrow 1951; Hicks 1939a; Kaldor 1939; Scitovsky 1941), and the debates on the feasibility of efficient allocation of resources under planned economy conditions (Barone 1908; Dobb 1933; von Hayek 1935, 1940; Lange and Taylor 1938) highlight the implicit 'separation criterion' at work in allocation theory, and the possibility to use allocation principles as means to evaluate and compare alternative institutional arrangements. At the same time, the distinction between general optimality conditions and the specific allocation (distribution) mechanisms characterizing different economic regimes highlights that different political arrangements may be required in order to meet the same optimality principles in different contexts. This feature of allocation theory opens the theory to application in manifold institutional contexts. De Finetti is possibly the most outspoken advocate of the use of optimum principles in a multi-objective maximization setting. First, he highlights that one should 'translate in precise form the goals initially expressed in a more or less vague and indeterminate form, [...] assess their internal coherence, and [...] suggest, if necessary, how to modify or change them' (de Finetti 1973, p. 15). Then, one should 'delineate forms of social organisation meant to lead to the desired situations, by investigating and comparing their attitude to function in a simple and effective way, and with a tendency to stability' (de Finetti 1973, p. 15). This procedure involves two distinct but interconnected tasks. Task 1 requires the assessment of the *mutual consistence of goals*. In terms of the achievement of any collection of social objectives, this requires disentangling the plurality of objectives in order to assess to which degree the different objectives are mutually

compatible and to which degree satisfactory attainment of one objective may require accepting an *incomplete* attainment of other objectives.¹⁵ This task entails attaching weights to the different partial objectives, and different societies may attach different weights to different objectives. For example, equality of opportunities may conflict with the protection of disadvantaged individuals or social groups; the maximization of opportunities (and of the freedom of choice associated with it) may conflict with the minimization of uncertainty. Or, distributional equality may conflict with savings and accumulation requirements. Task 2 requires the identification of *effective and workable mechanisms* capable of leading to the desired outcomes. For instance, full employment may require attainment of a certain level of aggregate demand as well as certain changes in the sectoral composition of the economy (with the relative expansion of certain sectors and the relative contraction of other sectors). In other circumstances, a satisfactory expansion of the gross domestic product may require to overcome resource bottlenecks or technological bottlenecks that would otherwise hamper the attainment of that objective, or the attainment of full employment without triggering inflationary pressure may require an institutional mechanism in which strong welfare policies effectively compensate the income losses that might be associated with wage moderation.¹⁶

Allocation principles highlight trade-offs but do not provide an immediate way to deal with trade-offs. They draw attention to what can be 'technically' achieved without anybody's loss (by moving from a sub-optimal to an optimal allocation of resources) and to what can only be achieved by some individual or social group at somebody else's loss (by moving from one optimal allocation to another). At the core of allocation analysis is a set of assumptions (or data) concerning the elements of the economy that must be considered as given when asking which resource transfers are feasible and under which conditions. This entails that the content of the allocation problem changes fundamentally depending on which features of the economy we consider as given. For example, a transfer of resources from group *A* to

¹⁵In technical terms, this would require a maximisation exercise, but 'the function to be maximised [should] synthesize all the partial objective functions previously considered, making them compatible with each other in the way considered to be the best' (de Finetti 1973, p. 30).

¹⁶James Meade emphasized the complementarity of incomes and welfare policy as a necessary condition for a non-inflationary full employment policy: 'the successful introduction of institutions for achieving the necessary flexibility of rates of wages and of other forms of earnings [are] by far the most difficult economic problem which they have to face. [T]heir introduction would have been impossible if they had not been accompanied by effective measures to ensure that workers had, in addition to their earnings from work, a secure fixed income from some other source' (Meade 1993, p. 90).

group *B* may require a corresponding loss for *A* when technology and institutions are given but may be feasible without any such loss if there is a corresponding change to a more effective technology, and similarly for a resource transfer from *B* to *A*. This analytical framework highlights the complex hierarchy of constraints and opportunities that characterizes allocation processes. Opportunities are different depending on which specific constraint is binding, so that shifting the binding condition from one constraint to another opens up a set of opportunities while closing off others. This view draws attention to the role of constitutional arrangements as means to entrench a particular constellation of constraints and opportunities, and of political conflicts and compromises as means to establish a particular allocation from among the allocations consistent with binding constraints.

Allocation theory highlights a plurality of situations in which constitutional and/or political conditions determine *which* allocation mechanism is at work, *how* that mechanism can deliver a particular allocation, and *which adjustments* are needed to make the outcome of a particular allocation mechanism consistent with optimality conditions.¹⁷ For example, political conditions at a fundamental ('constitutional') level may determine whether the relevant allocation mechanism is, say, a competitive market economy or a command economy. In this connection, economic theory highlights the feasibility conditions of the respective allocation mechanisms if these mechanisms have to meet 'technical' requirements for the mutual fitting of economic actions. Instances are investigations into the Walrasian equilibrium of a competitive economy of markets (Walras 1874–77; Hicks 1939b, 1946; Allais 1943; Arrow and Debreu 1954; Debreu 1956a, b), and research into

¹⁷Leonid Hurwicz defines an *allocation mechanism* as the mechanism that 'specifies rules according to which, given the information available to him at a given time, a participant send messages to other' (Hurwicz 1977, p. 20). In his view, '[b]oth market phenomena and command systems can be fitted into this schema. Thus in the Walrasian tâtonnement process the language consists of prices and quantities demanded or supplied by the various agents. If the model contains an "auctioneer", his response function calls for price changes proportional to aggregate excess demand, while the response functions of others require them to convey their excess demands given the prices called out by the auctioneer. In an extreme version of a "pure command" system, the dialogue starts with the peripheral agents sending to the center messages describing their respective components of the environment (e.g. their resource holdings and production functions), whereupon the center, after suitable data processing and calculations, sends to the peripheral agents the order for actions. In this command system the outcome is clear: to carry out the orders received. In the Walrasian tâtonnement process, the matter is a bit more complicated. One must wait until equilibrium is somehow established—i.e. everyone is repeating his previous message. Then the outcome rule is to carry out exchanges according to the equilibrium bids made' (Hurwicz 1977, pp. 20–21).

the characteristics and feasibility of coordination in a centrally planned economy (Barone 1908; von Mises 1920; Marschak 1924, 1959; von Hayek 1935, 1940; Lange and Taylor 1938; Kantorovich 1965; Kornai and Lipták 1965; Malinvaud 1967). Either line of investigation is concerned with the internal coherence of the allocation mechanism and *not* with the assessment of its specific allocation outcomes. Political considerations do not directly enter this type of analysis, even if the actual existence of a particular allocation mechanism may reflect a particular constellation of relative positions of individuals and/or social groups in the polity. Once a given allocation mechanism is in place, the issue arises of the way in which a specific social and political context may determine the initial resource endowments of individual and/or social groups, and thus the outcome of the allocation process under the allocation mechanism under consideration. A possible way of addressing this problem is by dropping the assumption of given distributional parameters and of considering the allocation mechanism as a two-stage procedure (Hurwicz 1977, p. 22). In this case, stage one specifically deals with the setting of initial resource endowments and stage two determines the allocation outcomes. Here distributional (and political) issues take central stage, in the sense that initial endowments may be assigned to individuals and/or social groups in such a way that a predetermined distribution can be achieved through the working of a given allocation mechanism (Hurwicz 1977; Pazner and Schmeidler 1978; Shapley and Shubik 1967; Dasgupta 1980). Alternatively, the initial resource endowments of individuals and/or groups may be considered as given, and political objectives may intervene *after* the allocation outcome is known. In this case, compensatory measures may be necessary to achieve an ex post adjustment of allocation outcomes if the latter is not acceptable from the social or political point of view (for instance, if allocation outcomes are too skewed against certain social groups). Compensation may consist of resource transfers between individuals or groups (Chipman and Moore 1968; Hicks 1939a, b, 1975; Kaldor 1939; Samuelson 1950; Scitovsky 1941; Sen 2002, 2009). It may also require the introduction of 'hybrid' allocation mechanisms, such as those combining features of market and command economy (Arrow 1974, 1983 [1969]; Meade 1948, 1986). In short, allocation theory highlights a plurality of conditions under which the working of any given allocation mechanism gives scope to political conflicts and compromises. First, any allocation mechanism presupposes a political settlement (the settlement bringing into operation that mechanism in lieu of others). Second, certain allocation mechanisms draw attention to the possibility of implementing political objectives through the working of the allocation mechanism itself

(as in the case of endogenous endowments described above). Third, the allocation mechanism may pinpoint the scope of politically triggered compensatory measures once allocation outcomes are known.

To conclude, both viability requirements and allocation mechanisms highlight constraints and possibilities for the political life of the economy. However, viability and allocation concentrate attention on different features of the relationship between the economy and the polity. Viability highlights systemic requirements for the feasibility of interdependent economic activities. This type of investigation highlights the political conditions necessary to the implementation of viability requirements, as well as the scope for the achievement of political objectives given the conditions for viability. Allocation analysis takes the fulfilment of viability conditions as given and concentrates attention on the political cleavages and alliances that may arise when distributing given endowments among individuals and/or groups, or when assessing the *relative* advantages of individuals and/or groups along trajectories from sub-optimal to optimal states of the economy.

5 Political Economy Between Theory and Context

Viability and allocation highlight two different approaches to the economy as a political space. Viability conditions point to the existence of systemic constraints (what I have called the proportionality requirements for the material life of the polity) and may be suggestive of an 'active' policy domain. For in this space, political actors are often considered to be capable of identifying the relevant proportionality conditions, and to be empowered to act towards their fulfilment. Viability analysis could also provide a benchmark for assessing to which extent different policy objectives are compatible with the proportionality requirements of any given set of interdependencies between sectors and/or social groups. In this way, this type of analysis may also be instrumental to the discovery of conflicts of interest between sectors and/or between groups that might otherwise remain concealed within the web of interdependencies. Allocation analysis takes a different view. For it presupposes economic actors capable of responding in an appropriate way to the incentives of a given allocation mechanism, as well as political actors capable of *bringing into existence* that particular mechanism. This framework presupposes a political space in which conflicts and/or compromises may arise in the determination of the allocation mechanism, in the introduction of the political objectives

constraining the working of that mechanism, and in the adoption of possible compensatory measures. However, conflicts and/or compromises do not directly show up in the working of the allocation mechanism itself.

Both the conditions for systemic viability and the conditions for systemic efficiency provide useful heuristics for the identification of which constellations of sectoral or group interests are compatible with either set of conditions. Viability and efficiency conditions are also instrumental in identifying which sets of policies are feasible in view of the given constellation of interests in society.¹⁸

The economy as a political space has a twofold character depending on whether the relationship between the economy and the polity is seen from the viability or the allocation point of view (see above). In addition, both viability and allocation conditions are inherently flexible and open to a variety of formulations, depending on which conditions are considered to be fixed and which conditions are viewed as variable and open to context. The relationship between theory and policy is one in which one can most clearly see the implications of the duality between viability and allocation approaches, and the open ended character of either approach. This is one important reason why arguments developed, respectively, within the viability or the allocation framework may support the same policy, and why either framework may sometimes provide support for opposite policies. For example, the allocative view of taxation may support a tax policy aimed at correction of the outcomes of a specific allocation mechanism, as with Arthur Cecil Pigou's view of tax incentives to support increasing returns sectors and tax disincentives to divert resources away from decreasing returns sectors (Pigou 1912, 1920). On the other hand, the allocation approach may also support a tax policy aimed at triggering *within* the existing allocation mechanism a social-welfare increasing allocation outcome, as with James Mirrlees's optimal tax argument supporting a zero marginal income tax rate for the highest income individual or group (Mirrlees 1971). Similarly, viability theory may support, respectively, free trade or protection depending on whether the attention is focused on the mutual advantages of trade at any given distribution of resources and productive capacities (Ricardo 1951 [1817]), *or* on the means of acquiring those productive capacities before the opening

¹⁸In this connection, Gunnar Myrdal emphasizes the role of economics as 'economic technology', by which he meant a tool for the 'analysis of the field of social interests' (Myrdal 1953, p. 199).

of trade relationships (List 1904 [1841]).¹⁹ The policy-openness of the viability approach reflects the emphasis of this approach on interdependence and hierarchy between industrial sectors, which justifies free trade or protection depending on whether the industrial structures of trading partners are considered to be given or subject to policy decisions. A similar openness to different policy options is manifest in the allocation approach, as this approach may support free trade as an efficiency-enhancing measure (Ohlin 1933), but may also justify limits to free trade as means to cope with the existence of strong asymmetries in the distribution of initial endowments between trading partners (Samuelson 2004).

The political economy of economic theory suggests a close look *both* at cases in which the same theory recommends opposite policies and at cases in which the same policy is supported by different theories. In either set of circumstances, the *causal mechanism* leading from theory to policy allows to overcome the apparent indeterminacy of the relationship between theory and policy and gives reasons for the policy that any given theory may suggest under specific circumstances. For example, tax policy may address production as a welfare-enhancing activity either in terms of the way in which production processes are organized in different industrial sectors (Pigou) or in terms of the unequal distribution of skills in the economy (Mirrlees). The emphasis by Pigou and Mirrlees on different aspects of production activity leads to different causal mechanisms and explains the differences between their respective policy proposals: a tax and subsidy policy based on the distinction between ‘marginal social net product’ and ‘marginal private net product’ for Pigou (1929 [1920], p. 174); an ‘approximately linear income-tax schedule’ for Mirrlees (1971, p. 208), who maintains that ‘complete equality of social marginal utilities ceases to be desirable, for the tax system that would bring about that result would completely discourage unpleasant work’ (Mirrlees 1971, p. 175). Similarly, viability theory may support either free trade (Ricardo) or protection (List) depending on the different causal mechanisms at play when we take a static or a dynamic view of comparative advantage in production. For with static comparative advantage (Ricardo) the opening of trade reflects the existing distribution of productive capacities between trading partners, while with dynamic comparative advantage (List) the accumulation of productive capacities may precede the opening of

¹⁹Lionel Robbins emphasizes that any close and unqualified connection between classical political economy and free trade is historically unjustified. In particular, he highlights that according to the Classical Economists ‘the good society is to be regarded as an artifact’ (Robbins 1952, p. 55). He also notes that ‘the system of economic freedom [can only work] if a conscious effort is made to create the highly artificial environment which is necessary if it is to function properly (Robbins 1952, p. 56).

trade, so that protection may become a prerequisite for the determination of the ‘manufacturing power’ of the economy under consideration (List 1904 [1841], p. 162).²⁰ In short, a given theoretical framework may be consistent with a plurality of causal mechanisms and policy frameworks. This highlights the context-dependence of theoretically grounded policy advice, but also emphasizes the central role of theory in identifying which causal factors make policy intervention effective in each particular context.

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²⁰The distinction between the ‘static and dynamic aspects of the principle of comparative cost advantages’ has been emphasized by Luigi Pasinetti (1993, p. 161). According to Pasinetti, ‘there certainly are comparative cost advantages which derive from the climatic and natural characteristics of each particular country. But there are other comparative cost advantages which may be *acquired* through learning methods’ (Pasinetti 1993, p. 162). The argument in the text suggests that the same analytical framework may support free trade or protection depending on whether static or dynamic comparative advantages are considered.

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8

Political Economy of Economic Value

Ajit Sinha

1 Introduction

Classical economists were mainly concerned with the *dynamics* of an economic system. For example, Adam Smith was interested in understanding the ‘nature’ and ‘causes’ of growth in the per capita real income, which led him to the problem of how to compare the real national incomes at two points of time, since it is made up of heterogeneous goods and services. Instead of taking the path of some kind of ‘index number’ solution, Smith used this problem to seek the answer in the *ultimate cause* of value. Since then the problem of the ‘measure of value’, i.e., the *scale* to measure value of a commodity, got entangled with the problem of ‘ultimate cause’ of value in classical economics. In general, classical economics analyzes production as a relation between labor and nature. The flip side of production is appropriation of income. The income so produced is necessarily appropriated by or divided among population according to the position they occupy in the process of production. This led classical economists to ask the question: how the changes in production affect the distribution of income and if the distribution of income is affected by changes in production then does it have any effect on the measure of value and in turn the measure of income itself? In this paper, I will first briefly discuss how these questions were specifically

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dealt with by Adam Smith, David Ricardo, and Marx and then discuss how Sraffa was able to solve the problem of the 'measure of value' by disentangling this problem from the problem of the 'ultimate cause' of value.

2 Adam Smith: The Distribution of Income or How Production Is Appropriated Determines Value of Commodities

The story begins with Adam Smith. As early as 1776, Adam Smith explicitly set out to inquire into the 'nature' and 'causes' of the 'wealth of nations'. He argues, against the Mercantilists, that the true wealth of a nation does not lie in its stock of gold and silver (i.e., the international currency) but rather it lies in the per capita flow of goods and services per year. He goes on to claim that the 'cause' of wealth does not lie in the surplus of real balances in international trade and capital inflows but rather in its laborers' ability to produce goods and services. Thus the state policies should be geared to supporting the growth of real income rather than increasing the surplus in balance of trade. Then arises the question of what government policies facilitate growth in a nation's real wealth and what policies hinder it? This brings Adam Smith to the problem of comparing wealth of a nation over time. Since real wealth is a vector of heterogeneous goods and services, in general comparing two such vectors would require a homogeneous measure of wealth. Since Adam Smith had already rejected the measure of wealth in terms of money, aggregation of all the goods and services produced in a year in terms of its money value was not satisfactory to him. And he correctly argued that money-commodity is a commodity whose value fluctuates over time as the value of any other commodity, therefore it cannot be a reliable measure for comparing the real wealth over time. An additional problem with choosing precious metals as the Standard of value was that it was mainly produced outside of the British economy and brought in only through international trade. Thus changes in productivity or other factors in precious metals producing economies could affect the value of the precious metal and thus the measure of British wealth independently of any changes taking place in the British economy. This is where Adam Smith confronts the problem of a Standard of value, that is, a scale that measures wealth (or aggregate income) that itself remains unaffected by price movements over periods of time. This 'invariable measure' must lie outside the commodity set as all commodities are liable to price movements over time.

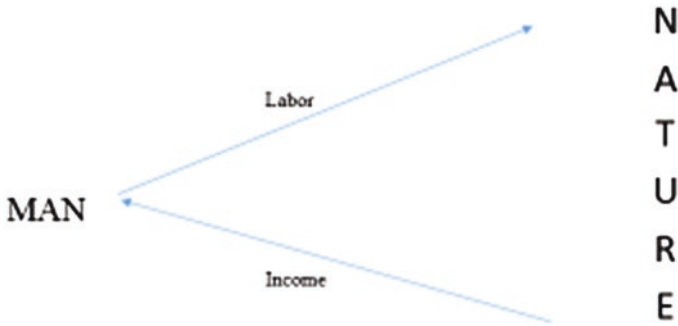


Fig. 1 Man and nature

This problem takes Adam Smith to the idea of direct primordial production relation between man and nature as depicted in Fig. 1. The top arrow represents Man's laboring activity against nature and the bottom arrow represents his appropriation of nature as product of his labor.

In other words, the top arrow in the figure represents the 'real cost' or 'real price' paid by the laborer for the income received. For Adam Smith, income that is produced and appropriated belongs to the commodity set and the commodities have values but the labor that produces the income remains outside of the commodity set but provides a fixed Standard for measuring values of the commodities produced. He argues that if a hunter 'A' kills two deer in a day's labor and another hunter 'B' kills one beaver in a day's labor then it is 'natural' that A and B will exchange deer and beaver in the proportion of one beaver for two deer:

In the early and rude state of society which precedes both the accumulation of stock and the appropriation of land, the proportion between the quantities of labour necessary for acquiring different objects seems to be the only circumstance which can afford any rule for exchanging them for one another. If among a nation of hunters, for example, it usually cost twice the labour to kill a beaver which it does to kill a deer, one beaver should naturally exchange for or be worth two deer. It is natural that what is usually the produce of two days or two hours labour, should be worth double of what is usually the produce of one day's or one hour's labour. (Adam Smith [1776] 1981, p. 65)

Now, in this economy of two people, the national income after a day's labor turns out to be a vector of two deer and one beaver. If we choose beaver as our Standard of value then the national income turns out to be two beaver and if we chose deer as our Standard of value then it would be four deer.

Adam Smith, however, argues that the exchange of deer for beaver and vice versa between A and B represents 'command' over each other's labor. A's possession of two deer is as good as a command over one day's labor of B and B's possession of a beaver is as good as a command over one day's labor of A. This is equivalent to the amount of labor A must perform to get a beaver and vice versa for B:

Labour was the first price, the original purchase-money that was paid for all things. It was not by gold or by silver, but by labour, that all the wealth of the world was originally purchased; and its value, to those who possess it and who want to exchange it for some new production, is precisely equal to the quantity of labour which it can enable them to purchase or command. (pp. 47–48)

This is what Adam Smith calls 'real' value of commodities. Now, suppose productivity doubles in both industries. Thus, one day's labor of A produces four deer and B produces two beavers in a day. Thus, the vector of national income after a day's work consists of four deer and two beaver. Now, if both A and B still receive two deer and one beaver after a day's work and the rest is appropriated by two capitalists, say C and D, then, in terms of command of labor, two deer or one beaver will still command a day of labor, so the national income also doubles to four days of labor, i.e., both A and B will have to work two days each now to be able to buy all the national income produced. So we can see that as long as the income of the laborer or real wages per day of labor remains fixed, Smith's Standard correctly accounts for changes in the real national income. However, instead of a rise in productivity, if we had considered a scenario where wages were halved to one deer or half beaver for a day's labor then again the national income would rise to four days of labor commanded even though the real income has remained the same. But Adam Smith denies that. He argues that from the point of view of the laborer (either A or B) his expenditure or 'sacrifice' has remained the same, i.e., one day of labor. In the first case, it buys him two deer or one beaver and in the second case, it buys him one deer or half beaver. So it is the prices of deer and beaver that have doubled. Thus the rise in national income is due entirely to price changes and not real changes:

Equal quantities of labour, at all times and places, may be said to be of equal value to the labourer. In his ordinary state of health, strength, and spirits; in the ordinary degree of his skill and dexterity, he must always lay down the same portion of his ease, his liberty, and his happiness. The price which he pays must always be the same, whatever may be the quantity of goods which he receives in return for it. Of these indeed, it may sometimes purchase a

greater and sometimes a smaller quantity; but it is their value which varies, not that of the labour which purchases them. At all times and places that is dear which it is difficult to come at, or which it costs much labour to acquire; and that cheap which is to be had easily, or with very little labour. Labour alone, therefore, never varying in its value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared. It is their real price; money is their nominal price only. (pp. 50–51)

But though equal quantities of labour are always of equal value to the labourer, yet to the person who employs him they appear sometimes to be of greater and sometimes of smaller value. He purchases them sometimes with a greater and sometimes with a smaller quantity of goods, and to him the price of labour seems to vary like that of all other things. It appears to him dear in the one case, and cheap in the other. In reality, however, it is the goods which are cheap in one case, and dear in the other. (p. 51)

Thus to measure the real changes in the national income one must separate out changes in the national income caused by changes in wages from changes in real goods and services. The invariable Standard of measure of value for Adam Smith is the labor-time that a *fixed* real wage commands.

After establishing the invariable Standard of value in the labor commanded measure of a fixed real wage, Adam Smith goes on to explain how the exchange-ratios of commodities are determined. Above we have noticed that Adam Smith claims that '[i]f among a nation of hunters, for example, it usually cost twice the labour to kill a beaver which it does to kill a deer, one beaver should naturally exchange for or be worth two deer'. So it appears, that the exchange-ratios between commodities are 'naturally' determined by the proportion of labor-time it takes to produce the respective commodities; i.e., it is the technique of production, or the top arrow of Fig. 1, that determines the exchange-ratios of commodities. But we have also noticed that Adam Smith's measure of value is defined as the sacrifice in terms of labor-time that the laborer must make to acquire the commodity. The first measure refers to *production* whereas the second measure refers to an *exchange* between the laborer's payments in terms of his or her sacrifice of labor-time against his or her income (i.e., real wages). Now, 'In the early and rude state of society which precedes both the accumulation of stock and the appropriation of land', the two measures—one in terms of the labor-time needed to produce the commodity, i.e., labor as an activity, and the other in terms of labor-time needed to be sacrificed by the laborer to acquire the commodity, i.e., labor as a payment in exchange for wages—coincide. In this case, the

value of one deer is half day's labor and the value of one beaver is one day's labor. But now, as in our above example, suppose the productivity of hunters A and B doubles but they continue to receive two deer and one beaver after a day's labor respectively and handover two deer to the capitalist C and one beaver to the capitalist D respectively as their profits for advancing them two deer and one beaver as their wages. Adam Smith argues that once total income no longer goes to the laborers, the coincidence of labor used in production and the labor-time commanded by the income of the laborer will diverge and the theory of value based on labor-time used in production no longer remains valid—it should be kept in mind that this proposition is valid under the condition that total income is appropriated by the laborers according to equal wages for homogeneous equal labor. However, once a capitalist class and a class of landlords emerge and the rule for appropriation of the output or the distribution of total income changes then according to Adam Smith, the rule for the determination of values of commodities must also change. In this altered situation, Adam Smith proposed that the determination of value could be made by simply adding up given wages, profits and rent. In our above example, the total income in terms of 'command of labor' is four days of labor. Out of which the workers receive two days of labor and the capitalists receive two days of labor and the rate of profits is 100%. Now, if the rate of profits and real wages were known then we could derive the total value of the national income produced in one day and its distribution between the two classes. Now, look at one deer. To produce one deer, A now takes $1/4$ days of labor for which the capitalist C must advance $1/2$ deer as wages (given two deer is the wage for a day). At 100% rate of profits, the capitalist C must receive $1/2$ deer as profit as its share in one deer. Now adding up the value of wages and profits generated in the production of one deer gives us $1/4 + 1/4 = 1/2$ day's labor, which turns out to be correct. We can extend such reasoning by increasing the productivity of the hunters further to 8 deer and 4 beaver a day and add one unit of privately owned forest (land) by E and F needed for the hunting of deer and beaver. If E and F demand four deer and two beaver in exchange for the rent of land then again we can reduce the value of one deer to $1/8 + 1/8 + 1/4 = 1/2$ day's labor. All these exercises are nothing but income accounting identities. This tells us that the real value of a commodity can be resolved into income as in this case it turns out to be equal to wages plus profits plus rent:

In every society the price of every commodity finally resolves itself into some one or other, or all of those parts; and in every improved society, all the three enter more or less, as component parts, into the price of the far greater part of commodities. (p. 68)

Our example, however, is too simplistic. In this case, A and B do not need any produced means of production or raw materials for hunting either deer or beaver. But in general, one would expect that killing of deer and beaver would require some weapons and raw materials to trap the animals, etc. In that case, the value of one deer or beaver must also contain the value of means of production and raw materials that have been used up in production of one unit of deer and beaver. Adam Smith argues that those means of production and raw materials used up in the production of one unit of output are also produced and have therefore, in turn, have produced income and so their values can also be resolved into income categories and the value of the means of production and raw materials used up in their production can again, in turn, be resolved into income categories going back and back in production chain. He believed that this chain must end up with the primordial production relation, which is a direct relation between man and nature. Thus, the value of a commodity can be finally reduced to a long chain of pure income such as wages plus profits plus rent:

In the price of corn, for example, one part pays the rent of the landlord, another pays the wages or maintenance of the labourers and labouring cattle employed in producing it, and the third pays the profit of the farmer. These three parts seem either immediately or ultimately to make up the whole price of corn. A fourth part, it may perhaps be thought, is necessary. In the price of corn, for example, one part pays the rent of the landlord, another pays the wages or for replacing the stock of the farmer, or for compensating the wear and tear of his labouring cattle, and other instruments of husbandry. But it must be considered that the price of any instrument of husbandry, such as labouring horse, is itself made up of the same three parts; the rent of the land upon which he is reared, the labour of tending and rearing him, and the profits of the farmer who advances such a rent of this land, and the wages of this labour. Though the price of the corn, therefore, may pay the price as well as the maintenance of the horse, the whole price still resolves itself either immediately or ultimately into the same three parts of rent, labour, and profit. (p. 68)

Given that value can be resolved into wages, profits and rents, Adam Smith went on to argue that the *rates* of wages, profits and rents are determined in the dynamic context of economic growth and are known at any given moment independently of the knowledge of the values or prices of commodities. For example, at any given moment real wages are high or low depends on whether the economy is thriving or stagnant or declining. A thriving economy with a high rate of growth would require high rate of growth of population and hence higher real wages so that more children of the working class survive. Furthermore, the subsistence wage for the worker,

which is associated with zero rate of growth of population, is not a biological minimum but itself changes with historical trend in wages and the culture: ‘By necessities I understand not only the commodities which are indispensably necessary for the support of life, but whatever the custom of a country renders it indecent for creditable people, even of the lowest order, to be without’ (Smith 1981, pp. 869–870). Thus given these rates at one moment, the values of commodities can be calculated.

3 David Ricardo: Value Is Determined by Expenditure of Labor and Is Not Affected by Changes in Distribution of Income

David Ricardo (1951 [1821]) criticized Adam Smith for both his choice of a Standard of measure in ‘labor commanded’ and his ‘adding up’ theory of value. Ricardo argued that Smith had simply replaced a single commodity, gold or silver, as the Standard of measure with real wages as his Standard, but real wages also fluctuate over a long period of time like gold or silver and therefore there is nothing ‘invariable’ about this measure either. He also claimed that Adam Smith’s theory of value is logically flawed. He argued that Adam Smith cannot simultaneously claim that, on the one hand, the value of a commodity ultimately *resolves* into wages, profits and rent and, on the other hand, that rates of wages, profits and rents are given independently of value, since value of a commodity (or the national income) must put a constraint binding on the third distributional category; for example, if the shares of the national income that goes to wages and profits are independently determined then the share that goes to rent must be whatever is left and cannot be determined independently of prices. Thus there can be no determination of value by *adding up* independently given rates of wages, profits and rent.¹

Ricardo also criticized Adam Smith for moving away from relating the theory of value with labor as an activity or technique of production to income distribution. He argues that Adam Smith was wrong in suggesting

¹In Sinha (2010a, b) I have argued that Adam Smith’s so-called ‘additive theory of value’ does not ignore the constraint binding on the system. Smith takes both wages and the rate of profits as given but treats rent as the residual. Also see Sinha (2010a, b) for my more expansive defence of Adam Smith against Ricardo’s criticisms.

that the hypothesis that exchange-ratios of commodities are determined by the labor-time ratios spent in producing the respective commodities no longer holds once a non-laboring class arrives on the scene and demands a share in income produced. He showed that Adam Smith's original hypothesis remains intact even if a positive rate of profits arises as long as the techniques of producing commodities have the same direct to indirect labor ratios, i.e., the industrial ratios of their total direct labor employment to total physical capital used in production, measured by the labor-time needed to produce them. Hence it is not a new share in national income that causes the original hypothesis to be modified. However, the hypothesis requires modification because in general there is no reason to assume that the ratios of direct to indirect labor-time for all the techniques of production would be the same for all the industries in the economy. And if that is the general case, then the requirement of equal rate of profits across industries for the long-term solution of the equilibrium or 'natural prices' must bring about a deviation in exchange-ratios from their labor-time ratios. This is because when the technical ratio of direct to indirect labor-time across the industries are equal then an equal percentage fall in wages would release proportionately equal income per unit of capital in all the industries to be distributed as profits. Thus the rate of profits in all the industries will remain equal without affecting the prices. However, if the technical ratios of direct to indirect labor are unequal across industries then an equal percentage fall in wages would release proportionately unequal income per unit of capital resulting in unequal rates of profits across industries, if prices remain the same. Hence prices must be affected if the long-term equilibrium condition is to be maintained.

Even after acknowledging this, Ricardo, however, was not ready to abandon the labor theory of value. He argues that even though the equilibrium exchange-ratios deviate from their labor-time ratios, it could be argued that the *ultimate cause* of *changes* in exchange-ratios can be traced back to changes solely in the techniques of production or the labor-times needed to produce the commodities. In other words, Ricardo wanted to deny that changes in the distribution of the national income or the net output produced have any impact on the exchange-ratios of commodities. Ricardo, however, could see that the same cause that necessitates the modification in exchange-ratios of commodities from their labor-time ratios must also necessitate changes in the exchange-ratios of commodities when the rate of profits or wages rise or fall. So, how could he argue that it is solely the changes in techniques that explain the changes in exchange-ratios of commodities? Ricardo thought that the effect of changes in distribution on exchange-ratios

of commodities is only *apparent* and solely due to the fact that we have to use an arbitrary commodity as a Standard to measure the changes in the exchange-ratios of commodities. He hypothesized that if we could find or theoretically construct a commodity that is not affected by changes in the distribution of income then it could be shown that exchange-ratios of commodities would remain unchanged in the face of changes in distribution of income when it is measured against this particular 'invariable' measuring Standard. At one stage Ricardo identified the search for an invariable Standard of value with the true theory of value itself: 'Is it not clear then that as soon as we are in possession of the knowledge of the circumstances which determine the value of commodities, we are enabled to say what is necessary to give us an invariable measure of value?' (Letter of Ricardo to McCulloch, dated 21 August 1823, Ricardo 1955, p. 358).

This proposition of Ricardo is however logically false because changes in the distribution affect relative values of commodities and thus logically there cannot be any commodity against which the relative values of commodities could remain constant in the face of changes in distribution. Evidently, Ricardo had finally come to this realization, as in a letter to James Mill, written six days before his untimely death on September 11, 1823, he wrote: 'I have been thinking a good deal on this subject lately but without much improvement—I see the same difficulties as before and am more confirmed than ever that strictly speaking there is not in nature any correct measure of value nor can any ingenuity suggest one, for what constitutes a correct measure for some things is a reason why it cannot be a correct one for other' (Ricardo 1955, p. 372, dated 5, September 1823).

We have seen that Adam Smith's project was to 'inquire' into the 'nature' and 'causes' of the 'Wealth of Nations' and in the course of this inquiry he found that he needed an invariable measure of value to measure changes in real wealth over time. This led him to inquire into the ultimate cause of value, which, according to him, is the *sacrifice* or 'price' that a laborer must make or pay to acquire his or her income. From here on, he developed a theory of value or what he called 'natural prices' that was nothing but accounting of national income, given rates of wages, profits and rents independently of prices. David Ricardo's project, on the other hand, was to inquire into the *laws* that regulate the distribution of income with the progress in the 'Wealth of Nations'. He argued that without the knowledge of the true doctrine of rent, for which he credits Malthus and Edward West, 'it is impossible to understand the effect of the progress of wealth on profits and wages ...' (Ricardo 1951, p. 5). With the help of his theory of differential rent, Ricardo tried to establish that the increase in the wealth and population of a

nation leads to a rising trend in rent of land at the cost of rate of profits on capital. Now, if value could be determined by adding up wages profits and rent, as Ricardo interpreted Adam Smith's theory to be, then this proposition may not be true, as a rise in rent could lead to a rise in the prices of all commodities leaving the rate of profits and wages unchanged. However, if the labor theory of value is true then extension of cultivation on less fertile land must lead to a fall in the rate of profits, if wages are held constant. On the other hand, leaving the rent constant, it can also be shown that a rise in wages must lead to a fall in the rate of profits and vice versa. For Ricardo, labor is the ultimate cause of value, but not as the 'sacrifice' or price paid by the laborer but rather as the productive activity. Thus, value should be independent of changes in distribution but changes in value due to changes in technique must have implications for distribution, since it is value that constrains the relations between distributional variables. When Ricardo realized that, in the general case, prices of commodities are not given by their labor-time ratios, he thought that this was still not fatal to his project as what he needed was the ultimate cause of *change* in the values or prices of commodities, since his inquiry was focused on the effect of changes in value on distribution due to rising difficulties in the production of agricultural goods. But once he realized that even in this case effects on values of changes in distribution cannot be removed, he blamed it on the arbitrary nature of the Standard in which values or prices are measured and entertained the idea for some time that an 'invariable' Standard, i.e., a Standard that is not affected by changes in distribution, will simply remove all the distortions caused in prices by changes in distribution.

Piero Sraffa (1951), however, has a different interpretation of Ricardo's problem of the 'invariable measure of value'. In his highly influential 'Introduction' to Ricardo's *Principles*, which was written in collaboration with Maurice Dobb, Sraffa argues that Ricardo in around 1814–15 was working on the basic principle that 'it is the profits of the farmer that regulate the profits of all other trade' (Sraffa 1951, p. xxxi). According to Sraffa, Ricardo assumed that in agriculture both capital (including seed and wage advances) and products were the same goods, and thus a rate of profit in agriculture could be determined on the basis of the physical data without any need for a theory of value. And since in a competitive market equal rate of profits must prevail, the prices of manufactures and other commodities have to be so adjusted as to allow the same rate of profits on their capital investments. In this framework, an inverse and proportional relationship between the rate of profits and the real wages can be directly observed through the microcosm of the agricultural sector. Apparently, Malthus had

objected to Ricardo's reasoning on the ground that '[i]n no case of production, is the produce exactly of the same nature as the capital advanced. Consequently we can never properly refer to a material rate of produce. ... It is not the particular profits or rate of produce upon the land which determines the general profits of stock and the interest of money' (letter dated August 5, 1814, quoted in Sraffa 1951, pp. xxxi–xxxii). In the face of such criticism Ricardo had to abandon his 'corn model', which opened him up to the problem of aggregating heterogeneous commodities, as the measure of capital required some device to homogenize a heterogeneous collection of goods. This led Ricardo to search for a general theory of value, which would then allow him to get a measure of the produce and capital in terms of their values. Thus the problem of value had to be solved before the question of distribution could be dealt with, as Ricardo in the early stages of the preparation of the *Principles* wrote to James Mill, 'I know I shall be soon stopped by the word price' (Letter dated 30 December 1815, *Works VI*, p. 348, quoted in Sraffa 1951, p. xiv). Now, the labor theory of value establishes that prices are determined by technique alone and are not affected by changes in distribution. Hence, if labor theory of value could be defended as a legitimate theory of value then it can be shown that wages and profits must be inversely and proportionately related as the size of the net output remains constant when it is cut in different proportions. However, as we have seen above, Ricardo had to admit that in the general case values do get affected by changes in distribution and therefore, in general, he could not establish that the size of the net output remains constant when distribution changes. It is Sraffa's contention that Ricardo maintained that such changes in the size of the net output due to changes in distribution arises solely because we take an arbitrary commodity as the Standard to measure prices and that commodity is also affected by the changes in distribution as other commodities are. He thought that an 'invariable measure of value' should insure that the size of the net output remains constant as prices change due to changes in distribution. Though this proposition is true for a 'standard system' with the 'Standard commodity' as the measure of value, it is not true for any real system that is not in standard proportion even if the Standard commodity is used as the measure of value (see the section on Piero Sraffa below for an understanding of the standard system and the Standard commodity).²

²See Sinha (2010a, 2016, 2017) for my critique of Sraffa's position.

4 Karl Marx: The Classical 'Natural Prices' or Values Are Displaced Labor-Values Because Profits Are Displaced Surplus-Values

Most of the controversies between Ricardo and the leading economists of his time such as Malthus and J. B. Say can be interpreted as a defense of Adam Smith against Ricardo. Much later, Marx (1977 [1867], 1991 [1894]) follows in the footsteps of Ricardo, but with his own major innovation. Marx thought that Ricardo unnecessarily got bogged down by the problem of 'invariable measure of value'. He maintained that the question of the deviation or rather the *difference* between the equilibrium exchange-ratios or 'natural prices' and the 'labor-time' ratios are more important than the question of the *cause of changes* in the exchange-ratios. For Marx, *human labor* is the *substance* of economic analysis, because economics is all about 'necessity' or alienated *human labor*. Thus, he goes on to distinguish the concept of 'value' from the classical concept of prices or 'natural prices' or what he calls the 'prices of production'—in the classical tradition values and 'natural prices' were used as synonyms, values were always defined in exchange relation with the given Standard of measure. However, 'Value' of a commodity, according to Marx, represents nothing but the total direct and indirect labor-time used in producing it. Thus 'value' is an absolute, and not a relative, concept and there is no confusion about its unit of measure—it is the unit of *time*, as hours or days of labor, etc. On the other hand, the concept of 'natural prices' or the 'prices of production' is a relative concept and does require the unit of some other commodity to represent itself.

Marx argues that the link between labor-time and exchange-ratios of commodities cannot be established directly unless one analyzes the *origin* of profits. He maintained that though political economy (i.e., both Smith's and Ricardo's theories) raised the problem of the origin of prices and found the correct solution in labor, it failed to raise the problem of the origin of profits because of its class character. He pointed out that political economy always takes the existence of a positive rate of profits as a fact of life without any further analysis of where it comes from. To analyze the origin of profits, Marx starts from his absolute category of 'value' of a commodity. He then divides the value of a commodity into three distinct components: $c + v + s$, where c , v and s represent the value of the means of production used in producing the commodity (i.e., the indirect labor-time—Marx called it the 'constant capital'), the value of wage goods advanced to the workers, which

Marx called the 'variable capital' and the difference between the total labor-time worked and the value of the wage goods advanced, which Marx called the 'surplus value', respectively. Thus the direct labor-time is divided into two parts: one part represents the wage advances and the other part represents the labor performed over and above the value of the wage basket received by the workers—it is similar to the division of a serf's labor-time: one part on his own land for himself and the other part on the landlord's land for the landlord. However, this surplus-labor does not convert directly into profits where it originates. He argues that the price ratios or the exchange-ratios of commodities deviate from their labor-value ratios in a systematic way, which could be explained on the basis of his value analysis.

According to Marx, the total surplus produced in the economy is equal to the sum of all the surplus-values produced in individual industries. This total surplus is then divided among the individual industries according to an equal rate on their individual capital investments such as $(c_i + v_i)$, where i represents the industry i . Thus $\sum s_i / \sum (c_i + v_i) = r$ (say) defines the average rate of profits in the system and the 'price of production' of a commodity is then defined by $p_i = (c_i + v_i) (1 + r)$. Given these prices of production, the 'natural prices' of classical economics only represent the ratios of prices of production of any commodity against the price of production of the commodity produced by the average 'organic composition of capital', i.e., $\sum c_i / \sum v_i$ (or C/V), of the system, which has the same rate of profit both in the value system as well as in the system of prices of production and therefore has no reason to deviate from its value. Thus, in the general case, the prices of commodities will systematically differ from their value ratios though they could only be derived from the labor-values of commodities, as the rate of profits could only be derived from surplus-values. In the above calculation, the sum of profits must come out to be equal to the sum of surplus-values and the sum of prices of production must come out to be equal to the sum of values. Thus competitive mechanism seems to only displace individual profits from their surplus-values and individual prices of production or 'natural prices' from their labor-values and create an *appearance* that disguises the true *essence* of the system, since the *essence* of the system is contained by the *average commodity*, which is produced by the *average industry* made up of average direct to indirect ratio of the system as a whole.

Some years later, Bortkiewicz (1949 [1907]) pointed out that Marx's argument was flawed, since the measure of capital in terms of labor-time $(c_i + v_i)$, as Marx had used to derive his average rate of profits, is illegitimate once it is admitted that exchange-ratios deviate from labor-time ratios. This is because capital goods are produced commodities and therefore if their

prices deviate from labor-values as outputs then the same prices must apply to them when they are used as inputs. As a matter of fact, Marx himself had realized that there was a problem of this nature with his method of connecting labor-values of commodities with their prices of production through the average rate of profits derived on the basis of labor-value calculations:

The development given above also involves a modification in the determination of a commodity's cost price. It was originally assumed that the cost price of a commodity equaled the *value* of the commodities consumed in its production. But for the buyer of a commodity, it is the price of production that constitutes its cost price and can thus enter into forming the price of another commodity. As the price of production of a commodity can diverge from its value, so the cost price of a commodity, in which the price of production of other commodities are involved, can also stand above or below the portion of its total value that is formed by the value of the means of production going into it. *It is necessary to bear in mind this modified significance of the cost price, and therefore to bear in mind too that if the cost price of a commodity is equated with the value of the means of production used up in producing it, it is always possible to go wrong.* (Marx [1894] 1991, p. 264, emphasis added)

Marx, however, could not come up with a solution to this problem and once it is admitted that the measure of capital must also be in terms of prices of production, Marx's average commodity as the Standard of measure derived on the basis of labor-values or the average organic composition of capital loses its relevance.

5 Piero Sraffa: For Any Given System of Production, Distribution of Income Is Independent of Values or Prices but Prices Are Dependent on Distribution of Income

Sraffa (1960) rejects the idea that one can *ultimately* reduce productive activity to the primordial act of production by going back and back in time. The reason for it is that if a produced commodity is used as means of production in producing any commodity then no matter how far back we go in time there always will remain some *commodity residue*, and so pure man versus nature situation cannot be theoretically conceived. The relevance of commodity residue becomes all important when we try to understand how the rate of profits on capital and wages are related, given a produced net income.

It is clear that if one could reduce production to the primordial man versus nature relation then all capital investments can be reduced to a long-dated series of wage payments and thus in this scenario the rate of profits must become infinite when wages are reduced to zero; however, if the commodity residue is taken into account then the rate of profits must reach a finite maximum when wages are reduced to zero given that some positive nonwage capital always must exist in physical form. Sraffa hypothesized that the finite maximum rate of profits of any given system of production that uses other commodities as means of production must remain constant when the rate of profits and wages vary. In other words, Sraffa hypothesized that the ratio of net output to total capital of any given economy must remain constant in the face of changes in prices due to changes in wages or the rate of profits:

What is demanded of a model is that it should show a constant (constant with respect to variations of \underline{p}) ratio between quantity of capital & quantity of product. If this can be constructed and proved to be general, a number of important “consequences” follow. (Sraffa Papers, D3/12/16: 14, dated August 1942, quoted in Sinha 2016)

Let us suppose we *observe* a simple three commodity economy after a cycle of production (a ‘harvest’ or an annual cycle with equal rotation time for all the industries), which is given by:

90 t. iron + 120 t. coal + 60 qr. Wheat + 3/16 labour → 180 t. iron
 50 t. iron + 125 t. coal + 150 qr. Wheat + 5/16 labour → 450 t. coal
 40 t. iron + 40 t. coal + 200 qr. Wheat + 8/16 labour → 480 qr. Wheat

Totals $\overline{180}$ $\overline{285}$ $\overline{410}$ $\overline{1}$

In this case, the net output of the system is given by (165 t. coal + 70 qr. wheat) and the total capital investment by (180 t. iron + 285 t. coal + 410 qr. wheat). Clearly, at this stage the maximum rate of profits of the system, which is equal to Net Output/Capital ratio (let’s call it R), cannot be determined without the knowledge of prices; since the ratio (165 t. coal + 70 qr. wheat)/(180 t. iron + 285 t. coal + 410 qr. wheat) is a ratio of heterogeneous goods. Let us assume that all the industries receive their profits equal to the average rate of profits of the system, say r , which is an unknown. This can be represented in equation form as:

$$\begin{aligned}
 (90p_i + 120p_c + 60p_w)(1 + r) + 3/16 w &= 180p_i \\
 (50p_i + 125p_c + 150p_w)(1 + r) + 5/16 w &= 450p_c \\
 (40p_i + 40p_c + 200p_w)(1 + r) + 8/16 w &= 480p_w, \\
 \hline
 (180p_i + 185p_c + 410p_w)(1 + r) + w &= 180p_i + 450p_c + 480p_w
 \end{aligned}
 \tag{I}$$

where p 's are the prices of respective commodities, r is the average rate of profits of the system and w is the wage rate. The system has five unknowns and three equations. Since prices are relative, one can choose any of the three prices and put it as the measuring Standard by putting its value equal to one, say e.g., $p_w = 1$ or any combination of commodities such as $(165p_c + 70p_w) = 1$. Thus we have now four independent equations and five unknowns. If we take the value of w given from outside in terms of the measuring Standard adopted then we can solve for a unique set of all positive prices and the average rate of profits r (this result is ensured by Perron-Frobenius theorem). Notice that when we take $w = 0$, the solution of r that we obtain is equal to the maximum rate of profits of the system R , which is associated with a particular set of prices. Let us take $(165p_c + 70p_w) = 1$ as our measuring Standard, thus the range of w is from 0 to 1. Now, as we go on changing the value of w from 0 to 1 in the above equation-system (I), we generate a series of different set of p 's and r 's as our solution sets. We notice that as the set of p 's changes with changes in w , the ratio of Net Output to Capital: $(165p_c + 70p_w)/(180p_i + 285p_c + 410p_w)$, or R , keeps changing as well. Thus it apparently refutes Sraffa's hypothesis, which was that the ratio of Net Output/Capital must remain constant with respect to changes in r or w . As we shall see below, Sraffa, however, succeeded in showing that his hypothesis is indeed correct and the result we observe above is simply due to the arbitrary nature of the Standard of measure we have selected.

We have seen that Ricardo had already established that if industrial ratios of direct to indirect labor were uniform for all the industries then changes in the rate of profits will have no impact on the relative prices of the commodities and the labor theory of value would correctly predict those price ratios. However, when the industrial ratios of direct to indirect labor happen to be unequal across industries then changes in the rate of profits would affect the price ratios to maintain the requirement of a uniform rate of profits in the system. The same reasoning holds for Sraffa's system of equations as well. If the industrial ratios of direct labor to means of production were equal for all the equations then every fall in wages (starting from $w = 1$) would release just enough revenue in each industry to pay for profits at an

equal rate without having to disturb the prices. However, if the proportions of the means of production to direct labor are not equal for all the industries then by the same logic prices *must* be affected. Because at the old prices some industries would have surplus of revenue and some deficit after paying the rate of profits at the uniform rate and therefore, prices *must* change to remove these surpluses and deficits from the equations. It should be noted that the determination of equality or inequality of proportions can be made by measuring means of production by taking their values at any wage (say, $w = 1$), since when proportions are the same then changes in wages have no impact on the prices and thus on the proportions so measured. From this, it follows that if the proportions are not equal at one wage, they will not be equal at any wage.

The mathematical reasoning of the necessity of movements of prices with respect to changes in wages, when the proportions of means of production to labor are not uniform, reveals an important fact: since these 'surplus' and 'deficit' industries are results of differing proportions of means of production to labor, there would be a *critical* or *balancing* proportion of means of production to labor for which no 'surplus' or 'deficit' would emerge; i.e., if an industry that used this 'balancing proportion' of means of production to labor then in this industry the 'cause' of change in prices due to change in wages would be absent. The important point about this 'critical proportion' is that if it is a balancing proportion at one set of prices then it must remain 'balancing proportion' for all the set of prices throughout the range of w from 1 to 0. This is because by definition a fall in wages releases in this industry exactly the amount needed to be transferred to profits to pay for the new general rate of profits on the *initial prices*, i.e., the 'price effect' of a change in wages is absent in this industry.³

To prove this, Sraffa showed that any empirical input–output data of basic goods,⁴ as we have taken above, can be converted to a Standard system by simple algebraic manipulation. For example, if we rescale the coal industry by $4/5$ and the iron industry by $4/3$. We obtain a rescaled equation-system (I), which is a Standard system:

³This is similar to Marx's idea of the industry with average organic composition of capital, which will show no deviation between values and the prices of production. This idea of Marx, however, could not do the job because, once it is admitted that prices of production deviate from values, it is the prices of production that must be used to measure the organic composition of capital of individual industries, which would change in all sorts of ways as wages change and thereby bring about changes in the average organic composition of capital itself.

⁴A basic good is a good that goes directly or indirectly in the production of all goods.

$$\begin{aligned}
 (120p_i + 160p_c + 80p_w)(1 + r) + 3/16 w &= 240p_i, \\
 (40p_i + 100p_c + 120p_w)(1 + r) + 5/16 w &= 360p_c, \\
 (40p_i + 40p_c + 200p_w)(1 + r) + 8/16 w &= 480p_w, \\
 \hline
 (200p_i + 300p_c + 400p_w)(1 + r) + w &= 240p_i + 300p_c + 480p_w
 \end{aligned}
 \tag{I'}$$

The Standard system (I') is *unique* to the equation-system (I).⁵ Now, in our Standard system (I'), we find that the value of the Net Output/Capital ratio is well defined in physical terms, independently of the knowledge of prices; since $(40 \text{ t. iron} + 60 \text{ t. coal} + 80 \text{ qr. wheat}) / (200 \text{ t. iron} + 300 \text{ t. coal} + 400 \text{ qr. wheat}) = 1/5$ or 20%, no matter what p 's happen to be. We call this Standard Maximum Rate of Profits, R^* . Now, if we take our Standard net output $(40p_i + 60p_c + 80p_w) = 1$ as our Standard of measure and give wages as fraction of this composite commodity, which Sraffa calls the Standard commodity, we will trace out value of all the r 's associated with all the values of w from 0 to 1 independently of the knowledge of prices. This relationship is given by: $r = R^*(1 - w)$, where R^* remains constant with respect to changes in w and r . This shows that given w , r can be determined independently of prices as the value of R^* is known and remains constant with respect to changes in w .

Two consequences follow: (i) since equation-system (I') is derived from simply rescaling the equations of equation-system (I), both the equation-systems are algebraically equivalent. And therefore, the relationship, $r = R^*(1 - w)$, must also hold for the equation-system (I), i.e., $r = R(1 - w)$, so long as the Standard of measure for prices and the wages are taken to be the Standard net product as above, and (ii) given that the average rate of profits of the empirical system must be equal to the average rate of profits of the Standard system and that this relationship must be true for all the rescaled system of the Standard system (the empirical system is just one rescaled system of its unique Standard system), it follows that all the industrial rates of profits must always be equal; i.e., the condition of equal rate of profits is not necessarily a condition of equilibrium or the center of gravitation of the system. Now, given w we can calculate r or given r , we could calculate w and plug

⁵See Sraffa (1960) for a proof of this proposition.

these values in equation-system (I) to derive the set of prices that are compatible with the given r and w determined independently of prices.⁶

Thus with the help of the Standard commodity as the Standard of measure, Sraffa establishes Adam Smith's fundamental proposition that the distribution of income is determined independently of prices and these given rates of distributional variables put constraints on prices to be such that the national income accounting must come out to be consistent with the *given* distribution of the national income. Sraffa also showed that there is no need to either assume an equilibrating mechanism or an existence of an equilibrium to prove this proposition. An objective input–output data along with either given wages in terms of the Standard commodity or the rate of profits has sufficient information to determine prices in the system.

Now, the Standard commodity as a Standard of measure remains invariable in the face of changes in prices brought about by changes in wages or the rate of profits. However, these changes in wages and the rate of profits are not the real changes that bring about the real changes in quantity demanded and supplied through the mechanism of price movements as a consequence. They are simply the whole range of rates of profits and wages that can be determined together independently of prices, given the input–output data and one of the two distributive variables anywhere in its entire range of possibilities. Thus this Standard is only a theoretical construct which is designed to show that the problem of income distribution can be separated from the problem of value or price determination.

Now, can the Standard commodity play the role of the Standard of measure or the money-commodity in the real world? The answer, in my opinion, must be: no. The Standard commodity is derived from a given set of industrial input–output data with a fixed amount of total labor employment in the system. Any small change in the technique of production of one or more basic goods or in the total employment of labor in the system must change the Standard commodity. Since the real economy is almost always going through some changes in its use of techniques and/or labor employment, the given Standard commodity must turn into an ordinary measuring Standard for the changed system or one will have to create a new money-commodity for every production cycle. But this is simply not possible because one of the fundamental characteristics of money is to be a means of deferred payments. Thus it is not possible to conceive that wages can be taken as 'given'

⁶For a mathematical proof of the above proposition and a detailed exposition of Sraffa's system, see Sinha (2016).

in terms of the Standard commodity in the real world. This, in my opinion, is the reason why Sraffa drops the idea of taking wages as ‘given’ and proposes instead to take the rate of profits of the system as ‘given’ (see Sraffa 1960, p. 33). The purpose of taking wages as ‘given’ in the early part of the analysis was to show that the average rate of profits of the system is a ‘non-price phenomenon’ and that a consequence of it is that all industrial profits must be uniform:

... The rate of profits is embedded ‘in the things’ and no manipulation of prices could ever affect it. [There could be no more tangible evidence (convincing proof) of the rate of profits [being, as] a non-price phenomenon (effect)]. (D3/12/53: 32, 1955, quoted in Sinha 2016, p. 148)

Once this purpose is accomplished, there is no need to continue with this assumption, which has meaning only in theory but not in empirical world. The rate of profits, on the other hand, is simply a pure ratio per unit of time, and hence its movements over periods of time can be compared directly in the empirical world. Thus for every new production cycle we can work out its R and given r , we can calculate its wages w from the equation, $r = R(1 - w)$, which by definition is in terms of its relevant Standard commodity. No matter what money-wage happens to be in the system, that money wage must be equal to the wages derived in terms of its Standard commodity.

We have seen above that Ricardo was mainly interested in analyzing the relation between r and w in a dynamic context when the economy is going through structural changes—in his case, when total labor employment in the system is rising and productivity of agricultural sector is declining with the productivity of manufacturing sector remaining the same. Through the help of his ‘labor theory of value’ Ricardo argued that the result of such structural changes in the economy would be a rising rent and a falling rate of profits with a given fixed real wages. On the basis of Sraffa’s analysis, we can say that the share of total profit in the net output or the total income at any given moment can be given by r/R . Changes in R represents changes in the structure of the economy in so far as its productivity is concerned.⁷

⁷Here productivity of the system refers to net output/capital ratio, i.e., the rate of surplus produced in the system and not in terms of productivity per unit of labor. In Sraffa’s system wages are not considered as part of capital, they take part in receiving a share of the surplus or the net output produced. Pasinetti (1981, pp. 104–106) has developed a dynamic Standard commodity, which measures the changes in average productivity per unit of labor for an economy growing at full employment with structural changes and consequent changes in prices. A comparison of the two productivity measures may prove to be interesting.

In the case of Ricardo's example, R must be falling and therefore, for every given r , the share of profits in the total output must be rising and the share of wages must be declining. Similarly, if the productivity of the system is increasing, i.e., R is rising, then for every given r the share of wages in the total income must be rising.

6 Conclusion

In this paper we have argued that the theories of value or prices in the classical tradition were mainly concerned with the problem of how prices of commodities relate to the distribution of income in a dynamic context. Now, price is a relative concept, it relates to the ratio of exchange between two commodities, whereas income is an absolute concept in the sense that one need not think of it to exist only in a relation of exchange with something else—it can simply be conceived as a collection of one or several commodities. But when Adam Smith confronted the problem of comparing the changing income over time, he realized that income needs to be expressed in some homogeneous unit and measured by a scale, which itself must remain constant over time. This led him to think of the production of income itself in terms of an 'original' exchange relation between labor and nature. This 'original' exchange relation, he thought, provided him with the natural unit of measure for income, which remains independent of variations in the exchange relations between commodities over time. He further reasoned that since total income produced must be equal to its total division among various recipients of income and that total income is nothing but aggregation of single units of commodities, the value of those commodities must also 'resolve' into its aliquant parts of the same distribution of income. Adam Smith's contention was that the *rates* of the division of income at any moment are known data, as they are determined in a long-term dynamic or growth context. Thus *rates* of the distributional categories such as wages, profits and rents are determined independently of what the values of commodities happen to be at any moment. The causation in the dynamic context works from changes in the rates of distribution to values or 'natural prices' of commodities.

In opposition to Adam Smith, Ricardo tried to establish that values of commodities are determined by the technique of production alone and it was independent of changes in distribution of income. He maintained that Adam Smith's idea of the primordial production relation provides the unit and the method to measure the changes in technique of production but

not the Standard of measure for value. In the case of Ricardo, the causation in the dynamic context runs from changes in technique of production to changes in the rates of income distribution. However, when Ricardo was confronted with the problem that, in general, values cannot be determined without the knowledge of the rate of profits, he still wanted to prove that *changes* in the 'real' value can solely be explained by the changes in technique. It is to prove this hypothesis that Ricardo looked for an invariable measure or Standard of value—i.e., a Standard that is not affected by changes in distribution. He thought, though incorrectly, that if it could be shown to be true for the Standard then it could be shown that it is also true for all the commodities if they are measured against such a Standard.

Marx's main objective was to prove that the origin or the source of profits was in the exploitation of labor. Though Ricardo wanted to establish that prices are determined by technique and are not affected by how the pie is cut, Marx wanted to establish that how the pie is cut is determined independently of prices. In this context, Marx acknowledges that changes in how the pie is cut will affect the prices but it cannot affect the total value of the net national income. This hypothesis of Marx crucially rests on the idea that there is an 'average' commodity produced by the 'average' organic composition of capital of the system, which will show no deviation between value and prices and hence if this commodity is used as the Standard of measure for all other prices then the value of total net output will remain constant independently of how the pie is cut between the capitalists and the workers.

Throughout these developments, the idea that all productive activities can finally be represented in terms of labor alone and therefore, labor is the primary factor of production played a central role. Sraffa took a momentous theoretical step forward by highlighting the importance of 'commodity residue'—as the title of his book proclaims, once you introduce commodity as a means of production then there can be no linear regression that can take you out of the circle of 'production of commodity by means of commodity'. Hence there is no primary factor of production in the system. In this context, Sraffa showed that for any given system of production, there exist an 'average' industry and an 'average' commodity, which represents the physical property of the system as a whole. If one chooses this average commodity as the Standard of measure for wages and prices, then the productivity, as well as the rate of profits of the system, can be reckoned from the physical data alone without invoking prices to homogenize heterogeneous commodities. Thus the question of productivity and the distribution of income can be separated from the question of values or prices of commodities. On the other hand, these value or prices of commodities are dependent on the given

distribution in so far as the reckoning of the rates of profits and wages in terms of prices must come out to be the same as their reckoning in physical terms. The relations between productivity, rates of profits, wages and prices that Sraffa establishes are the logical relations in which these variables must relate to each other at any given moment. The ‘average’ or the Standard commodity is uniquely defined for one set of given input–output data. In a structurally changing economy Sraffa’s Standard commodity cannot be used to compare wages and prices at two points of time. However, we can still compare structurally changing economies on the basis of their changing productivity and the rate of profits in so far as the movement of the shares of income going to the capitalists and the workers are concerned.

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9

Constitutional Political Economy

Viktor J. Vanberg

1 Introduction

“Constitutional political economy is a research program that directs inquiry to the working properties of rules and institutions within which individuals interact, and the processes through which these rules and institutions are chosen or come into being.” This is how James M. Buchanan (1999 [1990]: p. 377) defined, in the inaugural issue of the journal *Constitutional Political Economy*, the subject of the sub-discipline in economics which owes its main inspiration to Buchanan’s work.

Constitutional Political Economy or *Constitutional Economics* emerged, as Buchanan (ibid.) puts it, “as an integral, but distinguishable, part of the sub-discipline of public choice,” a research field, which also counts Buchanan (1919–2013) among its principal founders. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*, co-authored by James Buchanan and Gordon Tullock (1962), is not only one of the classic texts of public choice theory but also a foundational treatise of constitutional economics.

The term *Constitutional Political Economy* was coined in the early 1980s, the first dictionary entry on *Constitutional Economics* appeared in 1987, and the journal *Constitutional Political Economy*, which serves as its

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principal outlet, started, as noted above, in 1990. In substance, though, the foundations for this research program Buchanan had already laid in one of his earliest publications, his 1949 paper on “The Pure Theory of Government Finance: A Suggested Approach.” There he challenged, as he put it in retrospect, “the still-dominant orthodoxy in public finance and welfare economics” (Buchanan 1999 [1986], p. 456) by advocating an “individualistic theory” for which the “state has no ends other than those of its individual members,” and state decisions are “the collective decisions of individuals” (Buchanan 1999 [1949], p. 122f.). As he has often acknowledged, Buchanan owes the principal inspiration as well as encouragement for his unorthodox endeavor in particular to two sources. These were, firstly, Frank Knight, with whom he studied at the University of Chicago, and, secondly, Knut Wicksell, whose German dissertation *Finanztheoretische Untersuchungen* (Wicksell 1896), he serendipitously discovered in 1948 and a part of which he translated into English (Wicksell 1958 [1896]).

In his writings over the following decades, Buchanan systematically developed and consistently expanded the line of inquiry that he had embarked on in his early work. The research program that Buchanan thus created is the subject of the sections that follow.

2 Constitutional Political Economy and the “Science of a Legislator”

Constitutional political economy (henceforth *CPE*) is part of a broader set of theoretical approaches in modern economics that includes public choice, the new institutional economics, the economics of property rights, law and economics, and others. They all aim at rectifying the institutional deficit of orthodox neoclassical economics by focusing attention on how socioeconomic-political processes are shaped by the rules and institutions within which they unfold. *CPE*’s distinguishing feature is the particular attention it pays to the *choice of rules* as a means to make such processes better serve the preferences of the individuals involved. It is because of its emphasis on the *choice of rules* as a means for improving the human condition that, so Buchanan (1999 [1990], p. 387) argues, *CPE* “is best interpreted as a re-emphasis, a revival, a re-discovery of ... classical political economy ..., represented especially in the works of Adam Smith.”

Buchanan alludes here to Adam Smith’s (1981 [1776], p. 468) definition of political economy as a branch of the “science of a legislator,” a definition

for which the Walrasian tradition in economics had little taste. It was Léon Walras (1954 [1874], p. 52) who commented that “if political economy were simply what Adam Smith said it was ... it would certainly be a very interesting subject, but it would not be a science in the narrow sense.” Thereby he brought to completion what had begun with David Ricardo, the separation of the “science” of economics from moral philosophy, the twin sister of Smith’s political economy. According to Walras, the “theory of institutions” belongs to the domain of “moral science or ethics” (ibid., p. 63) and cannot be part of the “pure theory of economics” as a “physico-mathematical science” (ibid., p. 76) that he advocated.

In developing his own research agenda, Buchanan was, as he has repeatedly acknowledged, influenced and encouraged by his colleague at the University of Virginia,¹ Rutledge Vining, who persistently argued that not its outcomes per se but only the rules on which an economic system is based are subject to direct political choice (Buchanan 2001d [1992b], p. 52f.). Rutledge Vining, who had also been a student of Frank Knight, explicitly placed the theory of political economy he advocated in the tradition of Adam Smith’s “science of the legislator” (Vining 1969, p. 199; 1956, p. 14). It is, as he defined it, “a theory about, or conceptualization of, the choice that is exercised by a people, acting through their legislative agents, when they decide to change some component part of the ... (economic system, V.V.) presently in operation” (Vining 1969, p. 202f.). By contrast to an economics that concerns itself with problems that are posed by choices among alternative means for attaining given ends, such a political economy deals with the kinds of problems that are faced by individuals who, as a group, “jointly choose the constraints and regulations which they impose upon their individual actions” (Vining 1956, p. 9). Acknowledging his intellectual debt to F.H. Knight (Vining 1984, p. 34), Vining says about the economist’s role as practitioner:

In the role by which he is familiarly known in the history of the subject, he has practiced his profession as counselor to legislators in their deliberations upon how well or ill an economic system is working and upon how it might be modified to improve its performance. (Vining 1984, p. 3)

Insisting that politics cannot directly choose outcomes or end-results of socio-economic processes (such as income distribution, employment stability,

¹Buchanan taught at the University of Virginia in Charlottesville from 1956 to 1968.

and the like), but that “only the system of statutory and administrative rules is subject to immediate and direct modification” (Vining 1984, p. 177), Vining argued for a *rule-based economic policy*. In the same spirit, and explicitly directed against Kenneth Arrow’s (1951, p. 17) claim that “the object of choice are social states,” Buchanan argues:

People may be presumed to place ultimate value on the characteristics of social states that may, first, be imagined, and, second, arrayed in some order of preference. ... The approach here implies ... that that which is valued cannot, itself, be directly chosen in any meaningfully defined process ... Individuals participate in the choices among assignments of rights, among rules, that, in turn generate social states as participants rationally choose among alternatives within the structure of rights so chosen. Assignments of rights may be valued only as they are predicted to allow for the emergence of valued outcomes. It becomes an empty exercise to evaluate rules independently of the outcomes that are predicted to emerge under their operation. It should be equally empty to evaluate imagined social states without consideration of the structure of rights, or rules, that may be expected to generate them. ... The result forces a recognition of the elementary fact that the objects of social choice are alternative assignments of rights, or alternative rules structures, rather than alternative social states, although individuals’ evaluations of such assignments or structures may depend solely on ultimate evaluations of predicted patterns of emergent outcomes. (Buchanan 2001b [1995], pp. 207f., 211)

It is significant that F.A. Hayek also describes his own theoretical efforts as a modern-day counterpart to Adam Smith’s political economy. There are, after all, close affinities between his views on the relation between “the system of rules ... and the order or pattern of actions which result” (Hayek 2014 [1967], p. 278) and Buchanan’s constitutional approach, even if Hayek’s emphasis is more on the evolution than on the deliberate choice of rules.² About his treatise *Law, Legislation and Liberty*, which he subtitled “A new statement of the liberal principles of justice and political economy,” Hayek explicitly says that it is intended to revive the Smithian legacy and to argue against the narrow focus of modern-day economics. As he puts it:

²As he explicitly states, with his emphasis on the evolution of rules Hayek does not mean to diminish the role of deliberate legislation: “The question which is of central importance as much for social theory as for social policy is thus what properties the rules must possess so that the separate actions of the individuals will produce an overall order. ... Our main interest will then be those rules, which, because we can deliberately alter them, become the chief instrument whereby we can affect the resulting order, namely the rules of law” (Hayek 1973, p. 45). On “Hayek’s constitutional political economy,” see Vanberg (1994 [1989]).

Yet, although the problem of an appropriate social order is today studied from the different angles of economics, jurisprudence, political science, sociology, and ethics, the problem is one which can be approached successfully only as a whole. ... Nowhere is the baneful effect of the division into specialisms more evident than in the two oldest of these disciplines, economics and law. Those eighteenth-century thinkers to whom we owe the basic conceptions of liberal constitutionalism, David Hume and Adam Smith, ... were still concerned with what some of them called the ‘science of legislation’. ... One of the main themes of this book will be that the rules of just conduct which the lawyer studies serve a kind of order of the character of which the lawyer is largely ignorant; and that this order is studied chiefly by the economist who in turn is similarly ignorant of the character of the rules of conduct on which the order that he studies rests. (Hayek 1973, p. 4f.)

Noteworthy are also the affinities that exist between Buchanan’s constitutional economics and the research program of the ordoliberal Freiburg School, founded in the 1930s by economist Walter Eucken and jurist Franz Böhm,³ a school of thought that, in turn, Hayek felt close to. When in 1962 he left the University of Chicago to join Freiburg University’s *Fakultät für Rechts- und Staatswissenschaften*, Hayek emphasized in his inaugural lecture the closeness of his own thinking to the research program that the faculty’s former members, Eucken and Böhm, had created (Hayek 2014 [1963], p. 214). Even if the Freiburg ordoliberals did not explicitly relate their research program to Adam Smith’s understanding of political economy, their concept of *Ordnungspolitik* is clearly in the spirit of his “science of a legislator.”⁴ It assigns to government and legislature the task of providing and enforcing an “appropriate constitutional framework” (Eucken 1990 [1952],

³Even if there has been no direct connection between the ordoliberal and Buchanan’s research program, Henry Simons’ *Economic Policy for a Free Society* (1948) may provide an indirect link. Walter Eucken refers to Simons’ book as a most important like-minded work in his *Grundsätze der Wirtschaftspolitik* (1990 [1952], p. 255), and Buchanan (2001d [1986], p. 40) speaks about Simons’ strong influence on Chicago University’s economics students. Simons’ (1948, p. 160) constitutional perspective is exemplified in his statement: “The liberal creed demands the organization of our economic life largely through individual participation in a *game with definite rules*. It calls upon the state to provide a stable framework of rules within which enterprise and competition may effectively control and direct the provision and distribution of goods.”

⁴In their “ORDO Manifesto of 1936” the founders of the Freiburg School stated: “The treatment of all practical politico-legal and politico-economic questions must be keyed to the idea of the economic constitution. ... We wish to bring scientific reasoning, as displayed in jurisprudence and political economy, into effect for the ... problem of understanding and fashioning the legal instruments for an economic constitution” (Böhm et al. 1989 [1937], p. 23f.).

p. 289) within which markets can properly function.⁵ *Ordnungspolitik*, or rule-based economic policy, aims at improving the resulting economic order in an *indirect* manner, by improving the framework of rules, by contrast to an economic policy that seeks to change outcomes directly by specific interventions into the economic process (Eucken 1990 [1952], p. 336).

3 The Game Analogy

An analytical tool that occupies a central place in *CPE* is the *game analogy*. It serves, as Buchanan argues, to illustrate the categorical distinction between choices made *within* given rules and choices *of* rules, or stated differently, between choices *within* constraints and choices *of* constraints⁶:

On many occasions ... I have used the analogy with games since I think this allows us to present the basic distinction most clearly. Consider a poker game. Participants must initially agree on the set of rules that will define the game to be played. This agreed-on set of rules becomes the constitution of the game. Play takes place within these rules There are two quite distinct stages or levels of choice involved here, and these choices have quite different features. First, there is the choice of the rules themselves, *constitutional choice*. Second, there is the choice among the strategies of play within the rules that define the game. I call this choice of strategy *post-constitutional choice*. (Buchanan 2001b [1981], p. 44)

The two levels of choice to which Buchanan refers are associated with two different lines of inquiry. At the post- or sub-constitutional level, the principal question is how a game within its given rules can be played most successfully. At the constitutional level, the principal question is whether and how changes in the rules may allow all players to play a better game.

⁵For a more detailed review of the Freiburg School's research program, see Vanberg (1998). For a discussion of the affinities between Buchanan's constitutional approach and the ordoliberal tradition, see Vanberg (1988) and H. Leipold (1990).

⁶Buchanan (1999 [1990], p. 379f.): "(I)t would seem unnatural or bizarre, within the mind-set fostered by ordinary economics, to consider the prospect that an individual might deliberately choose to constrain or limit the set of available choice options. Within this mind-set, the utility of the chooser is always maximized by allowing for choices over the whole range allowed by exogenously determined constraints. ... Constitutional economics directs analytical attention to the *choice among constraints*." The front cover of the journal *Constitutional Political Economy* shows the image of Ulysses tied to the mast, as a metaphor for the role that self-imposed constraints can play in seeking advantages one cannot realize otherwise.

The principal focus of an applied *CPE* is on the latter question. It “concentrates on reform in the rules, as opposed to improvement in strategies of play for particular players within defined or existing rules” (Buchanan 1999 [1986], p. 462).⁷

As Buchanan has often noted, it was due to Rutledge Vining’s persistent emphasis on the game analogy that he fully recognized its fundamental significance for constitutional analysis, though he, too, recalled Frank Knight using the analogy to illustrate problems of social organization (Buchanan 2001c [1972], p. 353). Knight liked to stress that “it is useful to think of social life as a game” (1982 [1946], p. 455) and that a main task of the political economist is to assist in the choice of the “‘rules of the game,’ in the shape of law, for economic relationships” (Knight 1940, p. 28). After all, he pointed out, the “first characteristic of play, as of all social activity, ... is that freedom is conditioned and limited by ‘law’, in several meanings of the word” (1982 [1946], p. 464). Furthermore, “(a)ll problems of social ethics are like those of play, in that they have the two components of obeying the rules, and improving the rules, in the interest of a better ‘game’” (ibid., p. 466). The “parallelism between play and political and economic life” (ibid.), Knight saw in particular exemplified by the characteristic combination of commonality and conflict of interests that one finds in both, in ordinary games and in social life. As he puts it:

(P)lay exhibits in relation to its rules or laws the ubiquitous harmony and conflict of interests. All the parties to any game have a common interest in the game itself – hence, in general obedience to the rules. But they have conflicting individual interests in winning – consequently, in law-breaking or cheating. Similar considerations apply far more acutely to the improvement of the game by changing the rules. The notion of law and its enforcement – and improvement – will be found to be the locus of virtually all social problems. (1982 [1942], p. 249)

Knight alludes here to a number of motivational issues that are central to the *CPE* enterprise. There is, firstly, the motivational asymmetry, both in ordinary games and in the “game” of social life, routed in the fact that playing

⁷Buchanan (1991 [1989], pp. 36, 40): “We evaluate the rules that describe a game by assessing how successful the rules are in allowing players to achieve those objectives that they seek in playing. ... (W)e change a game by changing the rules, which will, in turn, modify the predicted pattern of outcomes. If we diagnose the pattern of results observed to be less desired than alternative patterns deemed to be possible, it is incumbent on us, as political economists, to examine predicted results under alternative constraint structures.”

a given game successfully is in the immediate interest of each player, while reforming the rules to make for a better game for all involved is a collective good for the group of persons involved.⁸ Secondly, while all players share an interest in general rule-compliance, individually they are tempted to seek differential gains from rule-violations. Thirdly, while all share a common interest in rule-changes that make for a better game for all involved, each player prefers, and is tempted to lobby for, rules that promise differential advantages to him or her, at the expense of other players.

Again acknowledging Frank Knight as his source of inspiration, Rutledge Vining emphasizes the analogy between ordinary games and his concept of rule-based economic policy when he argues:

The modifiable entity that men refer to as ‘the *economic system*’ is analogous to a game in that it consists, as does a game, of a system of constraining and prescriptive rules and definitions that condition and set limits upon the prudential and means-end choices and decisions exercised by individual members of a population. (Vining 1969, p. 203)

Situations of rule-reforms or constitutional choice in socioeconomic-political life can be usefully compared, Vining stresses time and again, to “a group of players of a game who will have stopped their play in order to consider certain proposed modifications of the rules of the game” (ibid., p. 200).

In light of the affinity between Buchanan’s research program and their own constitutional perspective, it is not surprising that the Freiburg Ordoliberal⁹ and, in particular, F.A. Hayek too use the game analogy as a conceptual tool. In a section of his *Law, Legislation and Liberty* in which he discusses the “rationale of the economic game” (Hayek 1976, p. 70), Hayek notes about the nature of the market process:

It is a procedure which, as Adam Smith ... understood, in all important respects (except that normally it is not pursued solely as a diversion) is wholly analogous to a game, a game partly of skill and partly of chance. ... It proceeds, like all games, according to rules guiding the actions of the individual participants whose aims, skills, and knowledge are different. (Ibid., p. 71)

⁸Knight (1982 [1946], p. 466): “It is a vitally important fact that the capacity to play intelligently, from the standpoint of winning, is much more highly and commonly developed among human beings than is the capacity to improve or invent better games.”

⁹For references, see Vanberg (1998, p. 173).

To underscore its structural similarity to rule-based games, Hayek speaks of the market system as “the game of competition” (ibid., p. 71) or as “the game of catallaxy” (ibid., p. 115), the game of exchange.¹⁰

4 Theoretical and Applied Constitutional Economics

Because of its focus on the “normative” issue of how socioeconomic-political “games” may be improved to the benefit of all persons involved, Buchanan’s research program has been classified by authors like Stefan Voigt (1997) as a “normative” enterprise that needs to be supplemented by a “positive constitutional economics.” Such distinction between normative and positive *CPE* suggests, misleadingly I posit, that the “positive” branch offers refutable statements about “what is,” while Buchanan’s “normative” branch specializes in prescriptive statements about “what ought to be.” It is, I suppose, more appropriate to draw instead a distinction between *theoretical* and *applied CPE*.

Theoretical CPE studies how different rules and institutions affect the nature of the socioeconomic-political processes that unfold within the constraints they impose, or, in other words, it investigates into how, as Hayek (1973, p. 98) calls it, the “order of rules” shapes “the order of actions” that emerges within it.¹¹ By contrast, *applied CPE* is concerned with how the insights of the theoretical branch can be used to propose solutions to “problems” that the agents in socioeconomic-political processes face.¹² To classify such concern as “normative” is no more appropriate than to speak of, say,

¹⁰Hayek (2014 [1978], p. 310): “The market ... is, as Adam Smith already understood, as if we had agreed to play a game, partly of skill and partly of chance. This competitive game ... is, to use up-to-date language, not a zero-sum-game, but one through which, by playing it according to the rules, the pool to be shared is enlarged, leaving individual shares in the pool in a great measure to chance.” Hayek’s reference is to A. Smith’s (1981 [1776], p. 234) criticism of the “man of system” who ignores that “in the great ‘chess-board’ of human society, every single piece has a principle of motion of its own, altogether different from what the legislator might choose to impress upon it. If those two principles coincide and act in the same direction, the game of human society will go on easily and harmoniously, and is very likely to be happy and successful. If they are opposite or different, the game will go on miserably, and the society must be at all times in the highest degree of disorder.”

¹¹Buchanan (2001b [1987], p. 4): “Any positive analysis that purports to be of use in an ultimate normative judgment must reflect an informed comparison of the working properties of alternative sets of rules or constraints. This analysis is the domain of Constitutional Economics.”

¹²Buchanan (1999 [1959], p. 196): “Propositions advanced by political economists must always be considered as tentative hypotheses offered as solutions to social problems.”

applied physics as “normative physics.” To be sure, applied *CPE* is “normative” in the sense that proposing solutions for problems necessarily presupposes value judgments. Defining something as a “problem,” as well as the decision to devote attention to certain kinds of problems rather than others, inevitably involves normative judgments. Yet this is true for any applied science that proposes solutions to specified problems. The normative presuppositions that are involved here are, however, located at a *meta-level*, and they are not part of the proposal for how the problem at stake may be solved. They define the conditions under which the proposed problem-solutions are claimed to be valid. The proposals themselves do not have the character of value judgments but are, instead, *conditional* “ought”-statements. They say what one “ought” to do if one wants to solve a problem of a specified type. Such conditional “ought”-statements are testable in the sense that the measures they recommend may or may not in fact be capable of solving the problem in question. Furthermore, they are irrelevant if their addressees have no interest in solving the problem.¹³

Buchanan too contrasts occasionally “normative and positive political economy” (2001d [1992a], p. 23). Yet, a closer inspection of his arguments shows that what he refers to as “normative” are the *normative presuppositions* and not the substantive claims of his applied *CPE*. In this sense, one can read, for instance, his statement:

Critics have charged that my work has been driven by an underlying normative purpose ... I shall acknowledge that I work always within a self-imposed constraint that some may choose to call a normative one. I have no interest in structures of social interaction that are non-individualist ... The individualist element in my vision of social reality, actual or potential, has been an important element of my substantive criticism of the work of others in political economy. (Ibid.)

The normative presupposition of Buchanan’s *applied CPE*, the “self-imposed constraint” of which he speaks, can be summarized as *normative individualism*, complementing the *methodological individualism* on which Buchanan’s *theoretical CPE* is based (Buchanan 1991 [1989], p. 29). The principle of methodological individualism says that explanations of social phenomena should start from propositions about the behavior of individual persons. The principle of normative individualism says that the evaluations of

¹³For a more detailed discussion of this issue, see Vanberg (2012, p. 383).

the individuals involved, as opposed to some external criterion, should be viewed as the measuring rod against which social arrangements are assessed. In other words, it requires that constitutional issues are analyzed from the perspective of the individuals who are to live under the chosen rules. Their interests define what counts as a constitutional problem and what qualifies as a suitable solution. As Buchanan (2001b [1988], p. 62) puts it:

The ‘good society’ is that which best furthers the interests of its individual members as expressed by these members, rather than that society that best furthers some independently defined criterion for the ‘good’.

This implies “the normative premise that individuals are the ultimate *sovereigns* in matters of social organization” (1999 [1991], p. 288) and, accordingly, “that they are the addressees of all proposals and arguments concerning constitutional issues” (*ibid.*).

As a “self-imposed constraint,” the principle of normative individualism provides the research focus for Buchanan’s constitutional economics, the criterion that guides the choice of issues to be studied. It directs *CPE*’s research interests to the kinds of problems individuals face when they seek to organize their interaction and cooperation in ways that advance the interests of all involved. In other words, it lets *CPE* be concerned with the question of how “man can organize his own association with his fellows in such a manner that the mutual benefit from social interdependence can effectively be maximized” (Buchanan and Tullock 1962, p. 306).

As noted above, the solutions that an applied *CPE* proposes for social-organizational problems are comparable to the solutions that other applied sciences advance for the practical problems with which they are concerned.¹⁴ Buchanan emphasizes, though, that the social problems the political economist deals with in his role as legislative advisor are of a different nature than “scientific-technical” problems in the ordinary sense.¹⁵ To insist on the

¹⁴Buchanan (1962, p. 308): “Indeed the only purpose of science is its ultimate assistance in the development of normative propositions. We seek to learn how the social world works in order to make it work ‘better,’ to ‘improve’ things: this is as true for physical science as it is for social science.” When Buchanan speaks here of “normative propositions” he obviously refers to the ‘conditional ought-statements’ that applied sciences advance rather than genuine value judgments.

¹⁵Buchanan (2001d [1989], p. 307): “There are important implications if the problem of social organization is analyzed as one of securing agreement on the constraints within which we engage with one another . . . Agreement on the rules by which we shall live, one with another, domestically and internationally, is, of course, informed by scientific inquiry and understanding. But, at base, the problem is not one involving technological application of scientific discoveries, and it seems a mark of folly to treat it as such, that is, as an engineering problem.”

significance of this difference was, Buchanan recalls, one of Frank Knight's "crusades" (Buchanan 2001c [1968], p. 92). About the practical problems that economics may serve to solve Knight had said:

Its practical problems are those of social policy. And the first requisite for 'talking sense' about social policy is to avoid the nearly universal error of regarding the problem as in any sense closely parallel to the scientific-technological problem of using means to realize ends. The social problem ... is in no sense a scientific-technical or manipulative problem unless we consider 'society' under the form of a dictatorship over which the dictator is proprietor as well as sovereign, and as an enterprise which is to be managed solely in his interest. ... If society is in any sense democratic or free, its problems are problems of group decision and of group self-determination, in connection with which control is a misleading term. (1940, p. 27f.)

Following up on Knight, Rutledge Vining (1984, p. 3) has argued in the same spirit:

In his most characteristic role as practitioner, the economist is a specialist advisor to legislators and citizens in a legislative frame of mind. The advising of business firms and other administrative organizations or agencies with well-defined ends to attain is an altogether different activity. (1984, p. 3)

The individuals who jointly choose the constraints are the same individuals whose actions are constrained. ... The system must be jointly chosen by the members of the society, and the technical problem ... is that of facilitating the social-interaction and communication leading to a consensus. (1956, p. 17f.)

5 The "Gains-From-Trade" Paradigm

"What Should Economists Do?" In his 1963 Presidential Address to the Southern Economics Association, Buchanan (1999 [1964]) posed this question to his colleagues, answering it by suggesting that the "mutuality of advantage that can be secured ... as a result of cooperative arrangements, be these simple or complex, is the one important truth in our discipline" (ibid., p. 36). The issue of how cooperative associations can be "mutually beneficial to all parties" should therefore be, he concluded, the discipline's

central concern,¹⁶ and the proper explanatory approach for economists to adopt should be what he calls the “*gains-from-trade paradigm*.”

Buchanan’s claim about the “one important truth” in economics is based on the argument that voluntary exchange transactions, which are at the very core of economists’ theory of the market, represent the paradigm example of mutually advantageous transactions (Buchanan 1999 [1986], p. 457). When economists speak of “the market” as a wealth-creating arrangement, Buchanan emphasizes, they do not mean just any system of decentralized interactions. They presuppose, by implication, the existence of an institutional framework that aims at securing voluntariness in transactions by preventing the use of coercion and fraud as strategies of enrichment.¹⁷ As Buchanan (1999 [1964], p. 38) puts it: “The ‘market’ or market organization is ... the institutional embodiment of the voluntary exchange processes that are entered into by individuals in their several capacities.”

The *gains-from-trade paradigm* Buchanan contrasts to the “*maximization paradigm*” that, as he argues, became particularly influential since Lionel Robbins’ (1932, p. 16) famous definition of economics as “a science which studies human behavior as a relationship between ends and scarce means which have alternative uses.” Once we accept the Robbins’ formulation of the “economic problem,” so Buchanan charges, economics “comes to be conceptualized as a varied set of exercises, all of which involve the maximization of some appropriately selected objective function subject to the appropriately defined constraints” (2001d [1976], p. 125). The problem with this conceptualization is, he argues, that what may be an appropriate analytical tool in studying individual human choices becomes misleading when it is extended to the social, aggregate level. Just such extension was, however, in his view, invited by Robbins’ definition:

Search him as you will, and you will not find an explicit statement as to *whose* ends are alternatives. His neutrality extends to the point of remaining wholly

¹⁶Suggesting that economics might be called *catallactics* or *symbiotics*, Buchanan (1999 [1964], p. 35) notes: “Symbiotics is defined as the study of the association between dissimilar organisms, and the connotation of the term is that the association is mutually beneficial to all parties. This conveys, more or less precisely, the idea that should be central to our discipline.”

¹⁷About the economist who looks at the market as an arena for voluntary exchange, Buchanan (1991 [1989], p. 37) says: “He or she does not evaluate the results of exchange teleologically against some previously defined and known scalar. Instead, he or she adjudges the exchange to have been utility enhancing for each trader to the extent that the *process* itself has embodied attributes of fairness and propriety. If there has been neither force nor fraud, and if the exchange has been voluntary on the part of both traders, it is classified to have been mutually beneficial.”

silent on the identity of the choosing agent, and few economists seem to have bothered with the difficult issue of identifying properly the entity for whom the economic problem exists. It is thus by quite natural extension that the economic problem moves from that one which is confronted by the individual person to that facing the larger family group, the business firm, the trade union, the trade association, the church, the local community, the regional or state government, the national government, and, finally, the world. (1999 [1964], p. 30f.)

While acknowledging that the maximization logic of the standard rational model can be usefully applied to the choices of individual human beings, as they participate in exchange and collective action, Buchanan insists that it is inapplicable either to the exchange process itself or to organized, collective action.¹⁸ What should be generalized as we move from the level of individual choice to organized, collective action is, he suggests, not the rational maximization paradigm but the exchange or gains-from-trade paradigm that economists routinely apply, at least implicitly, when they look at market exchanges as value-enhancing transactions. By focusing attention on the *processes* from which social outcomes result rather than on the outcomes *per se*, the gains-from-trade paradigm provides economists, Buchanan posits, with an analytical tool that allows them to integrate the study of markets as well as of organized collective arrangements within one coherent theoretical framework.¹⁹

In its generalized application of the gains-from-trade paradigm, *CPE* mainly concentrates on the organization of politics, inquiring into how the choice of rules or constraints at this level may serve to enhance the prospects of mutual gains for all participants. Yet it includes, Buchanan (1999 [1990], p. 384) emphasizes, also

¹⁸Buchanan (1991 [1989], p. 32): “In exchange ... participants may be modeled as behaving to maximize their separately defined utilities, subject to the constraints separately faced, as defined by the rules, the endowments, and the predicted responses of other participants. The standard maximization behavior embodied in rational choice models may, of course, be accepted for this analytical exercise. But, in exchange ... neither any single player-participant nor the set of players-participants, as a group, treats the outcome of the process as a maximand. The solution to the exchange process, simple or complex, is not the solution of a maximization problem, and to model it as such is the continuing source of major intellectual confusion in the whole discipline.” R. Vining (1984, p. 39) has specifically emphasized that “nothing at all is being maximized or minimized or optimized by persons genuinely participating in a joint choice of a modification of the law.”

¹⁹Buchanan (1999 [1990], p. 384): “If an exchange rather than a maximizing paradigm is taken to be descriptive of the inclusive research program for the discipline, then *economics* involves inquiry into *cooperative* arrangements for human interaction, extending from the simplest of two-person, two-good trading processes through the most complex quasi-constitutional arrangements for multi-national organizations.”

the derivation, analysis of, and justificatory arguments for rules that constrain both individual and collective behavior in a wide array of membership groupings ... Clubs, trade unions, corporations, parties, universities, associations – these and many more, exist and operate under constitutions that are amenable to scientific inquiry.²⁰

The “exchanges” that are involved in organized, collective action are, of course, of a different nature than the two-party transactions into which market processes may be factored down (Vanberg 1994 [1992]). They require what Buchanan calls a “*complex exchange*,” the simultaneous participation of all parties to the collective enterprise (Buchanan 1991 [1989], p. 39). The complex exchange of which Buchanan speaks can be described best as an *exchange of commitments* among all participants. Such joint commitments can take either of two principal forms (Vanberg 2005, p. 29). They may consist in the exchange of promises to contribute one’s share to the financing of some collective good in the consumption of which all participants in the joint enterprise share. Alternatively, they may involve the exchange of promises to jointly submit to the rules that impose binding constraints on all contracting parties. To the former type, Buchanan (1999 [1986], p. 461) refers when he states:

In the market, individuals exchange apples for oranges; in politics, individuals exchange agreed-on shares in contributions toward the costs of that which is commonly desired, from the services of the local fire station to that of the judge.

On the latter, he comments when he notes that

individuals choose to impose constraints or limits on their own behavior primarily, even if not exclusively, as a part of an *exchange* in which the restrictions on their own actions are sacrificed in return for the benefits that are anticipated from reciprocally extended restrictions on the actions of others with whom they interact. (1999 [1990], p. 380)

²⁰Buchanan (1999 [1964], p. 39, 41f.): “The task of the economist includes the study of all such cooperative trading arrangements which become merely extensions of markets as more restrictively defined. ... I am simply proposing that economists concentrate on the institutions, the relationships, among individuals as they participate in voluntarily organized activity, in trade or exchange, broadly considered.” In retrospect, Buchanan (1991 [1989], p. 31) said about his 1963 Presidential Address: “My argument was that economics, as a social science, is or should be about trade, exchange, and the many and varied institutional forms that implement and facilitate trade, including all of the complexities of modern contracts as well as the whole realm of collective agreement on the constitutional rules of political society.”

6 Mutual Gains and Agreement

In 1986, Buchanan was awarded the Alfred Nobel Memorial Prize in Economic Science “for his development of the contractual and constitutional bases for the theory of economic and political decision-making.” His acceptance speech he used in particular to acknowledge the influence on his own work of “that great Swede, Knut Wicksell,” describing his “1948 discovery of Knut Wicksell’s unknown and untranslated dissertation, *Finanztheoretische Untersuchungen*” as “one of the most exciting moments of his career” (1999 [1986], p. 455f.). What had impressed Buchanan most in Wicksell’s dissertation was the part on “A New Principle of Just Taxation” (Wicksell 1958 [1896]). In it, Wicksell had argued that in a society of free and equal citizens public expenditures can be considered legitimate only if they are “intended for an activity useful to the whole of society and so recognized by all” (ibid., p. 89). As for the “recognized by all,” he specified that whether the benefits of a “proposed activity to the individual citizens would be greater than its costs to them, no-one can judge this better than the individuals themselves” (ibid., p. 79).

Accordingly, for Wicksell, “justice in tax distribution” required that public projects generate net benefits for each individual citizen because it “would seem to be a blatant injustice if someone should be forced to contribute toward the costs of some activity which does not further his interests” (ibid., p. 89). Furthermore, he concluded, only unanimous approval of a proposed activity can provide a conclusive test of whether it promises indeed net benefits for all members of the polity. After all, he argued, for projects that are claimed to be beneficial for society at large it should “always be theoretically possible, and approximately so in practice, to find a distribution of costs such that all parties regard the expenditure as beneficial and may therefore approve it unanimously” (ibid., p. 89f.). And he added: “In the final analysis, unanimity and fully voluntary consent in the making of decisions provide the only certain and palpable guarantee against injustice in tax distribution” (ibid., p. 90).

In Wicksell’s “principle of unanimity and voluntary consent in the approval of public expenditures and taxes” (ibid., p. 116), Buchanan found a most congenial theoretical outlook that helped him, in an early stage of his academic career, to develop with more confidence the research program that he had embarked on. The Wicksellian approach he later summarized as follows:

Wicksell's objective was to construct a criterion for efficiency in fiscal decisions, by which he meant the satisfaction of the demands of individuals, as consumers of collectively financed goods and services, analogous to the satisfaction of consumer demands in the competitive market for private goods and services. ... By the very nature of the problem that he confronted ... Wicksell was compelled to adopt the criterion of *agreement*, interpreted as that which emerges as the end state of any voluntary exchange process. As this criterion was extended to the fiscal choice process, the 'voluntary exchange theory' of modern public finance was born. (Buchanan 2001d [1988], p. 141)

In Wicksell insistence on the "criterion of *agreement*," Buchanan found support for his claim that theoretical consistency requires economists to apply their principal analytical tool, the exchange paradigm, as well as the corresponding criterion of efficiency, namely voluntary agreement, in their study of collective arrangements no less than in their study of the spontaneous order of the market. According to Buchanan, just as in ordinary market exchange claims of mutual gains or "efficiency" are ultimately derived from the presumption of voluntary agreement among the trading parties, claims of "efficiency" or value enhancement in organized, collective action can ultimately be based on nothing other than the supposition that the parties involved voluntarily agreed to the measures taken. As Buchanan puts it:

If only individual evaluations are to count, and if the only source of information about such evaluations is the revealed choice behavior of individuals themselves, then no change can be assessed to be 'efficient' until and unless some means could be worked out so as to bring all person (and groups) into agreement. (2001b [1987], p. 10)

The political analogue to decentralized trading among individuals must be that feature common over all exchanges, which is *agreement* among the individuals who participate. The unanimity rule for collective choice is the political analogue to freedom of exchange of partitionable goods in markets. (1999 [1986], p. 463)

In order to develop the Wicksellian unanimity criterion into a principal analytical tool of his own research program, though, Buchanan needed to solve first a problem inherent in Wicksell's argument. That the requirement of "absolute unanimity" for every single budgetary decision²¹ may be

²¹Musgrave and Peacock (1967, p. xv) comment on Wicksell's approach: "While there are issues on which public policy must be determined by simple majority, Wicksell argues that most matters of

impossible to implement in practice, Wicksell (1958 [1896], p. 92) had acknowledged and concluded that one must be content with the “requirement of approximate unanimity of decisions.” This concession creates, however, a disturbing tension. While the unanimity principle is supposed to provide the indispensable criterion of “justice in taxation,” its practical applicability appears to be rather doubtful. It is Buchanan’s significant contribution to have shown how this tension can be resolved.

The solution Buchanan proposes amounts in effect to a distinction between, on the one side, unanimity as an indispensable criterion of *legitimacy* in social transactions and, on the other side, unanimity as a *decision rule* that may be dispensed with for reasons of practicability. The problems of practical applicability that Wicksell’s interpretation of the unanimity principle faces can be solved, so Buchanan’s argument, without giving up its role as normative criterion, namely by shifting it upwards to the *constitutional level* where the rules for in-period decisions are chosen.²² As he puts it:

This (Wicksell’s, V.V.) restrictive interpretation ... is very substantially reduced ... when the unanimity criterion is shifted one stage upward, to the level of potential agreement on constitutional rules within which ordinary politics is to be allowed to operate. In this framework, an individual may rationally prefer a rule that will, on particular occasions, operate to produce results that are opposed to his own interests. The individual will do so if he predicts that, on balance over the whole sequence of ‘plays,’ his own interests will be more effectively served than by the more restrictive application of the Wicksellian requirement in-period. (1999 [1986], p. 464)

The “calculus of advantage” that may lead individuals to dispense with the unanimity requirement at the level of in-period decisions is the principal subject of *The Calculus of Consent*, co-authored by Buchanan and Tullock (1962), a book to which I referred to earlier as a Public Choice “classic”

budget policy are not of this type. Specific public services should be voted upon in conjunction with specific cost distributions; and their adoption should be subject to the principle of voluntary consent and unanimity.”

²²Buchanan (1999 [1990], p. 465f.): “Because of his failure to shift his own analytical construction to the level of constitutional choice, Wicksell was confined to evaluation of the political process in generating current allocative decisions.” Buchanan credits, once more, Rutledge Vining’s emphasis on rules for allowing him “to pull out from Wicksell’s more applied treatment the two-state or two-level structure of political decision making that is perhaps the sine qua non of constitutional economics” (2001d [1992b], p. 53).

as well as a foundational treatise in constitutional economics. In-period decisions that are made by less-than unanimity rules, such as, in particular, majority rule, can, of course, no longer be claimed to be “efficient” in the sense of generating gains for all participants. They qualify, however, as legitimate or “just” if, and to the extent that, they are made by rules that all parties voluntarily agree to.²³

The significance of shifting the unanimity requirement upward to the constitutional level lies in the fact that at this level general agreement can be more readily achieved than at the level of particular in-period decisions, because of the increased uncertainty with which the individuals involved can predict how they will personally be affected. Buchanan (1999 [1990], p. 464) points this out when he states:

To the extent that the individual reckons that a constitutional rule will remain applicable over a long sequence of periods, with many in-period choices to be made, he is necessarily placed behind a partial ‘veil of uncertainty’ concerning the effects of any rule on his own predicted interests. Choice among rules will, therefore, tend to be based on generalizable criteria of fairness, making agreement more likely to occur than when separable interests are more easily identifiable.²⁴

To be sure, at the constitutional level, the participants must be expected to pursue their own interests no less than at the level of particularized in-period choices, and their interests in rules being implemented that work to their own differential advantage will tend to create impediments to the reaching of agreement. This problem points to the fact that the choice of rules must itself be framed by rules, placed at a more general constitutional level, that aim at creating conditions that discourage the seeking of privileges and encourage the search for impartial rules.

²³Buchanan (2001b [1988], p. 63): “Individuals may generally agree upon the rules of the game within which ordinary politics takes place, and these agreed upon rules may allow for predicted net gainers and net losers in particularized political choices. The question of legitimacy or justification shifts directly to the rules, to the constitutional structure, which must remain categorically distinct from the operations of ordinary politics, which is constrained by the rules.”

²⁴As Buchanan (2001d [1988], p. 150) notes, the role in constitutional choice of a “sufficiently thick veil of ignorance and/or uncertainty such that no identification of prospective gainers or losers is possible” has likewise been emphasized by John Rawls (1971).

7 Politics as Exchange

In the introduction of his pioneering 1949 paper, Buchanan (1999 [1949], p. 119) pointed out that a “framework for the pure theory of government finance may be erected on either of two political foundations,” an “‘organismic’ theory of the state” or an “individualistic theory,” the approach he advocated. To a later republication, he added the footnote: “This paper was written before the author was familiar with the Italian fiscal theory and its more careful consideration of the political presupposition” (Buchanan 1960, p. 8).

As he has noted in retrospect, it was his discovery of the English translation of de Viti de Marco’s *First Principles of Public Finance* (1936 [1928]) that stimulated Buchanan’s “interest in looking further into the Italian sources” (Buchanan and Musgrave 1999, p. 17), a project he realized when he spent the year 1955/1956 as a Fulbright fellow in Italy.²⁵ Contrasting the “cooperative” and the “monopolistic” state, de Viti de Marco (ibid., p. 43) had supposed that “we may regard the democratic State as that which resembles the economic pattern of the co-operative.” Its “law of taxation,” he argued, “is based on the assumption of an exchange relationship: that is, the exchange of a payment to the State for the provision of public services by the State” (ibid.).

The arguments on the “cooperative state model” that he found in the Italian public finance literature, in particular in de Viti de Marco’s writings, further strengthened Buchanan’s confidence in his “exchange conceptualization of politics” (1999 [1986], p. 461) as a central part of the research program that, influenced by Knight and Wicksell, he had begun to develop with his early article.²⁶ Agreeing with Wicksell and de Viti de Marco, Buchanan insists that for a free and democratic society the individualistic exchange model of politics is the only appropriate theoretical approach. As he posits:

²⁵About the year 1955/1956 he spent as Fulbright fellow in Italy, Buchanan (2001d [1992c], p. 28) notes: “It is no exaggeration to state that the Italian year allowed me to cross the threshold into what would later come to be called the research program in ‘public choice,’ and, particularly, ... in ‘constitutional political economy.’”

²⁶On de Viti de Marco’s “cooperative state model,” Buchanan (2001a [1960], p. 69) notes: It “involves the fundamental premise of democratic choice to the effect that *all* members of the social group participate conceptually in the reaching of collective decisions. ... The voluntary aspects of fiscal action are stressed, and the tax is considered as a price in the broadest philosophical sense.”

If we adhere strictly to the individualistic benchmark, there can be no fundamental distinction between economics and politics, or more generally, between the economy and the polity. The state, as any other collective organization, is created by individuals, and the state acts on behalf of individuals. Politics, in this individualistic framework, becomes a complex exchange process, in which individuals seek to accomplish purposes collectively that they cannot accomplish non-collectively or privately in any tolerably efficient manner. The catallactic perspective on simple exchange of economic goods merges into the contractarian perspective on politics and political order. (Buchanan 2001b [1988], p. 62)

The claim “that ‘political exchange,’ at all levels, is basically equivalent to economic exchange” (Buchanan and Tullock 1962, p. 250) can obviously not mean that citizens voluntarily pay their taxes and comply with the existing legal order in the same sense in which they voluntarily deal with their trading partners in the market arena. They would scarcely do so if it were not for the presence of the coercive apparatus of the state. Indeed, as Buchanan (1999 [1986], p. 461) notes, the “observed presence of coercive elements in the activity of the state seems difficult to reconcile with the model of voluntary exchange among individuals.” What the exchange model of politics claims is that, just as transactions in the market arena derive their legitimacy from voluntary agreement among the trading parties, in a society of free and equal individuals the coercive apparatus of the state can derive its ultimate legitimacy only from voluntary agreement among the members of the polity to submit to such coercion.

The “exchange” of which the exchange model of politics speaks is an exchange of promises or commitments at the *constitutional* level.²⁷ The agreement to accept an apparatus of coercion is a concomitant to the exchange of commitments involved when the members of a polity for prudential reasons agree on rules that promise a “better game” for all involved. Where they cannot expect such rules to be self-enforcing—in other words, where common *constitutional* interests do not per se generate general

²⁷Buchanan (1991 [1989], p. 39): “How can we even begin to explain political reality by an exchange model? ... Conflict, coercion ... do indeed characterize political institutions, as they may be observed to operate *within a set of constitutional rules* ... But if analysis and attention is shifted to the level of rules, among which choices are possible, we can use potential and actual agreement among persons on these rules as the criterion of normative legitimacy. And such agreement may well produce rules, or sets of rules, that will operate so that, in particularized sequences of ordinary politics (single plays of the game) there may be negatively valued results for some of the participants.”

compliance interests—the contracting parties may rationally agree on an apparatus of enforcement. As Buchanan phrases it:

In agreeing to be governed, explicitly or implicitly, the individual exchanges his own liberty with others who similarly give up liberty in exchange for the benefits offered by a regime characterized by behavioral limits. (1999 [1990], p. 389)

Individuals acquiesce in the coercion of the state, of politics, only if the ultimate constitutional ‘exchange’ furthers their interests. Without some model of exchange, no coercion of the individual by the state is consistent with the individualistic value norm upon which a liberal social order is grounded. (1999 [1986], p. 461)

Because of its emphasis on voluntary agreement as the only conclusive test of “efficiency” and ultimate source of legitimacy in social transactions and arrangements—from ordinary market exchange to collective organizations of all kinds, private and public—constitutional economics in the Buchanan tradition is often classified as “contractarian.” In fact, Buchanan has often pointed to the close relation between his own research program and “the contractarian tradition in political philosophy” (2001b [1987], p. 10) and, in particular, its affinity with John Rawls’ (1971) modern contractarianism.²⁸

Since, from a contractarian perspective, agreement at the constitutional level is essential in providing legitimacy to non-consensual in-period decisions in collective action, private and public, the practicability of the agreement test at this level obviously becomes the central issue. Other than for private associations, this issue is particularly challenging for politics as collective organizations. In the case of private organizations with free entry and exit, somebody’s voluntary choice to join and to remain within the organization is a relevant indicator of his agreement to its constitution. In the case of politics, the same applies to individuals who voluntarily acquire and maintain citizenship in a polity. Typically, though, the vast majority of citizens in most states acquired their citizen-status by birth and not by their own explicit choice. Given the fact that requiring explicit unanimous agreement

²⁸Buchanan (1999 [1990], p. 465): “(T)he research program in political economy merges into that of contractarian political philosophy, both in its classical and modern variations. In particular, my own approach has affinities with the familiar construction of John Rawls.” Buchanan (2001c [1972], p. 353) notes, though, that he was more sympathetic with Rawls’ original conception of “justice as fairness” (Rawls 1958) than with Rawls’ later specification (Rawls 1971).

would imply an obviously unrealistic standard, the search for a most meaningful interpretation and specification of the agreement test is an important challenge for constitutional inquiry (Vanberg 1994 [1986], p. 228ff.; 2014, p. 26). As Buchanan (1999 [1986], p. 463) puts it:

Politics as observed remains, of course, far from the idealized collective-cooperative exchange that the unanimity rule would implement. ... But barriers to realization of the ideal do not imply rejection of the benchmark definition of the ideal.

8 Conclusion: Procedures Vs. Outcomes

The paradigmatic significance of the shift in analytical focus that the *CPE* research program implies is most apparent in its comparison with welfare economics, the discipline's traditional applied branch. The defining feature of welfare economics, with all its modern variations and refinements, remains the notion of some aggregate measure of "social welfare," the maximization or advancement of which is the task of politics. With its outlook at politics, Buchanan (1999 [1990], p. 382) charges, welfare economics inappropriately transfers the maximization paradigm from the realm of individual rational choice "to social or collective choice on the basis of some implicit presumption that collectivities choose analogously to individuals" (1999 [1990], p. 382). Within its theoretical framework, so defined, welfare economics naturally concentrates its analytical attention, firstly, on specifying the "social welfare function" as the standard against which policy outcomes are to be evaluated and, secondly, on exploring which policy measures are best suited to advance "social welfare" (Buchanan and Tullock 1962, p. 284). In other words, welfare economics focuses on *directly* evaluating outcomes in "social welfare" terms and aims at providing policy advice in the form of information about the instrumentality of alternative policy measures for producing welfare-enhancing outcomes.

By contrast, *CPE*'s research focus is on *procedures* rather than on outcomes per se.²⁹ It rejects the welfare economist's claim that policies can be directly

²⁹Buchanan (1999 [1959], p. 204): "Whereas the 'social welfare function' approach searches for a criterion independent of the choice process itself ..., the alternative approach evaluates results only in terms of the choice process itself."

assessed in terms of their social welfare effects³⁰ and insists that outcomes or “social states” can be evaluated only *indirectly*, in terms of the choice processes from which they result. As Buchanan (1999 [1986], p. 461f.) puts it:

Improvement in the workings of politics is measured in terms of the satisfaction of that which is desired by individuals, whatever this may be, rather than in terms of moving closer to some externally defined, supra-individualistic ideal. ... There is no criterion through which policy may be directly evaluated. ... The focus of evaluative attention becomes the process itself, as contrasted with end-states or outcome patterns. ‘Improvement’ must, therefore be sought in reforms in process, in institutional change that will allow the operation of politics to mirror more accurately that set of results that are preferred by those who participate. ... (T)he *constitution* of policy rather than policy itself becomes the relevant object of reform.

As they differ in their analytical foci, welfare economists and constitutional economists differ accordingly in how they interpret their role as advisors in politics. While constitutional economics, as noted earlier, sees itself in the tradition of Adam Smith’s “science of the legislator,” providing advice on the choice of rules, welfare economics may be described “science of the politician,” providing advice on the choice of policies. Stated, again, in Buchanan’s (2001b [1987], p. 4) words:

The constitutional economist, precisely because the subject matter is the analysis of alternative sets of rules, has nothing to offer by way of policy advice to political agents who act within defined rules. ... (T)he whole exercise is aimed at offering guidance to those who participate in the discussion of constitutional change. In other terms, constitutional economics offers a potential for normative advice to the members of the continuing constitutional convention, whereas orthodox economics offers a potential for advice to the practicing politician.

³⁰Buchanan (1999 [1954], p. 100f.): “A necessary condition for deriving a social welfare function is that all possible social states be ordered *outside* or *external* to the decision process itself. What is necessary, in effect, is that the one erecting the function be able to translate the individual values which are presumably revealed to him into social building blocks. If these values consist only of individual orderings of social states (which is all that is required for either political voting or market choice) this step cannot be taken.” As Paul Samuelson (1954, p. 389) has famously said in his “The Pure Theory of Public Expenditures”: “The failure of market catallactics (to determine the optimal level of collective consumption, V.V.) in no way denies the following truth: given sufficient knowledge the optimal decisions can always be found by scanning over all the attainable states of the world and selecting the one which according to the postulated ethical welfare function is best. The solution ‘exists’; the problem is how to ‘find’ it.”

As opposed to the welfare economist's role as *policy advisor*, the constitutional economist's task as *legislative advisor* is to locate potential deficiencies in existing institutional structures, deficiencies in the sense of obstacles that prevent the individuals involved from realizing mutual gains that under more suitable rules of the game might be attainable. The ultimate addressees of proposals for reform are the individual constituents of the polities or collectivities in question. They are the ultimate judges on whether or not adopting the suggested reforms will serve their interests, as they see them.

This is how Buchanan (1999 [1986], p. 467) summarizes the role of the constitutional economist:

Positively, this role involves analysis of the working properties of alternative sets of constraining rules. ... Normatively, the task for the constitutional political economist is to assist individuals, as citizens who ultimately control their own social order, in their continuing search for those rules of the political game that will best serve their purposes, whatever these might be.

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10

Political Economy of Civil Society

Adrian Pabst

1 Introduction

Political economy concerns both the economic arrangements of the polity and the political arrangements of the economy. This characteristic is constitutive of political economy as a science of both practical reasoning and theoretical reflection (see Chapter 1 by Roberto Scazzieri in this Handbook), and it raises fundamental questions about the place of civil society. Is civil society a third domain alongside the polity and the economy? If so, are these three domains composed respectively of the institutions of the state, the market and civic associations? And if that is the case, does it follow that the state deals primarily with the public sector, the market with the private sector and civil society with the social sector? According to such a tripartite division, what would be a political economy *of* civil society? Or is society more primary than the polity and the economy? In such a configuration, do intermediary institutions embed state and market in the social relations of civil society? If so, what are the implications for the interaction between instrumental and non-instrumental activities, as well as intended and unintended outcomes? Connected with these questions are anthropological issues of the social nature of humankind and the conditions of sociability in relation to political and economic arrangements.

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In the history of modern political and economic thought, four models of political economy and civil society can be distinguished (cf. Taylor 1990; Cohen and Arato 1992; Ehrenberg 1999). First of all, the primacy of the state over civil society and the notion of an inherently adversarial sociability either prior to, or after, the establishment of state sovereignty, which can be found in the writings of thinkers as diverse as Machiavelli (1988, 1996), Hobbes (1960), Rousseau (1997), Kant (1991, 1996) and Hegel (1991). Second, the primacy of the market over civil society and the notion of a contractually based society of private individuals interconnected primarily through market exchanges, as inherited from Locke (1988) and the writings of Hamilton et al. (2003) on America's 'commercial republic'.

Third, the primacy of civil society over the 'invisible hand' of the market and the 'visible hand' of the state where civil society describes a domain of social connectivity characterised by mutual mirroring and affective dispositions. This is linked to the notion of pre-rational moral sentiments in establishing the division of labour and a commercial society according to the tradition of the Scottish Enlightenment, notably the work of Adam Ferguson (1995) and Adam Smith (1978, 1991, 2000). Fourth, the primacy of civil life over the polity and the economy and the notion of embedding economic activity and social behaviour in the practice of civic virtue rather than purely based on rules, rights and contracts. Key to this model is the principle of association and the centrality of intermediary institutions in limiting both state and market power. Elements of this conception of civil society can be found in the works of thinkers like Baron de Montesquieu, Benjamin Constant, François Guizot, Alexis de Tocqueville in France, Johann Georg Hamann, Friedrich Heinrich Jacobi and the early Romantics in Germany, as well as Edmund Burke, T.H. Green and L.T. Hobhouse in England or, before both these groups, the leading lights of the Neapolitan Enlightenment—in particular Paolo Mattia Doria (1729, 1740) and Antonio Genovesi (2013) who developed certain ancient, medieval and Renaissance ideas.

More recently in intellectual history, the concept of civil society has been associated with a domain of social relationships sharply distinguished from that of state and market (cf. Keane 1988; Seligman 1992; Kumar 1993; Becker 1994; Castiglione 1994; Hall 1995; Neocleous 1995; Walzer 1995). For example, Shils (1991, p. 4) defines the domain of civil society as follows:

[a] civil society is a society of civility in the conduct of the members of the society towards each other. Civility enters into conduct between individuals and between individuals and the state; it regulates the conduct of individuals towards society. It likewise regulates the relations of collectivities towards

each other, the relations between collectivities and the state and the relations of individuals within the state.

This signals a conceptual shift away from the embeddedness of the polity and the economy in society towards the disembedding of the market from social relations and the embedding of social relations in economic transactions (Polanyi 2001 [1944]). Such a double movement has created the conditions for civil society to be divorced from politics and the economy and even subordinated to the twin power of state and market institutions (e.g. Putnam 1993, 2000; Skocpol 1999, 2003). Therefore, the question that arises anew is about the political economy *of* civil society (cf. Pabst and Scazzieri 2012).

The aim of this chapter is to explore this question by focusing on three distinct yet related dimensions: (1) the conceptual history of civil society in relation to political economy; (2) the theory underpinning a political economy of civil society; and (3) the implications of a political economy of civil society for policy. To address these three dimensions, Sect. 2 provides a broad genealogical account that focuses on the idea of natural sociability in ancient and medieval conceptions of civil society, before Sect. 3 provides a typology of the above-mentioned four modern models that either rest on the idea of artificial sociability or renew older notions of natural sociability. Section 4 turns to the theory of the political economy of civil society and different conceptions of social connections that rest on a particular constellation of interests and a set of institutional arrangements, which involve both cooperation and conflict as well as an overarching constitutional framework. Section 5 outlines a series of implications for policymaking that reflect the primacy of civil life and intermediary institutions over state and market and the embedding in social relations of formal, procedural standards which are connected with state law and economic contract. The central idea linking all five sections is the distinction between natural and artificial sociability in relation to the polity, society and the economy.

2 Natural Sociability: Polity, Society and Economy

2.1 The Heritage of Plato and Aristotle

Common to ancient Greece and Rome was the idea that civil society is primarily political but also involves the economic conditions of life in the polity. Unlike modern conceptions of political economy in terms of state

and market, Greek and Roman Antiquity focused on the notion of human association—from the family (*oikos* or *familia*) via the city (*polis* or *civitas*) to the whole world (*cosmos* or *universum*). Just as the family and the entire private sphere is ultimately subordinated to the needs of the polity, so too the household is part of its foundation insofar as it rests on a division of labour that is based on different aptitudes and roles in satisfying the hierarchically ordered interests and needs of its members. Every level of association depends for its balanced harmony on whether each constituent element discharges its functions and whether relationships between all the elements are reciprocal.

Plato defines such a harmonious ordering of the polity as justice, saying that “the unjust are incapable of common action” (*Republic* Book I, 352B; Plato 1937, p. 618). The principle of justice governs not just the polity but also civil society and the economy, which it encompasses. Linking them together is the priority of the common good over private interest, whether individual or oligarchic. The problem with private interest is that it reflects subjective appetites of ambition, greed, rivalry and conflict that external sanctions are unable to regulate, never mind ordain towards the well-being of all. For this reason, Plato emphasises the importance of shared ends such as the public good in the economy, society and polity all at once. His search for unity reflects the idea that these three domains are bound together under the authority of universal goodness and that civil society—the realm of the household and the economy—is embedded in the polity. The latter is not synonymous with the state because the polity itself is plural and composed of different bodies and their members whose diverse talents provide the basis for the division of labour.

As he writes in Book VII of the *Republic*, any autonomy of the person and the household is subordinate to the interest of the commonwealth:

the law is not concerned to make any one class specially happy, but to ensure the welfare of the commonwealth as a whole. By persuasion or constraint it will unite the citizens in harmony, making them share whatever benefits each class can contribute to the common good; and its purpose in forming men of that spirit was not that each should be left to go his own way, but that they should be instrumental in binding the community into one. (*Republic* Book I, 519E–520A; Plato 1937, p. 778 [translation modified])

The point about Plato’s conception of civil society is that it includes reflections on the economic conditions of life in the polity, which is not primarily ruled by law and contract but by an orientation towards the good itself upheld by the philosopher-king and the new class of guardians.

Like his teacher Plato, Aristotle also emphasised the primacy of the polity over civil society and the economy, which rest on a division of labour that is based on different aptitudes. As Ehrenberg (1999, p. 10) argues, “Aristotle shared Plato’s understanding that human bonds are rooted in material need and that the division of labor rests at the heart of civil society”. And like Plato, Aristotle views the polity in terms of an association governed by the common good:

Every polis or state is a species of association and all associations are instituted for the purpose of attaining some good – for all men do all their acts with view to achieving something which is, in their view, a good. We may therefore hold [...] that all associations aim at some good; [...] the particular association which is the most sovereign of all, and includes all the rest, will pursue this aim most, and will thus be directed to the most sovereign of all goods. This most sovereign, and inclusive association is the polis, as it is called, or the political association (*koinonía politikè*). (*Politics* 1252a1–6; Aristotle 1984, p. 1986)

Aristotle’s conception of civil society is grounded in the family, which is the most basic social and economic unit—the first locus of a fundamental division of labour that is at the heart of the entire economy. The family or household is constituted by three sets of hierarchical relations, two of which involve a measure of reciprocity: master and slave, husband and wife as well as parents and children. The art of managing the household, *oikonomia*, is a complex network of individual necessity and mutual dependence that serve both a material and a moral purpose—ensuring the basic needs of persons and contributing to the formation of character through the exercise of authority and the instilling of ethos based on the practice of virtue. This, in turn, helps to make a contribution to the welfare of the city as a whole. For Aristotle, the household is therefore the first rung in an upward spiral of interwoven associations that encompass villages, the city and ultimately the *cosmos*. Each subsidiary sphere has its own internal end or finality, and that of the family together with the village is to ensure the material conditions of life in the *polis*.

Building on Plato, Aristotle views human happiness (*eudaimonia*) as the ultimate end of each association and by happiness he means a combination of individual fulfilment and mutual flourishing. The first condition for happiness is to achieve as much as possible material subsistence or autarchy, and the family as the most primary productive unit is an association wherein production is for use and all the fruits of production are shared in common. Whatever surplus is generated leads to exchange at the level of the village and the polis. The question that Aristotle raises is about the end or finality of

commerce: Does it serve the goal of subsistence in the sense of meeting the needs of the household, village and city? Or does it serve the goal of accumulating profit, which undermines the conditions of both material life in civil society and ethical life in the *polis*?

Money, as Aristotle foresaw, can be either a medium of exchange that facilitates the satisfaction of needs or it can be an instrument of accumulating abstract wealth that reinforces the human disposition towards vice, such as ambition, greed or conflict. The reason is that the ‘art of acquisition’ makes money the overriding aim and produces abstract wealth—in the form of profit or usury—that goes against the natural order of things precisely because it elevates private desire above the public good and is thus at the expense of fellow citizens—subjecting the other subsidiary spheres to a logic that is external to them and totalising.

On this basis, Aristotle distinguishes between two rival conceptions of civil society: either a civil society that embeds the economy and directs production, exchange and wealth towards the good life in the city, or a civil society wherein the pursuit of wealth for its own sake is now the goal of economic activity and the economy is uprooted from both civil society and the polity. The former conception views the economy as socially embedded and politically organised, whereas the latter sees it as socially disembedded and politically unconstrained. Key to Aristotle’s account of the political economy of civil society is the irreducible plurality of the *polis* and the overarching unity of the common good: “But a *polis* is composite, like any other whole made up of many parts” (*Politics* 1274b39–41; Aristotle 1984, p. 2023). Such a plurally composed city, which is made up of subsidiary spheres that rest on a division of labour and relations of both individual necessity and mutual dependence, requires a mixed constitution if it provides the conditions for a good life whereby citizens can share in universal goodness: “governments [i.e. constitutions] which have a regard to the common interest are constituted in accordance with strict principles of justice, and are therefore true forms; but those which regard only the interest of the rulers are all defective and perverted forms, for they are despotic, whereas a state is a community of freemen” (*Politics* 1279a17–21; Aristotle 1984, p. 2030).

Whereas Plato relied on the idea of a philosopher-king and guardians, Aristotle accentuated the role of citizens (restricted to adult males of a certain class) and the importance of constitutionally recognised bodies, which foreshadow the emphasis on intermediary institutions in ancient Rome and later the Middle Ages. Other conditions for the good life that encourages virtue and mitigates vice is a set of political institutions that can limit greed and avarice: “The most important rule of all, in all types of constitution,

is that provision should be made – not only by law, but also by the *general system of the economy* – to prevent the magistrates from being able to use their office for their own gain” (*Politics* 1308b32–33; Aristotle 1984, p. 2078 [translation modified]). In short, Aristotle developed an account of civil society with a material basis (grounded in the division of labour at the heart of the household) and an internal differentiation between different subsidiary spheres that are held together by an outlook towards the good life, i.e. a non-instrumental end that can orientate private interest towards the common public good. As Cohen and Arato (1992, p. 84) write

Politike koinonia was defined as a public ethical-political community of free and equal citizens under a legally defined system or rule. Law itself, however, was seen as the expression of an ethos, a common set of norms and values, defining not only political procedures but also a substantive form of life based on a developed catalogue of preferred virtues and forms of interaction.

2.2 The Stoic Legacy

Ancient Roman thinkers were divided on the centrality of civil society. Whereas the Epicureans and Cynics argue for a withdrawal from the world to a private sphere of resignation and self-sufficiency, some Stoics like Seneca and later Cicero shifted the focus back on the social nature of humankind and the need for civil associations that ultimately form a worldwide civic community (*cosmopolis*) based on universal citizenship—beyond the traditional bonds within the family and tribe, in particular overcoming the exclusion of women, slaves, children, resident aliens and foreigners (as in Plato and Aristotle). Ancient Roman philosophers shared with ancient Greek philosophers the idea that the human condition is one of reason and life in society based on forming associations. These associations are founded upon a natural division of labour and, in turn, provide the material basis for life in the *civitas*. As Cicero writes, the *res publica* represents “an assemblage of people in large numbers in an agreement with respect to justice and a partnership for the common good” (Cicero 1988, p. 65). Civil society combines both the economy and the polity that together make a civilisation and an empire possible, governed as they are by the principle of justice in the sense of pursuing universal goodness—not merely individual happiness understood as private interest or utility.

One key difference with ancient Greece is the ancient Roman emphasis on personal property and autonomous civic bodies. Private property was seen as a protection against arbitrary state power and also against excessive

greed and corruption because for Cicero wealth beyond a certain level undermines the social purpose of the economy. Since the innate sociability and the capacity for reason that characterise humankind are insufficient to guarantee resilient social bonds and a balance between liberty and solidarity, Cicero also argued for self-governing civic associations in the form of colleges and fraternities which differ not just from blood ties of family and kinship but also from the more formal ties of citizenship and nationhood (Black 1984; Pabst 2013).

Like Plato and Aristotle, Cicero warned about the pursuit of individual interest in the private sphere as a threat to the mutual flourishing of all in the *civitas*. Money and wealth are only conducive for the wellbeing of the commonwealth insofar as they are inscribed in both civic and political institutions—otherwise they end up subordinating other spheres to the logic of personal benefit and utility and thereby destroy civil society:

To profit from another's loss – is more unnatural than death, or destitution, or pain, or any other physical or external blow. To begin with, this strikes at the root of human society and fellowship. For if we each of us propose to rob or injure one another for our personal gain, then we are clearly going to demolish what is more emphatically nature's creation than anything else in the whole world: namely, the link that unites every human being with every other [...] a general seizure and appropriation of other people's property would cause the collapse of the human community, the brotherhood of man. (Cicero 1965, pp. 166–167)

Cicero's critique of both rapacious exploitation and state capture of private property underscores the centrality of a mixed constitution to balance different interests and direct them to the common good while also balancing liberty with solidarity or fellowship. A mixed constitution concerns not just the *res publica* but also the *societas civilis*—the set of social ties and civic bonds without which any commonwealth (itself the fusion of the polity with the economy and civil society) collapses.

Crucially, for Cicero—like for Plato and Aristotle—civil society is a natural institution just because human beings are by nature relational beings, and the city (*polis* or *civitas*) is the highest association governed by the principle justice and an outlook on the common good. In short, the classical conception of civil society encompasses political economy: It starts with a general account of human sociability in which natural dispositions and affections within groups of kins are the ultimate foundation of more extensive bonds within the city and beyond it, and it extends the division of labour at the

heart of the household to other associations. Relational patterns and social connections are thereby intertwined with ties that constitute political association, such that each mirrors and strengthens the other in mutually reinforcing ways. In this manner, the economy is inscribed in the social order of civil society and the political order of the polity.

However, in both the Greek and the Roman case, the mixed constitution and the embedded economy failed to prevent a slide into oligarchy and tyranny. Amid exploitation and imperial expansion, the political order that bound together civil society with the economy ultimately collapsed but it bequeathed a sense of civic association, citizenship and a private sphere (as a correlate to *polis* or *res publica*) composed of family, property, interests and rights. This sphere was distinct but not separate from *societas civilis* as the realm of reason, justice and participation in the common good—a politically organised community that encompassed the economy to secure the material basis of civilisation.

2.3 The Medieval Inheritance

Christianity took up and developed this conception in two directions. First of all, Church Fathers and Doctors like Augustine of Hippo and Thomas Aquinas emphasised the importance of linking the reciprocal relations of justice to the universal common good of God—a good that is personal, relational and embodies the highest form of association. Without such conception of justice states are but band of robbers and emperors little more than pirates. Only a universal brotherhood and sisterhood above the confines of the household and the state could direct human desire towards a proper balance between individual interest (self-love) and the mutual flourishing (love of others). Just as civil society can be dominated by human sin and vice, so too a mixed constitution involving the *oikos*, the *polis* and the *ecclesia* can provide reconciliation and a mutual regard for goodness, beauty and truth. The earthly city is a necessary but insufficient condition for the right ordering of human desire, and so the city of God foreshadowed by the Church provides a space for association beyond the pursuit of either power or wealth or both at once (Augustine 1998).

What patristic and medieval Christianity sought to theorise is how to embed both the economy and civil society in a wider order composed not only of the public political realm and the private sphere but also of a universal civic commonwealth beyond the divisions of class and colour. Central to this commonwealth was the Church as a community that limits the power

of state and market precisely by guaranteeing a space between the individual person and secular authority wherein people associated around shared ends (Aquinas 2007, pp. 4–18, 78–85, 202–206). This space encompassed a wide array of different intermediary institutions with a diversity of internal goods—from monastic chapters and Church orders via trading guilds and corporations to universities and communal and civic councils (Black 1984; Pabst 2013). As Cohen and Arato (1992, p. 85) suggest,

the feudal order of fragmented sovereign units, patrimonial rulers, corporate bodies, towns, etc., as well as medieval kingship and empire, all came to be described in different sources as *societas civilis sive res publica* [...]. Unnoticed, this usage introduced a level of pluralization into the concept that could now hardly be unified under the idea of an organized collective body, the notion of *res publica Christiana* notwithstanding.

In other words, civic relations under the auspices of citizenship is compatible with a variety of alternative, and sometimes mutually exclusive, memberships within a plural polity that is characterised by a complex space of diffuse sovereign power. It is also compatible with non-political connections, including hybrid economic and social relations (such as membership in guilds), across any strict divide between the civic and the political.

The second direction developed by Christianity concerned questions of ultimate authority over the ‘secular’ sphere of civil society (cf. Tierney 1964). Whereas Augustine and Aquinas argued for a balance between political and ecclesial authority based on the idea that man is a social being with an immanent and a transcendent outlook, Marsilius of Padua and William of Ockham emphasised the rupture between general sociability and political association, the artificial character of the body politic, and the absolute (unconstrained) character of political authority over civil society. For Marsilius and Ockham, the emperor rules over the entire temporal sphere, and the common good which he has the obligation to defend tends to serve the interests of the state against the transnational papacy and the national church. The reason is that church authority comes from Christ and his apostles who all refused to have any civil jurisdiction or political power. As such, the church has no legitimate temporal power in her own right and whenever the pope or the clergy exercise temporal jurisdiction, they can only do so by the will of the people (Marsilius 1967; Ockham 1952).

Whereas Augustine and Aquinas developed a more mediated account of papal *plenitudo potestatis* in the political sphere, Marsilius and Ockham equated the temporal sphere with coercive jurisdiction which is a monopoly

of the state. As a result, state sovereignty is now absolute, while at the same time markets become progressively less embedded in the relations of civil society. As Coleman (1999, pp. 48, 50) concludes, the consequence is that

secular politics not only has its own process of self-correction, but that it is independent of ecclesial power [...]. Because the temporal sphere is imperfect, he [Ockham] argued that secular sovereignty, once established, could be legitimate even when ‘absolute’, in that there need not be regular participation of the people in government, nor need there be institutions to restrain the power of kings.

Thus the late Middle Ages witnesses an erosion of the classical idea of a politically organised civil society that embeds the economy and also of the patristic and medieval idea that the Church can counterbalance political and economic power in such a way as to provide a space for the intermediary institutions of civil society which can direct state and market activities towards non-instrumental ends.

2.4 Implications for the Political Economy of Civil Society

The rationale for such a relatively long exposition is that early and later modern ideas about state and society are only intelligible with reference to those ancient, patristic and medieval discussions and distinctions (Strayer 1970; Black 1984; Ertman 1997). Indeed, current dichotomies are rooted in the contractualist perspective dominant since the late Middle Ages (Villey 1983, 2006; de Muralt 2002; Oakley 2005), but these are far removed from the more comprehensive reading of sociability to be found in the classical and Renaissance traditions (Pabst 2014)—including the emphasis on more constitutional and covenantal approaches. For example, when Justus Lipsius wrote that “*Vitam Civilem definio, quam in hominum societate mixti degimus, ad mutua commoda sive usum*” (Lipsius 1596, p. 1 as quoted in Ornaghi 1984, p. 71), he was still referring to the classical concept of sociability as a overarching condition encompassing a complex web of connections both of the horizontal and vertical kinds.

Indeed, Lipsius echoes themes of the Renaissance thinking about *vita civile* (civil life), both in the more Aristotelian version of Leonardo Bruni and Matteo Palmieri (civil life as a set of mutual arrangements and compensations among individual citizens and groups) and in the more Platonist

version of Nicolaus Cusanus and Marsilius Ficinus (civil life as a web of bonds generated by mutual mirroring and affective dispositions) (cf. Pabst 2011a). The four modern models on which the following section focuses cannot be properly conceptualised without reference to the legacy of ancient Rome and Greece as well as the patristic and medieval heritage.

3 Political Economy of Civil Society: A Typology of the Four Modern Models

3.1 The State-Centric Model

As outlined in the previous section, the Greco-Roman reflections on civil society emphasised the political foundation and finality of civil society that includes economic arrangements, whereas the patristic and high medieval conceptions viewed *societas civilis* as more primary than the polity and the economy. In late medieval and early modern Western thought, the focus shifted towards the role of the central sovereign state in defining the nature of the political community and economic activities. The intermediary institutions of civil society that mediate between individuals and the centre were increasingly subsumed under the sovereign powers of the state (Black 1984; cf. Gierke 1900, 1973; Maitland 2003). In the same process of centralisation, there was a greater disembedding of the market from the social relations that constitute civil society (Polanyi 2001).

Underpinning the primacy of the state over civil society is the notion of an inherently adversarial sociability that defines the natural condition of humankind and requires the regulating power of the centrally enforced social contract. Among a wide range of diverse thinkers, Machiavelli and Hobbes are a case in point. In Machiavelli's *The Prince*, for example, it is the exercise of violence and the use of fear that regulate civic life (Machiavelli 1988, pp. 34–39, 51–53, 76–79) within the city-state. This is not limited to the internal realm of domestic politics but also applies to the external realm of foreign affairs because there is an unmediated anarchy between states that only the power of rulers can try to mitigate: In his 1503 treatise *Words To Be Spoken on the Law for Appropriating Money*, Machiavelli writes that “among private individuals laws, contracts, and agreements make them keep faith, but among sovereigns only force can” (Cesa 2004, p. 2).

Like Machiavelli, Hobbes rejects the ancient, patristic and medieval idea that humans are political, social beings in favour of the view that humankind does not by nature seek society for its sake but some benefit:

By nature, then, we are not looking for friends but for honour or advantage [*commodum*] from them. This is what we are primarily after, friends are secondary. Men's purpose in seeking each other's company may be inferred from what they do once they meet. If they meet to do business, everyone is looking for profit not for friendship. If the reason is public affairs, a kind of political relationship develops, which holds more mutual fear than love; *it is sometimes the occasion of faction but never of good-will.* (Hobbes 1998, p. 22 [original italics])

Later, during the Enlightenment, Rousseau inverted Hobbes by arguing that the isolated, natural individual is 'good' and not yet egotistic, because vice arises from rivalry and comparison. However, Rousseau (1997) took the latter to be endemic once the individual is placed in a social context. Accordingly, his optimism about innocent isolation is trumped by a pessimism about human association (Milbank and Pabst 2016). This encouraged scepticism about the role of corporate bodies beneath the level of the state: for it is only the state that can lead human beings to sacrifice all their petty rivalries for the sake of the 'general will' (cf. Riley 1986). So just as the sovereign state seeks to stand above the interests of faction and sectional intrigue, so too the concentration of power in the centre risks undermining the civic bonds between people and the social ties that underlies the intermediary institutions of civil society.

Unlike Rousseau and rather like Machiavelli and Hobbes, the starting point of Kant's conception of civil society echoes Hobbes' notion of the 'state of nature': "In their external relationship with one another, states, like lawless savages, exist in a condition devoid of right. [...] this *condition* is one of war (the right of the stronger), even if there is no actual war or continuous active fighting (i.e. hostilities)" (Kant 1991, p. 165). So in a different mode compared with Hobbes, Kant naturalises violence within the social order of the polity and considers central state coercion as a mechanism to regulate natural anarchy. Thus Kant's account of politics rests on the idea of asocial sociability: Human beings are naturally self-interested and jealous vis-à-vis other human beings, but this eventually engenders some kind of competitive order, both nationally and internationally, which requires a federal union of states:

There is only one rational way in which states coexisting with other states can emerge from a lawless condition of pure warfare. Just like individual men, they must renounce their savage and lawless freedom, adapt themselves to public coercive laws and thus form an international state (*civitas gentium*) which would necessarily continue to grow until it embraced all the peoples of the earth. (Kant 1991, p. 107)

Like *societas civilis* at the national level, the *civitas gentium* rests on state coercion and social contract rather than free association and the pursuit of common purpose.

The same applies to Hegel's conception of civil society. In his *Philosophy of Right* (Hegel 1991), he views civil society (*bürgerliche Gesellschaft*) in terms of the interplay between objective state authority on the one hand, and the satisfaction of subjective needs on the other hand. By contrast with Machiavelli, Hobbes, Rousseau and Kant, Hegel does accord an important role to the principle of reciprocity as a way of blending the universality of a shared ethical outlook with the particularity involved in the pursuit of private and even selfish ends in social and economic activities. Civil society is both a system of economic interdependence and a realm of social mediation whereby individual wills are directed towards a greater social good through individual efforts and struggles as well as mutual recognition based on the division of labour and the centrality of human work:

A man actualises himself only in becoming something definite, i.e. something specifically particularised; this means restricting himself exclusively to one of the particular spheres of need. In this class-system, the ethical frame of mind therefore is rectitude and esprit de corps, i.e., the disposition to make oneself a member of one of the moments of civil society by one's own act [...] in this way giving recognition both in one's own eyes and in the eyes of others. (Hegel 1991, §207)

The link between civil society and the economy in Hegel is the corporation (*Korporation*), which is a voluntary association of person based on professional or social interests that can convert apparently selfish purposes into communities of shared goals, but at the same time finds itself to be subject to central state control: "unless he is a member of an authorised Corporation (and it is only by being authorised that an association becomes a Corporation), an individual is without rank or dignity, his isolation reduces his business to mere self-seeking, and his livelihood and satisfaction become insecure" (Hegel 1991, §253). So while the association as Corporation raises individual self-seeking to a higher level of common purpose, it is nevertheless the case for Hegel that the state restricts it to the interests of a sectional group through central control of civil society.

In short, the civil society model that emerged from the late Middle Ages and early modernity is characterised by the growing power of the central state, which leads to complex ties between political institutions and economic arrangements. As Lorenzo Ornaghi (1990, pp. 24–25) writes,

Through the permanent interaction between political institutions and structure, individual and collective actions coalesce into a specific ‘economic system’ that can be historically identified and represented. Again through this interaction, in every historically identified system the economic structure is founded upon (and perceived as) a *durable* framework of relations providing the basic framework for economic activity. It is precisely the ‘surplus value’ (*Mehrwert*) of political institutions that permits the existence and durability of correspondences and symmetries between politics and economics. [original italics]

3.2 The Market-Driven Model

The second model that emerges in the modern era centres on the market rather than the state, whereby a contractually based civil society is seen as the outcome of private individuals who are interconnected primarily through market exchanges, not social ties or civic bonds. Locke, in the social contract tradition of Hobbes, argues that human beings are born into an asocial state of nature until they agree to set up a political or civil society in order to protect their pre-political natural rights (life, liberty and estate or property) and their status as free and equal persons. In this manner, Locke established an economically determined sphere of civil society that could be envisioned in some sense as an extension of the state of nature—the primordial importance to secure private property, which

makes him [man] willing to quite this Condition [the state of nature], which however free, is full of fears and continual dangers: And ‘tis not without reason, that he seeks out, and is willing to joyn [*sic*] in Society with others who are already united, or have a mind to unite for the mutual *Preservation* of their Lives, Liberties and Estates, which I call by the general name, *Property*. (Locke 1988, p. 350 [original italics])

The point for Locke is that both the central authority of the state and the more diffuse organisation of civil society are a function of individual freedom and private choice with view to securing property: “The great and *chief end* therefore, of Mens [*sic*] uniting into Common-wealths, and putting themselves under Government, is the *Preservation of their Property*” (Locke 1988, p. 351 [original italics]). In other words, Locke views the state and civil society as a means to balance individual liberty and private property with mutual security and the shared interest of stability under the aegis of the rule of law and minimal government.

Property for Locke includes life, liberty and estate, and such an expansive sense of property has been interpreted by scholars like C.B. Macpherson (1962) to mean that Locke argues for accumulation of capital (as property) by individuals. Each of the three restrictions on accumulating property (decay, sufficiency for others and accumulation based on one's own labour) diminishes and even disappears as Locke's argument progresses in the *Two Treatises* (Locke 1988)—notably money as a store of value that is not subject to natural decay, growing productivity for capital owners and the existence of private property in the state of nature (e.g. slavery).

Whatever the merits of this interpretation, Locke does suggest that the coming into being of civil society does not fundamentally alter property rights in the state of nature. In other words, he views the economic order as pre-social and as more primary than the political order. And a result of contrasting economic with political arrangements, the realm of civil society is seen as neither more fundamental than the polity and the economy nor as having autonomy but rather as an extension of economic activities. For Locke, human beings need to submit to a common public authority whose power has to be limited in order to allow people to produce, trade and accumulate more privately owned wealth.

Locke's conception of civil society as an order founded on individual property and economically interconnected citizens shaped the notion of 'commercial republic' in the writings of America's founding fathers whose Federalist Papers defined the purpose of government to protect private possessions and to create the conditions for economic liberty—besides political and religious freedom (Hamilton et al. 2003, No. 10 and No. 51). Central to this vision is a combination of consent, contract and competition to turn the diversity of interests into an economic order governed by individual security and commerce: "the prosperity of commerce is now perceived and acknowledged by all enlightened statesmen to be the most useful as well as the most productive source of nation wealth, and has accordingly become a primary object of their political cares" (Hamilton et al. 2003, No. 12).

However, the priority accorded to commerce clashed with notions of civic virtue that was bound up closely with ideas of citizenship. Linked to this is the tendency of powerful economic interests to organise politically in the pursuit of passions (rather than actual interests) and not to be constrained by a substantive conception of the public interest that rests on civic institutions in order to shape the polity and the economy. It is this critique that informs the other two models of the modern era: the civil society model of Ferguson and Smith, and the model centred on civic life in the tradition of the Neapolitan Enlightenment and cognate movements across Europe.

3.3 The Civil Society Model

Adam Ferguson's 1767 *Essay on the History of Civil Society* focuses on the implications of abandoning civic virtue in favour of modern commercial society based on passion rather than interests. While the political domain is characterised by conflict and the need for military valour to impose some order, the economic realm risks being weakened and even destroyed by an over-reliance on individual self-seeking passions of accumulation: "the mighty advantages of property and fortune, when stripped of the recommendations they derive from vanity, or the more serious regards to independence and power, only mean a provision that is made for animal enjoyment" (Ferguson 1995, p. 35). The answer is not central state intervention in the market but rather the strengthening of fellow feeling and the importance of creating the conditions for a spontaneous order to emerge based on the uncoordinated actions of individuals within civil society. Key to Ferguson's conception of the autonomy of civil society is the distinction between interests and passions or desires:

The dispositions which refer to the preservation of the individual, while they continue to operate in the manner of instinctive desires, are nearly the same in man that they are in the other animals: but in him they are sooner or later combined with reflection and foresight; they give rise to this apprehensions on the subject of property, and make him acquainted with that object of care which he calls interest [...] if not restrained by the laws of civil society, men would enter on a scene of violence or meanness, which would exhibit our species, by turns, under an aspect more terrible and odious, or more vile and contemptible, than that of any animal which inherits the earth. (Ferguson 1995, p. 17)

In fact, Ferguson defines interest as the middle path between reason and passion, which means that interest can act as a counterweight to rationalism and irrationalism. Here it is important to highlight the ambiguity of commerce. While production and trade create their own virtues of punctuality and enterprise and are also able to limit the corruption of feudalism, it is equally the case for Ferguson that commerce can weaken the social origins and outlook of humankind because in commercial society

he [man] has found an object which sets him in competition with his fellow-creatures, and he deals with them as he does with his cattle and his soil, for the sake of the profits they bring. The mighty engine which we suppose to have formed society, only tends to set its members at variance, or to continue their intercourse after the bands of affection are broken. (Ferguson 1995, p. 24)

In this light, Ferguson argues for the importance to “reconcile [...] the social affections of mankind with their separate and interested pursuits” (Ferguson 1995, p. 139). Neither the market nor the state can be the source of civic virtue. This does not mean that Ferguson views them in negative terms. On the contrary, he defended a renewed role of government (compared with the limited powers of the state according to the republican account), notably the obligation of the state to create an environment within which the market can flourish by paying attention to education, the arts, sanitation, crime, poverty and demography. Similarly, the market as the commercial sphere is indispensable to the generation of wealth based on a new division of labour. However, what both state and market require is the ethical sphere of civil society wherein men act from “affections of kindness and friendship” (Ferguson 1995, p. 38). However, echoing the ancient warnings about the destructive potential of economic activities on social relations Ferguson worried that

the members of a community may, in this manner, like the inhabitants of a conquered province, be made to lose the sense of every connection, but that of kindred or neighbourhood; and have no common affairs to transact, but those of trade: Connections, indeed, or transactions, in which probity and friendship may still take place; but in which the national spirit, whose ebbs and flows we are now considering, cannot be exerted [...] the effects of such a constitution may be to immerse all orders of men in their separate pursuits of pleasure, which they may now enjoy with little disturbance; or of gain, which they may preserve without any attention to the commonwealth. (Ferguson 1995, pp. 219–220, 222)

Similarly, Adam Smith viewed both state and market as being inscribed in the wider sphere of civil society. The starting point is Smith’s conviction that commerce fosters political stability by encouraging non-violent factions to cooperate based on their pursuit of enlightened self-interest within the marketplace where individual interest is converted into a mutually beneficial outcome through the operation of the ‘invisible hand’. Once the market is freed from the manifold obstructions of human laws, it can support “the natural effort of every individual to better his own condition” (Smith 1991, p. 540). At the same time, the commercial society that centres on the market can lead to impediments to commerce because merchants, manufacturers and workers all try to restrict competition by forming corporations to limit entry into their sectors: “As it is in the interest of the freemen of a corporation to hinder the rest of the inhabitants from employing any workmen but themselves, so it is in the interest of the merchants and manufacturers of

every country to secure to themselves the monopoly of the home market” (Smith 1991, p. 884).

To avoid monopoly and rapacious corruption, Smith appeals both to government and to civil society. Indeed, he argues for legislators who need to take “an extensive view of the general good” in order to oppose not just monopolistic practices but also “to prevent the almost entire corruption and degeneracy of the great body of the people” (Smith 1991, p. 719). Civil society is the domain of inculcating knowledge of science and the practice of civic virtues that are necessary for the formation of enlightened citizens. However, for the purposes of this chapter, the question that arises is about the nature of civil society in relation to the economy. Smith is adamant that the virtues of sympathy and benevolence only operate at the micro level of interpersonal relations, producing strong, thick bonds between individuals bound together by personal ties of family or friendship. Sympathy and benevolence are absent from the macro level of weaker, thinner ties among individuals who are not bound together by personal bonds: “Men, though naturally sympathetic, feel so little for one another, with whom they have no particular connection, in comparison of what they feel for themselves; the misery of one, who is merely their fellow-creature, is of so little importance to them in comparison even of a small inconveniency of their own” (Smith 2000, p. 125).

Smith’s emphasis on ‘cooperation without benevolence’ (Smith 2000, pp. 141–151)—a recurrent theme linking the *Theory of Moral Sentiments* to the *Wealth of Nations*—has far-reaching implications for exchanges in the marketplace where agents treat economic relations as an instrument to attain self-interested objectives (Pabst 2011b). The practices of production, trade and consumption are seen as separate from mutual sympathy and benevolence. Moreover, market relations are now seen as the precondition rather than the outcome of sociality:

society may subsist among different men, as among different merchants, from a sense of its utility, without any mutual love or affection; and though no man in it should owe any obligation, or be bound in gratitude to any other, it may still be upheld by a mercenary exchange of good offices according to an agreed valuation [...] Society, however, cannot subsist among those who are at all times ready to hurt and injure one another [...] Beneficence, therefore, is less essential to the existence of society than justice. (Smith 2000, p. 124)

Smith’s defence of commercial society provides a key thematic link between the *Theory of Moral Sentiments* and the *Wealth of Nations*. In the former, the market as a universal human institution is a precondition for the free

exercise of private virtues. In the latter, the market as a universal mechanism of resource allocation is a precondition for the free pursuit of the “propensity to truck, barter and exchange one thing for another” in ways that are individually and collectively beneficial. In other words, what provides the first and final foundation of civil is

this division of labour, from which so many advantages are derived, is not originally the effect of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary, though very slow and gradual consequence of a certain propensity in human nature which has in view no such extensive utility: the propensity to truck, barter and exchange one thing for another. (Smith 1991, p. 21)

As such, only a commercial society is capable of overcoming the hierarchical, vertical and iniquitous relations of feudalism in favour of egalitarian, horizontal and just relations of capitalism. In fact, Smith champions commercial society as a concrete instantiation of both social and moral progress, which is valuable not only because it creates wealth but also because of the productive nature and effects of market relationships: “Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow citizens” (Smith 1991, pp. 26–27).

Yet at the same time, Smith’s commercial society risks weakening the relations governing civil society by supplanting intermediary associations, which he views in terms of obstacles to public well-being. In the *Wealth of Nations*, he writes that

people of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices [...]. But though the law cannot hinder people of the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies; much less to render them necessary. (Smith 1991, p. 117)

The fundamental reason for Smith is that a civil society grounded in the division of labour provides the space wherein the natural ‘propensity to truck, barter, and exchange’ balances individual interests in such a way as to generate social welfare: “by pursuing his own interest he [man] frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good” (Smith 1991, pp. 291–292).

3.4 Civil Life and Intermediary Institutions

There are two other modern traditions that gave rise to a rather different conception of the political economy of civil society. One is the Neapolitan Enlightenment of Doria and Genovesi (with roots in the work of Vico) and the other is the tradition of anti-absolutist thinking associated with figures like Montesquieu, Burke and Tocqueville. Linking them together is a renewal of ancient, medieval and Renaissance notions of civic virtue and an emphasis on the intermediary sphere of voluntary associations that mediate between the person, on the one hand, and the institutions of state and market, on the other hand.

Faced with the entrenched privileges of the nobility and the poverty of the peasantry, Doria—much like Vico (Robertson 2005, pp. 185–200)—looked for leadership among the magistracy of the city, the *ceto civile*. In his book *Vita Civile* (Doria 1729), he contrasted a politics of virtue with a politics driven entirely by self-live (*amore proprio*), which had given rise to a reductive view of politics as ‘reason of state’ rather than the public common good. Echoing the Greco-Roman legacy, he suggest that happiness as flourishing is the ultimate end of humankind and that this underpins our natural human disposition towards union with one another: “without any doubt, the first object of our desire is human happiness (*Primo oggetto de’ nostri desiderii è senza fallo l’umano felicità*)” (Doria 1729). Alongside a mixed constitution, Doria’s conception of civil life rests on notions of *ordini* (distinctions of rank) that in turn are grounded in a fundamental division of labour. Crucially, he viewed the proper governance of the economy in terms of the just distribution of natural resources and the fruits of human work. For this reason, he warned about the potential domination of the *economia naturale* (agriculture and human ingenuity) by the *economia astratta* (the accumulation of abstract wealth in the form of money). Central to a balance of rival interests was interpersonal cooperation and trust (*fede*) as the indispensable prerequisite for agreements upon which both production and trade are based—a commitment to the common good above and beyond particular private interests (Doria 1740).

It is this theme of public trust (*fede pubblica*) that Genovesi (2013) developed in his writings on civil economy. The starting point is that a properly embedded economy pursues mutual benefit based on reciprocal needs (*bisogni reciproci*) and the reciprocal obligation to assist (*reciproca obbligazione di soccorrere*; Genovesi 2013, p. 22). The exercise of virtue is both intrinsically good by forming character and fostering human flourishing,

and that it engenders a more prosperous economy by favouring trust and promoting cooperation. For Genovesi, the economy is no exception to the rule that true happiness—in Doria’s sense of mutual flourishing—involves sympathetic ties, which tend to influence even economic transactions: “for contracts are bonds and civil laws are [...] also compacts and public contracts” (Genovesi 2013, p. 341). This statement suggests that for Genovesi, there is no strict distinction of formal law and individual agency, since both must always be informed by what he calls ‘public trust’, which is defined as follows: “Public trust is therefore a bond that ties together and binds persons and families of one State to one another, with the sovereign or other nations with which they trade” (Genovesi 2013, p. 341, n.121). Put differently, public trust is not so much the aggregation of private trust as a kind of universal sympathy that includes a commitment to the common good.

Public trust connects the sphere of the economy to the domain of civil society: “public trust is to civic bodies what to natural bodies is the force of cohesion and of reciprocal attraction; without which there can be no solid and lasting mass, and all is but fine sand and dust” (Genovesi 2013, p. 342). For him, public trust is so central because it promotes the social bonds and civic ties that are indispensable for economic cooperation and civil life. Without real reciprocity, individual rights and commercial contracts cannot ultimately work. As a result, criminal activity that undermines public trust leads to a situation where “society will either dissolve itself, or it will convert in its entirety into a band of brigands” (Genovesi 2013, p. 343, here echoing St Augustine’s dictum that “without justice what else is the state but a band of brigands”, *De Civitate Dei*, Book IV, 4).

Later Gaetano Filangieri, who developed the nascent ‘civil economy’ tradition, stressed that economic inequality has the same corrosive effect as criminality and that wealth cannot be defined in terms of a merely abstracted quantity:

Exorbitant riches of some citizens, and the laziness of some others, presumes the unhappiness and misery of the majority. This civil partiality is contrary to the public good. A state cannot be said to be rich and happy save in that single case where every citizen through a definite labour in the course of a reasonable time is able commodiously to supply his own needs and that of his family. (Filangieri 2003, p. 12)

In short, the ‘civil economy’ tradition emphasises the centrality of virtue in the economic spheres that is thereby embedded in the structures of civil life.

From a distinct yet related perspective, the tradition of anti-absolutist thinking associated with figures like Montesquieu, Burke and Tocqueville focused on the crucial role of mixed constitution to uphold the domain of civil society that is constituted by autonomous intermediary institutions, which can embed state and market activities in a complex, multilayered web of social relations. Montesquieu, for example, contrasted the autarchy of despotism with the reciprocity of a balanced constitution in which the sovereign, the people and intermediate associations interact based on civil laws: “Despotism is self-sufficient; everything around it is empty. Thus when travellers describe countries to us where despotism reigns, they rarely speak of civil laws” (Montesquieu 1989, p. 74). In addition to civil law, Montesquieu argued that the intermediary institutions of civil society require a strong civic culture—a substratum of “mores, manners and received examples” that complement a body of law to protect the integrity of the “intermediate, subordinate and dependent bodies” that compose civil life (Montesquieu 1989, p. 187).

Both Burke and Tocqueville went further in their defence of civic associations, not only as autonomous and self-governing but also as bulwarks against the excessive power of both state and market. Burke’s rejection of state absolutism (whether the *ancien régime* or the revolutionary republic) is well-known, but what is perhaps less documented is the set of themes that are shared with the thinkers of the Neapolitan Enlightenment:

The constituent parts of a state are obliged to hold their public faith with each other and with all those who derive any serious interest under their engagements, as much as the whole state is bound to keep its faith with separate communities. Otherwise competence and power would soon be confounded and no law be left but the will of a prevailing force. (Burke 2014 [1790], p. 22)

It is true that Burke associated civil society with an inequality of status, but he also made the point that enforced equality can strengthen the power of the central state over the intermediary institutions of civil society. Therefore, as Ehrenberg (1999, p. 160) writes, for Burke,

legislation must “furnish to each description such force as might protect it in the conflict caused by the diversity of interests that must exist and must contend in all complex society” [Burke] because any attempt to impose a politically derived uniformity on a differentiated civil society is a prescription for disaster. Only a frank recognition that inequality stabilizes social relations could enable France’s intermediate institutions to protect civil society from the Crown and the mob.

Of equal importance is his critique of the political economy underpinning the French Revolution, which put in place a new settlement revolving around central state power and debt-funded commerce—to which the autonomy and property of intermediary associations were sacrificed in order to provide the stable guarantee for a new flood of paper money. The creation of public credit reached a *new* acme with the French Revolution because the revolutionaries brought about, according to Burke, a new settlement in which

every thing human and divine [is] sacrificed to the idol of public credit, and national bankruptcy the consequence; and to crown all, the paper securities of new, precarious, tottering power, the discredited paper securities of impoverished fraud and beggared rapine, held out as a currency for the support of an empire, in lieu of the two great recognised species that represent the lasting conventional credit of mankind, which disappeared and hid themselves in the earth from whence they came, when the principle of property, whose creatures and representatives they are, was systemically subverted. (Burke 2014 [1790], p. 40)

Burke's critique anticipated not only political totalitarianism and looming terror but also the 'paper-money despotism' that consists in expanding simultaneously public credit and state debt, which had built up as a result of corruption and expensive wars. First, the revolutionaries converted the confiscated property of the Crown and the Church into money, which was lent to the state. The money became public debt contracted by the government to wage war. This created a new class of 'monied interest' that charged usurious interest rates, making money out of money and generating speculative profits. Then the state taxed the people and robbed them of their assets to service the growing mountain of public debt financed by private creditors. This produced an 'ignoble oligarchy' composed of state agents and private speculators who colluded against society, as Burke observed:

if this monster of a constitution can continue, France will be wholly governed by the agitators in corporations, by societies in the towns formed of directors of *assignats* and trustees for the sale of church lands, attornies, agents, money-jobbers, speculators and adventures, composing an ignoble oligarchy founded on the destruction of the crown, the church, the nobility and the people. Here end all deceitful dreams and visions of the equality and rights of men. (Burke 2014 [1790], p. 199)

Burke also rejects the Hobbesian idea of a violent and anarchic state of nature, which can be merely regulated by the central state and an

international system of sovereign states. Nor does he agree with the Rousseauian notion that in the state of nature human beings do not depend on each other—pre-social liberty as self-sufficiency. On the contrary, for Burke the natural condition of humankind is social and relational, and human nature is by nature artistic and creative:

The state of civil society is a state of nature; and much more truly so than a savage and incoherent mode of life. For man is by nature reasonable; and he is never perfectly in his natural state, but when he is placed where reason may be best cultivated, and most predominates. Art is man's nature. (Burke 1791, p. 108)

In line with this thinking, Burke views rights as social and relational too, such as the right to property by descent, the right to due process (including trial by jury) and the right to education. In the *Reflections*, he contrasts these 'real rights of men' (Burke 2014 [1790], p. 59 [original italics]) with purely individual rights either in the state of nature, as for Rousseau, or in the artifice of political society, as for Hobbes.

Central to Burke's account of civil society is his conception of human beings as naturally linked to others by bonds of sympathy, which prevent fellow human beings from being 'indifferent spectators of almost anything which men can do or suffer' (Burke 1993, p. 68). Coupled with the passions of imitation and ambition, sympathy helps to produce an order that is not imposed upon some pre-existing chaos but rather emerges from nature. It does so by fusing a concern for others (sympathy) with following the example (imitation) of those who excel and can offer virtuous leadership (ambition). Even though they are 'of a complicated kind', these three passions 'branch out into a variety of forms agreeable to that variety of ends they are to serve in the great chain of society' (Burke 1993, p. 68). Therefore the key difference between the social contract tradition based on an anarchic state of nature and Burke's emphasis on 'natural sociability' is that the latter evolves with the grain of humanity, starting with the innate desire of human beings to associate with one another. The primacy of association underpins Burke's conception of community as expressed by his famous invocation of the 'little platoons': "To be attached to the subdivision, to love the little platoon we belong to in society, is the first principle (the germ as it were) of public affections. It is the first link in the series by which we proceed towards a love to our country and to mankind" (Burke 2014 [1790], p. 47). Here, as before, we find civil society embedded in a complex web of multilayered social relations.

It was Tocqueville who outlined a more fully developed conception of civil society was the most fundamental locus of social organisation that can balance individual liberty with mutual solidarity by diluting state and market power, in particular preventing the monopoly position of vested interest and guarding against either majority will or mob rule. By contrast with Smith, Tocqueville views humans as primarily social beings with a unique propensity to associate rather than to ‘truck, barter and exchange’. For the purpose of a more democratic polity, economy and civil society, the complex web of civil associations is indispensable:

A government can no more be competent to keep alive and to renew the circulation of opinions and feelings among a great people than to manage all the speculations of productive industry. No sooner does a government attempt to go beyond its political sphere and enter upon this new track than it exercises, even unintentionally, an insupportable tyranny [...] Governments therefore should not be the only active powers; associations ought, in democratic nations, to stand in lieu of those powerful private individuals whom the equality of conditions has swept away. (Tocqueville 1990, I, p. 109)

Thus the responsibility of the state is limited to the political sphere while that of the market is limited to the economic realm, with the complex web of civil associations constituting the domain of civil society, which underpins both the polity and the economy. From this perspective, neither economics nor politics as disciplines can provide first principles or final ends for humankind. Rather, “in democratic countries, the science of association is the mother of sciences; the progress of all the rest depends on the progress it has made” (Tocqueville 1990, I, p. 110).

4 Conceptualising the Political Economy of Civil Society

4.1 Disciplinary Divides and the Domain of Civil Society

Mainstream academic research and public policymaking tend to treat markets, states and individuals as foundational categories that are more primary than the civil society they constitute. Such a partitioning of social reality into foundational categories underpins the strict separation of academic disciplines and a process of ever-greater specialisation and the proliferation of

new subfields. The divide between separate spheres is encapsulated by the split between political philosophy and intellectual history, on the one hand, and the social sciences, on the other hand. In turn, the social sciences are further divided into specialised fields of inquiry according to an ever-greater 'division of labour'. A case in point is the disciplinary divide between political science and pure economics, which deepened following the Marginalist revolution of the 1870s insofar as both politics and economics were no longer seen as branches of political economy but instead as new sciences in their own right (Screpanti and Zamagni 2005, pp. 380–450).

In economics, the split occurred in the wake of Marshall (1890) and in politics it arose as part of the influence of Comte (cf. Collini et al. 1983; Manent 2010). Both disciplines continue to differ on the respective role of markets and states or the relative importance of individuals and groups in the allocation and distribution of resources, but the growing disciplinary divide has led to the absorption of politics into economics (e.g. North et al. 2010; Lohmann 2008) or else to the absorption of economics into politics (e.g. Blyth 2013). Either way, both fields rest on instrumental rationality, the maximisation of utility and a trade-off between rival interests—a zero-sum game of winners and losers in which conflict is more fundamental than cooperation.

Connected with this is a growing focus in economics on theories of rational choice, instrumental reason and methodological individualism at the expense of the classical analysis of system-wide opportunities and constraints—including bounded rationality, uncertainty and the shaping of individual agency by shared norms reflected in institutions such as the civic associations that compose civil society (Scazzieri 1999). Since systemic opportunities and constraints are associated with different institutional and organisational patterns that affect the division of labour and exchange, each system encompasses alternative *political economies*. Seen from this perspective, the rational choice framework stemming from the Marginalist Revolution has reduced the range of possibilities to a *single* political economy that can merely accommodate a limited range of policy options (Pabst and Scazzieri 2012).

Such approaches are also unable to conceptualise how and why the respective 'objects of study' (such as the economy, the political system or society) are increasingly intertwined with one another. One reason is that the separation of economics from politics prevents a proper conception of political institutions in defining the boundaries of the economic system and its different institutional and organisation patterns, which affect the division of labour and exchange. To quote once more Ornaghi (1990, p. 25):

the integrating role of political institutions appears to increase with the degree of complexity and organization of economic action. The relation of political institutions with economic structure then becomes essential for two distinct reasons. First, it provides a better analytical-historical perspective on the links between political economy and ‘political order’ (the latter is not coincident with the type of ‘order’ that is associated with the existence of the State). Secondly, it contributes to a ‘dynamic’ interpretation of the contemporary relations between State institutions and economic order. In turn, this is the only route to an analysis emphasizing the link between order and transformation in a theory of the intersections between economic and political cycle.

Thus, the modern separation of economics from political science coincides with a split between economic structures and political institutions, which has reduced the scope of political economy and separated the analysis of both markets and states from the social connections in which they are embedded.

Another example of how this disciplinary divide affects conceptions of sociability in relation to markets and states is the tension between International Relations and International Political Economy. In fact, the discipline of International Relations always struggled to theorise the international system of national states without taking into account the role of transnational markets (e.g. Rosenberg 1994). Even when new fields such as International Political Economy and (Critical) International Political Economy seek to cross artificial disciplinary boundaries, it is not clear whether they can conceptualise civil society or sociability (cf. Porta and Scazzieri 1997; Scazzieri 2003). The distinct nature of civil society in relation to political society or commercial society is under-explored, and its foundation seems to be grounded in separate spheres that are linked to other domains by formal standards of law or economic contract—not partially overlapping social ties or civic bonds.

A different approach is to theorise the domain of civil society in terms of interpersonal relationships that are inscribed in something like an objective ‘order of things’—not a fixed, determined structure or a conventional set of contractual arrangements but instead relational, non-instrumental patterns of interaction that underpin social congruence. Such an approach is consistent with von Hayek’s focus on “how the *order of rules* affects the resulting *order of actions*” (Vanberg 2005, p. 25 [original italics]; cf. Hayek 1969) in situations where knowledge is tacit and rules are those “which the individual may be unable to express in words” (Hayek 1978, p. 7). One key source of Hayek’s conception is Adam Ferguson’s point that human beings

“stumble upon” institutional devices that nobody has actively designed and implemented (Ferguson 1995, p. 123), which applies to many intermediary institutions of civil society.

The approach focused on an ‘order of things’ rather than a divided social reality is also consistent with John Hicks’s distinction between the ‘order of being’ and the ‘order of doing’ (see Scazzieri and Zamagni 2008, p. 6) whereby the former is defined as a causal network that precedes specific goal-seeking practices, while the latter is conceived as a causal structure brought about by practices that aim at specific objectives (but do not necessarily attain their stated purpose). The question raised by this distinction is about intention and the complex interplay of reason with habit in shaping actions that are grounded in natural sociability instead of purely artificial arrangements. Here it is instructive to draw on Michael Bratman’s distinction between willing and reasoning (Bratman 1987, pp. 23–27) and on John Broome’s recent accentuation of the role of dispositions in disentangling the ambiguous status of “acting for a reason” (Broome 2009). These contributions to the debate are an important reminder of the interweaving of deliberate reasoning with habits of which agents may be unaware but which may be central in determining the outcome of actions in a given social context (cf. Drolet and Suppes 2008). Another key factor affecting the ‘order of things’ is the role of uncertainty in the functioning of the polity, economy and society. According to Albert Hirschman, the outcomes of certain activities “are so uncertain” that they are “strongly characterized by a certain fusion of (and confusion between) striving and attaining” (Hirschman 1985, p. 13; cf. Hirschman 1982, pp. 84–91).

What these contributions to the literature on civil society highlight is the nature of the relationship between intended and unintended outcomes of actions that are grounded in natural sociability. The world of practice that characterises the domain of civil society is a complex structure of overlaps between intended and unintended outcomes, and these overlaps capture the constitution of a social realm of subsidiary spheres in which interactions are not solely instrumental and utility-oriented. Within any such domain, social activity is open to a plurality of possible results, and uncertainty is partly a product of the criss-crossing of multiple causal linkages (Pabst and Scazzieri 2012). Civil society so configured suggests a fundamental rethinking of economic and political theory. Rather than being wedded to the dichotomy between the body politic and commercial society that are governed primarily by individual rights or private self-interest (see above), the approach focused on natural sociability and an ‘order of things’ views civil society as

the principal locus of the dispositions for cooperation or conflict (Pabst and Scazzieri 2016).

As such, it is different from some premodern conceptions of community and civic life (Bruni 2012). Indeed, it addresses interpretive and policy issues by highlighting the manifold possibilities that are grounded in the domain of social practices. By contrast with Hobbesian and Lockean ideas of contractual connections based on pre-social individual rights and means-ends rationality (see Sects. 2 and 3 above), a conception of civil society in terms of natural sociability begins with the preliminary consideration of the mutual congruence of dispositions within any given social structure. The domain of civil society (as defined above) is the space of possible arrangements in which dispositions of the means-ends type interact with non-instrumental actions and dispositions and thus become embedded in the causal structure generating both intended and unintended outcomes. Civil society so conceived combines the realisation of specific objectives in the economic and political spheres with the persistence of a durable space of social connectivity. This complex web of instrumental and non-instrumental social relationships can provide the foundations not only for informal arrangements but also for formally instituted political and economic life.

4.2 Constitutional Political Economy and the Primacy of Association

One question that these reflections raise is about the relationship between constitution and political economy. This question is addressed in a number of different ways, for example, by James Buchanan in his approach to constitutions as normative frameworks to be assessed in terms of allocative efficiency. His work conceptualises the constitutional dimension of political economy in terms of

the working properties of rules and institutions within which individuals interact, and the processes through which these rules and institutions are chosen or come into being. The emphasis on the choice of constraints distinguishes this research program from conventional economics, while the emphasis on cooperative rather than conflictual interaction distinguishes the program from much of conventional political science. (Buchanan 1990, p. 1)

Buchanan's work shows that constitutional political economy differs from neoclassical economics and modern political science insofar as it explores the

wider constitution of the domain within which institutions, rules and policy choices occur—notably the cooperative framework of reciprocal exchange in the pursuit of mutual benefit that applies not just to the economy but also to civil society.

However, his account of political economy seems to view conflict as more primary than cooperation because he defines cooperation in terms of rational avoidance or resolution of conflict. Moreover, both conflict and cooperation rest on “methodological individualism and rational choice” (Buchanan 1990, p. 1), which suggests that the ‘primary units’ of society are for him rationally driven individuals who are bound together by contractual arrangements—only the social contract and economic exchange can turn natural conflict into some form of human cooperation. For Buchanan, both economics and politics subsume virtually all social relationships under the formal functioning of markets and states. Patterns of social interaction at the national and the international level are subordinate either to political relations within or between states or to economic transactions in the national or global marketplace. In this manner, his approach ignores more fundamental social connections that occur at, as well as across, different levels.

In turn, this raises questions about the nature of the structures that might characterise social connectivity. Any given *political economy* presupposes the design of a specific organisational structure insofar as it requires the arrangement of human actions in view of a particular objective, or set of objectives. Max Weber’s distinction between organisation and union is useful in clarifying this concept: “[a]n ‘organization’ (*Betrieb*) is a system of continuous purposive activity of a specified kind” whereas the association (*Verein*) is “a corporate group originating in a voluntary agreement and in which the established order claims authority over the members only by virtue of a personal act of adherence” (Weber 1947, p. 28). In view of Max Weber’s discussion, a political economy consistent with the non-instrumental character of civil society would be a specific organization (*Betrieb*) embedded in a wider space of social connections (*Verein*).

Here one can go further than Weber to suggest that the idea of plural political economies explore the complex links between the economy and the polity with a particular emphasis on different forms of sociability that constitute the domain within which markets, states and individuals interact. In this perspective, the domain of political economy rejects not only the strict separation of economics from politics and other similarly antagonistic binary opposites such as state versus market, the national versus the supranational level or individual versus collective interest. It also views social relations as more primary than either state-administrative or

market-commercial arrangements—a constitutive domain that embeds the economic-political domain (Polanyi 2001). Thus, political economy seeks to theorise the overarching constitution of the domain within which markets, states and individuals interact and the social structures in which both cooperative and conflictual relationships are grounded (Pabst and Scazzieri 2012; Pabst 2014). Contrary to the rational choice framework of market exchange upheld by the central state, political economy approach focuses on the ordering of different functions and an arranging of different positions, which embed both the economic and the political field in the complex structures of social interdependencies that help to constitute society (Pabst and Scazzieri 2016).

These reflections call attention to the widespread assumption in contemporary economics and political science about civil society as the outcome rather than the source of social interactions. Linked to this is the questionable modern move to subsume virtually all non-instrumental social relationships under the framework of markets and states (cf. Anderson 2000). If national states and transnational markets are treated as constitutive concepts of the modern international system since the 1648 Treaty of Westphalia (Hicks 1969; Hont 2005; cf. Arrighi 1994; Philpott 2001; Teschke 2003), then a fundamental problem occurs. Patterns of social interaction at the international level are relegated either to political relations between states or to economic transactions in the marketplace. Such an approach ignores more fundamental social connections that occur at both the national and the international level and are characterised by predominantly horizontal and non-instrumental relationships rather than the primarily vertical and instrumental relationships associated with national sovereignty and global commerce (Porta and Scazzieri 1997; Keohane 2002; Miller 2009).

As Polanyi (2001) suggested, both modern states and modern markets increasingly abstract from context-dependent social connections, thereby undermining the complex array of relationships that are at the root of human sociability. For this reason, one can suggest that the abstract, formal nature of the modern social contract can and does undermine the complex web of interpersonal social that embed the rule of law and commercial exchange. More recent historical and anthropological research indicates that across different societies and cultures, social bonds and intermediary institutions have traditionally been more fundamental than either formal constitutional-legal rights or formal economic-contractual ties (e.g. Godbout and Caillé 1992; Strathern 2004). The social practices involved in autonomous and self-governing groups and associations are for social purposes and reasons of mutual recognition that can serve both private and public interests (Goody 2004; Godbout 2007).

An association that is neither for state-administrative nor for economic-contractual purposes tends to involve three constitutive elements: first of all, the common *telos* of its founder or founders; second, different groups providing guidance based on the principles that underpin the association; third, the free consent, whether tacit or explicit, of the many members who compose the association. What is relevant here is the distinction between non-instrumental and instrumental patterns of social congruence that Oakeshott (1975, pp. 108–184) emphasised with the distinction between ‘civil association’ and ‘enterprise association’.

At the same time, Oakeshott’s preference for *societas* over *universitas* is an argument in favour of bonds of formal agreement that restrict community to participation in economic processes (Oakeshott 1975, pp. 185–326). By contrast, a conception of association in terms of *universitas* shifts the emphasis to the idea of a community of purpose that encompasses political participation. In other words, the question is whether civil society ultimately embeds both the economy and the polity or whether the political domain is more primary than the social domain (Polanyi 2001; Hirst 1996; Hirst and Bader 2001).

A political economy of civil society can be conceptualised in terms of the constitution of the polity and its political and social ties. Such a political economy is rooted in the view of the social sphere as a multilayered set of relations that involve both convergent and divergent interests between individuals or social groups. This account of the social as more primary than the economic or the political is a useful tool to analyse potential patterns of cooperation within and across different societies, and to explore possible ways in which a mutually beneficial organisation of diverse interests may be established. The social denotes a continuum of interests and institutions that cannot be partitioned into self-contained fields such as the economic or the political. Rather than being founded purely on formal theories and concepts that abstract from social relations (as in much of economics and political science), political economy reflects the specific fabric of given societies (Pabst 2014; Pabst and Scazzieri 2016).

Thus political economy shifts the emphasis away from constitutively separate interests to the ‘co-constitution of interests’—a structured space of social relations that is prior to decisions about the allocation and distribution of resources. In other words, different rules and institutions are grounded in different types of sociability, and the ultimate source of social interactions is civil society—defined as “the primary constitution of connectivity in which markets and states operate [... and which] *embeds* the causal structures determining the relationship between intended and unintended outcomes in any given social domain” (Pabst and Scazzieri 2012, pp. 337–338). The ‘political

economy of constitution' is thus a sphere of partially realised social connections that represents a certain 'constitution of interests'.

4.3 Interest and Intermediary Institutions

At this juncture, it is instructive to consider the way in which the economic constitution of any given society allows manifold individual and/or groups to coalesce around partially overlapping interests and thus to bring about patterns of social congruence. Douglass Cecil North and other scholars have focused in their research on some of the historical conditions rendering certain rules and procedures effective in certain contexts and ineffective in others (North 1990, 2005; North and Weingast 1989; North et al. 2010). In fact, fragmentation of interests may also lead to the opposite outcome. Cleavages, even if not coinciding, may still make congruence more difficult. This can happen when the social domain is so completely fractured that spheres of shared interest become very hard, if not altogether impossible, to detect. Recent theoretical and empirical work on failed states calls attention to this dark side of social differentiation (e.g. Acemoglu and Robinson 2006, 2012).

However, contrary to standard rational choice theories in economics and political science, interests can also be seen as relational in two ways. First of all, the interests of individuals, groups and even larger social 'units' such as sectors or entire nations are not simply the sum of their individual parts but extend to 'clusters' that reflect the relative positioning. Secondly, individual, group and larger relational interests are embedded within a set of relationships that are irreducible to purely contractual arrangements because the relative initial positions are not a matter of choice. As Ornaghi (1990) suggests, the very etymology of the term 'interest' (*inter-esse*) emphasises the 'in-betweenness' of social actors. This conception relates 'interest' to the reciprocal constraints and opportunities that characterise participation in a specific subsidiary social domain (see above). Whereas rational choice-based economics and politics tend to focus on individual private interest or collective public interest, the political economy of civil society shifts the emphasis to the relational structure of shared interests and the multilayered positioning of specific interests that are partially convergent and divergent at different levels.

Here one can once more go further to make the point that contractualist theories of institution ignore the pre-existing social ties into which individuals are not just born but also in which they find themselves at different

points in time (e.g. the professions they join) and which are not reducible to personal choice (e.g. Pabst 2014; Milbank and Pabst 2016). These ties provide both constraints and opportunities in relation to conflict and cooperation. Such a focus on pre-existing social ties can overcome a series of dualisms that characterise modern politics and economics, including instrumental versus non-instrumental action, hierarchical versus vertical interaction, intended versus non-intended outcome and homogeneous versus heterogeneous interdependence. By conceptualising the economic and political fields as ultimately embedded in the social domain, the political economy of civil society can offer a different conceptualisation compared with those approaches that focus exclusively on the contractualist arrangements underpinning the institutions of states and markets.

The focus on social ties and bonds that pre-exist the emergence of conflict and cooperation links institutions to constitution (Pabst and Scazzieri 2016). Such connections are characterised by more hybrid relationships rather than the more homogeneous links associated with state sovereignty and global commerce (as indicated above). Therefore, different rules and institutions are grounded in different types of sociability that point to the existence of a more fundamental social domain that can be conceptualised in terms of civil society (Pabst and Scazzieri 2012). Accordingly, a broader account of 'constitution' presupposes a multiplicity of partially overlapping connections at different levels. This is to say that constitution allows individuals and social groups to relate to other individuals and social groups at a certain level while relating to yet other individuals and social group at another level.

Here the proximity model of civil society provides a relevant interpretive framework insofar as in this model "individuals or groups derive their identity from a variety of attributes" such that "some of those attributes are central in a given relational domain but secondary in another domain" (Pabst and Scazzieri 2012, p. 345; cf. Scazzieri 1999). In a social domain whose structuring follows the above pattern, sociability is linked to multiple forms of connectivity in two different ways. First of all, the distance between individuals or social groups is characterised by a significant variety across society. Second, the notion of distance is a function of the nature of interdependence in question, e.g. profession, location or cultural affinity. Therefore, the notion of proximity shifts the emphasis away from a single set of standards towards a more plural, inclusive space of dispositions and connections.

Linking together interests, institutions and constitution is the notion of 'community of shared purpose' that reflects the complex sociability constituting the domain of political economy. 'Communities of shared purpose'

can be understood as diverse forms of social interactions that have potential for both conflict and cooperation and that are not reducible to dualisms or to the binary logic that underpins them, because sociability is plural and hybrid. One possible objection to the argument of this essay is to say that the internal structure of society is so diverse as to produce ‘parallel societies’ within a given territory and its people, not to mention diversity across countries and cultures. Indeed, there has been much discussion about the growing pluralism of late modern societies, including the pervasiveness of fundamental disagreements (political, economic, social and ethical) and the inability to resolve such disagreements rationally (e.g. Hirschman 1977; MacIntyre 2000 [1981]). This has led thinkers as diverse as Isaiah Berlin and John Rawls to argue that key substantive values are incommensurable and that therefore it is only possible to ‘agree to disagree’ and to settle for certain procedural mechanisms such as contractual arrangements backed by the rule of law (Berlin 1969; Rawls 1971).

However, it is possible to contend that such and similar oppositions between commensurable and incommensurable values rest on an unwarranted dualism. The notions of sociability and community of shared purpose (as defined above) can help to overcome this opposition in the direction of a multilayered social space in which there can be both disagreement on some substantive choices and also agreement on other substantive choices. Therefore, diversity and pluralism are not inherently antagonistic, and the notion of constitution is key to understanding that there are certain pre-existing social arrangements and patterns of sociability on which both conflict and cooperation rest.

5 Concluding Reflections

The concept of civil society is central to economic, political and social theory. This chapter has outlined a series of different approaches to the political economy of civil society—from Greco-Roman conceptions via patristic and medieval ideas to modern and contemporary notions. One of the main fault-lines that run through the history of ideas on this theme is the contrast between natural and artificial sociability and whether the institutions of civil society are grounded in activities with a ‘non-instrumental’ purpose. As such, civil society is neither subordinate to markets and states nor does it involve a social dimension isolated from economic and political relationships. It is rather an encompassing concept that has the potential to embed both markets and states in a set of multilayered social connections.

More specifically, the domain of civil society is the space of possible arrangements in which non-instrumental dispositions interact with dispositions of the means-ends type and embed them within an underlying relational set-up. The complex web of non-instrumental social relationships provides the foundations not only for the intermediary institutions commonly associated with contemporary notions of civil society but also for markets and states. This is because social connections and practices are more primary than activities for either state-administrative or economic-contractual purposes. Civil society properly configured is the most primary locus of imagining and instituting political and economic life.

In terms of theorising civil society, the chapter has tried to show that the domain of political economy cannot be defined as a space of freely choosing individuals; rather, it presupposes conditions of sociability that are compatible with a number of different patterns of social congruence. Within that domain, constitution refers to the architectural structure that provides relative persistence to potential social arrangements. And within that constitutional framework, the relations and associations between individuals or social groups mark the partial actualisation of the existing potential for cooperation or conflict. This suggests that neither action nor interest is independent of the conditions of sociability. On the contrary, performing an action is always embedded in social practices that involve specific goals and interests, which arise from the existing patterns of interdependence. Therefore, interests are defined within a complex social structure in which human practice overcomes the dualism between instrumental and non-instrumental actions, intended and unintended outcomes, and individual and collective levels.

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11

Industrial Structure and Political Outcomes: The Case of the 2016 US Presidential Election

Thomas Ferguson, Paul Jorgensen and Jie Chen

In early 2015, two scholars sat down to analyze the just completed 2014 Congressional elections. In contrast to mainstream commentators, they were not chiefly intrigued by the Republican gains in Congress or the widespread dissatisfaction with President Obama's economic policies that almost everyone agreed had helped cause that disaster for the president's party.¹ Instead, after poring over state by state election returns, they drew a radically different lesson: The American political system was coming apart at its seams.

The scholars knew that voter turnout typically falls off in mid-term elections. But the extent of the decline in 2014 astonished them. The major parties appeared to be breaking down as mass organizing vehicles:

¹In a vast literature, see, e.g., Jacobson, G. 2015. Obama and Nationalized Electoral Politics in the 2014 Midterm. *Political Science Quarterly*, 130, 1–25.

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2014 was fundamentally a democratic debacle. It likely heralds a new stage in the disintegration of the American political order....Focus on changes in turnout between presidential elections and the next off-year election. Across the whole sweep of American history, the momentous dimensions of what has just happened stand out in bold relief. The drop off in voting turnout from the presidential election of 2012 to 2014 is the second largest *of all time* –24 percentage points...the decline is broad and to levels that boggle the mind – rates of voting that recall the earliest days of the 19th century, before the Jacksonian Revolution swept away property suffrage and other devices that held down turnout. Turnout in Ohio, for example, fell to 34 percent – a level the state last touched in 1814, when political parties on a modern model did not exist and it had just recently entered the Union. New York trumped even this: turnout in the Empire State plunged to 30 percent, almost back to where it was in 1798, when property suffrage laws disenfranchised some 40 percent of the citizenry. New Jersey managed a little better: turnout fell to 31 percent, back to levels of the 1820s. Delaware turnout fell to 35 percent, well below some elections of the 1790s. In the west, by contrast, turnout declined to levels almost without precedent: California’s 33 percent turnout appears to be the lowest recorded since the state entered the union in 1850. Nevada also hit a record low (28 percent), as did Utah at 26 percent (for elections to the House). (Burnham and Ferguson 2014)

If there was any good news, it was decidedly bitter sweet: “[T]he sharp plunge in turnout elsewhere helped achieve a milestone of sorts: regional differences between the South and the rest of country just about vanished, for the first time since perhaps 1872, when the Union army still occupied much of the old Confederacy.”

The Republicans seemed ascendant; they had just won back control of the Senate. But the analysts believed that the vacuum forming at the heart of the party system spelled big trouble for both major political parties: “though Republicans jubilate now, the trend is probably as threatening to them as it is to the Democrats. The reason is stark: Increasing numbers of average Americans can no longer stomach voting for parties that only pretend to represent their interests.”

With an eye on Hillary Clinton’s looming presidential candidacy, the scholars laid down a very specific caution, derived from their assessment of the Obama administration’s economic record and the Party’s top-heavy dependence on super-rich mega-donors.

Though some Democrats try to sugarcoat the dismal facts by focusing on changes since 2009, when the President assumed office, the truth is that the

fruits of the recovery have gone lopsidedly to the very richest Americans. Wall Street and the stock market boom, but wages continue to stagnate, and unemployment remains stubbornly high...The administration's continuing efforts to court Wall Street, along with its reluctance to sanction even flagrant misconduct by prominent financiers just pour salt into these wounds....2014 suggests that the Democrats' ability to retain any mass constituency at all may now be in question. The facts of globalization, top-heavy income inequality, and the worldwide tendency toward austerity may just be too much for a party that is essentially dominated by segments of the 1 percent but whose legacy appeal is to average Americans...Right now Hillary Clinton's strategists appear to be pinning their hopes on firing up another ritualized big money-led coalition of minorities and particular groups instead of making broad economic appeals. That hope might perhaps prove out, if the slow and very modest economic recovery continues into 2016, or the Republicans nominate another Richie Rich caricature like Mitt Romney, who openly mocks the poorest 47% of the electorate. But exit surveys showed that in 2014 many women voters thought economic recovery and jobs were top issues, too. (Burnham and Ferguson 2014)

1 The Trump Puzzle

In 2016, the Republicans nominated yet another super-rich candidate—indeed, someone on the Forbes 400 list of wealthiest Americans. But pigeonholing him as a Romney-like Richie Rich was not easy. Like legions of conservative Republicans before him, he trash-talked Hispanics, immigrants, and women virtually nonstop, though with a verve uniquely his own. He laced his campaign with barely coded racial appeals and in the final days, ran an ad widely denounced as subtly anti-Semitic.² But he supplemented these with other messages that qualified as true blockbusters: In striking contrast to every other Republican presidential nominee since 1936, he attacked globalization, free trade, international financiers, Wall Street, and even Goldman Sachs.

Globalization has made the financial elite who donate to politicians very wealthy. But it has left millions of our workers with nothing but poverty and heartache. When subsidized foreign steel is dumped into our markets,

²See, e.g., NBC News, “Trump Ad Invokes Anti-Semitic Tropes,” November 6, 2016; <https://www.nbcnews.com/card/anti-defamation-league-trump-ad-invokes-anti-semitic-tropes-n678686>; accessed September 19, 2017.

threatening our factories, the politicians do nothing. For years, they watched on the sidelines as our jobs vanished and our communities were plunged into depression-level unemployment.³

In a frontal assault on the American establishment, the Republican standard bearer proclaimed “America First.” Mocking the Bush administration’s appeal to “weapons of mass destruction” as a pretext for invading Iraq, he broke dramatically with two generations of GOP orthodoxy and spoke out in favor of more cooperation with Russia. He even criticized the “carried-interest” tax break beloved by high finance. His campaign’s outreach to blue-collar workers was so effective that it provoked Hillary Clinton into a gaffe about “deplorables” remarkably similar to Mitt Romney’s famous outburst four years earlier.⁴

In the end, Donald Trump accomplished perhaps the greatest upset in American political history. With essentially all experts agreeing that he was politically dead, and many Republicans turning their backs on his campaign, he won more than half of all voters with a high school education or less (including 61% of white women with no college), almost two thirds of those who believed life for the next generation of Americans would be worse than now, and 77% of voters who reported their personal financial situation had worsened since four years ago.⁵ As the stock market rocketed upward the next morning instead of tanking as virtually all talking heads in the media had predicted if Trump somehow prevailed, elites and many ordinary citizens around the world felt the ground slipping beneath their feet. On the heels of the United Kingdom’s stunning vote in June to exit the European Union, which triggered another surprise short run economic upturn, it was all too much: Some new and uncanny force seemed loose in the world.

Given the new regime’s stunning, at times almost hallucinatory, whirl of personnel switches, out of right field cabinet appointments, Oval Office tweets over the head of establishment media, loudly advertised breaks with precedent, and dramatic policy reversals, both real and claimed, the two scholars’ conclusion that “the American political universe is being rapidly reshaped by economic and cultural crisis into something distinctly different”

³The speech was widely available; our citation comes from <https://egbertowillies.com/2016/06/29/donald-trump-speech-in-monessen-pennsylvania-video-transcript/>.

⁴Books and articles on the election are proliferating. For basic references, see, e.g., Allen, J. & Parnes, A. 2017. *Shattered—Inside Hillary Clinton’s Doomed Campaign*, New York, Crown; and Green, J. 2017. *Devil’s Bargain—Steve Bannon, Donald Trump, and the Storming of the Presidency*, New York, Penguin.

⁵These results come from the CNN website compilation, “2016 Election Results,” <http://www.cnn.com/election/results>.

now seems almost trite (Burnham and Ferguson 2014). But even a casual reading of the world press and the international scholarly discussion reveals an enormous divergence of views about the roots of this transformation as well as what actually happened in the 2016 election (Crotty 2017).

Some of the perplexity arises from what at times amounts to a multiple personality disorder afflicting the new administration. A few incidents in the campaign foreshadowed this, but the syndrome became obtrusive as the new leader grasped the reins of power. Even in normal times, political coalitions in America are messy around their edges, because they are built up out of elements that rarely cohere completely. But we are not in normal times. The Trump campaign was born in singularity: A billionaire candidate whose fundamental economic strategy as he emerged from a succession of hairbreadth escapes from insolvency rested on transforming himself into a worldwide brand name and then franchising that, thus avoiding big capital commitments. In the crunch, however, as we will show, name recognition could not substitute for real money: First, as he accepted the Republican nomination and then again in the late summer of 2016, his solo campaign had to be rescued by major industries plainly hoping for tariff relief, waves of other billionaires from the far, far right of the already far right Republican Party, and the most disruption-exalting corners of Wall Street.

The end of all vestiges of a one-man campaign had fateful consequences. The diverse investor blocs ranging themselves behind the new regime swelled but did not unify. Their only real point of agreement was that they preferred Trump to Hillary Clinton. After the election, the soaring stock market and influx of free market crusaders, including many former lobbyists, plumping for lower taxes, deregulation, and smaller government (aside, of course, from military expenditure) did win more admirers for the administration—for a time. An increasingly receptive business community, for example, showered record-breaking amounts of cash on the inauguration festivities.

Yet even as financiers from the very same Goldman Sachs firm that Trump had so recently denounced flocked to senior White House slots, Trump himself continued to cling to notions of mobilizing blue-collar workers. He put Steve Bannon, who championed this idea, in the White House and even, for a while, on the National Security Council. The incoming President electrified millions of Americans with tweets critical of Boeing, General Motors, and other giant businesses. He also organized meetings with union leaders. Spurning Democratic leaders' calls for all-out "Resistance," many trade union heads in construction, the electrical industry, and sectors of manufacturing hurt by free trade responded enthusiastically. Other more suspicious union chiefs felt boxed in by Trump's obvious

popularity within their ranks. Democrats and even many Republicans feared that his much talked about pledges to boost infrastructure spending might become the basis of a new political realignment in which traditional Democratic constituencies played key roles.⁶

The ghost of Juan Peron, however, vanished almost as fast as it appeared. Forced to make a choice, the President opted to nominate a fast food executive with a notoriously anti-union record as the next Secretary of Labor. The nominee gushed enthusiastically about rolling back the Obama administration's rules—which, in contrast to so much else it did in the field of economic regulation, represented real, effective measures to protect low wage workers against wage theft and violations of minimum wage laws. The resulting scrutiny led to a pitched battle and an embarrassing withdrawal by the nominee. His replacement was less controversial, but the credibility of any courtship of labor was in tatters (Block 2017).

Similar zigzags marked many other areas of policy, as internationally oriented business groups battled the champions of economic nationalism. The President repudiated the Trans-Pacific Trade Agreement and another accord under negotiation with Europe, but he moved slowly on the North American Free Trade Agreement (NAFTA). He also took his time implementing proposals for tariffs, though every small step he and his advisors took in that direction sent shockwaves around the world. The same slow motion shuffle befell his campaign's signature proposal for a wall on the Mexican border: There was talk, but little action. On NATO, policy toward the Middle East, Russian, Iran, and US alliances with Pacific area countries such as Japan and Korea, the administration was plainly at war with itself, to the consternation of many US allies, who were dismayed to discover that whatever "America First" meant, the taxi meter was running and they would have to ante up more for defense. As Steve Bannon exited the White House, amid a storm of controversy in the wake of the Charlottesville street clashes, the President reversed his own long held personal views, accepted the advice of his internationalist advisers, and decided to stay in Afghanistan.

More fatefully, the administration's initial efforts to block immigration by executive order were rejected by the courts and roused widespread indignation. They disgusted many Americans, who were repelled by what they perceived as arrant prejudice and barely disguised racism. Executives from many

⁶For Trump meetings with union leaders, see, e.g., Shepherdson, D. 2017. Trump Meets With Leaders of Building, Sheet Metal Unions. *Reuters*, January 23, 2017; Giordano, D. 2017. Giordano: IBEW On Board With Trump. *Daily News Philly.com*, February 1, 2017.

high tech companies, long reliant on steady streams of inexpensive foreign engineers, protested, as did other prominent business figures.

The administration slid deeper into trouble when it caved into pressure to make repealing the Obama administration's Affordable Care Act its first priority instead of swiftly passing legislation on infrastructure or broader tax reform. That opened enormous fissures between insurers and hospitals on one side and the Koch-led conservatives whose priority was lower taxes, and who had heavily bankrolled Congressional Republicans. It also directly threatened vast numbers of voters, whose lives sometimes literally depended on the program. When the Senate refused to go along, the whole effort collapsed abjectly.

The President quarreled in public with Republican Congressional leaders. He shocked even some of them when he insisted that all the contending protest groups in Charlottesville occupied the same moral level. After he pardoned a former Arizona sheriff who had boasted about his harsh treatment of immigrants, an eerie chill set in between the President, Capitol Hill Republicans, and even some members of the Cabinet and White House staff. Then, all of a sudden, the President started talking to Democratic leaders about a deficit deal, to the astonishment of everyone concerned. But that, too, turned out to be a mirage, as the administration quickly turned to Republican-only tax "reform" aimed at helping corporations and the wealthy, finally pushing that across at the end of 2017.

2 Election Shapers? Comey and the Russians

A record of campaigning and governing as crazy quilted as Trump's guarantees that reasonable people will assess some facts differently. But virtually from the moment Trump squeaked through on election night, all discussion turned highly partisan.⁷ Hillary Clinton and other leading Democrats called for all-out "Resistance" amid waves of grassroots protests to the new regime. As they sounded the tocsin, they pressed two explosive theories of her narrow loss alongside their criticism of the media's preoccupation with her emails. The first traced it to Russian hacking efforts that led to the publication (by WikiLeaks) in the run-up to the Democratic Convention of embarrassing Democratic National Committee (DNC) emails and later, in

⁷Allen, J. & Parnes, A. 2017. *Shattered—Inside Hillary Clinton's Doomed Campaign*, New York, Crown.

October, emails from top Clinton adviser John Podesta and the Center for American Progress that he had founded.⁸

The second pinned the reversal on the October 28th announcement—just days before the election—by then Federal Bureau of Investigation Director James Comey that the Bureau was reopening its earlier investigation into Clinton’s use of a private email server while Secretary of State. Although Comey subsequently informed Congressional leaders that his original decision not to prosecute would stand, Clinton and many other analysts contend that the announcement fatally damaged her credibility (Clinton 2017).

Discussions of possible Russian attempts to influence the election had figured in a few news reports media since the late spring of 2016. But within weeks after the election, both the Comey and the Russian stories were swept up into a much bigger and far more ideologically charged narrative that soon resounded around the world. The allegations about Russian influence dramatically broadened. A wave of leaks from unnamed national security personnel suggested that key people in Trump’s entourage, including incoming National Security Adviser Michael Flynn, a former Army Lieutenant General whom President Obama had fired as head of the Defense Intelligence Agency, had improperly cooperated with the Kremlin, possibly even violating the law. Stories also appeared relating how Republican Congressional leaders had resisted efforts by senior Obama administration officials to publicize allegations about the ties to Russia before the election.⁹

⁸Ibid. See also the account by Hillary Clinton herself: Clinton, H. 2017. *What Happened*, New York, Simon & Schuster. How the emails got to Wikileaks has been hotly contested; Julian Assange has denied that WikiLeaks obtained them from Russia. US government sources insist they did, directly or indirectly. A particularly interesting account is Satter, R., Donn, J. & Day, C. 2017. Inside Story: How the Russians Hacked the Democrats’ Emails. *APNews.com*, November 4, 2017. A problem is that when the breach was discovered, the Democratic National Committee did not allow the government agencies direct access to its servers. Instead, the agencies relied on the judgment of a private security firm hired by the DNC. See the discussion below, but especially Ritter, S. 2017. Time to Reassess the Roles Played By Guccifer 2.0 and Russia in the DNC Hack *Truth Dig*, July 28, 2017. Our discussion here treats the “Podesta Emails” in a conventional sense. Marcy Wheeler and other analysts have cautioned against assuming that we truly understand how many emails various actors have accessed or exactly when they leaked. There is strong evidence, for example, that some of the so-called “Podesta Emails” were leaked long before October 2016, including some in batches that have usually been attributed to hacks on the Democratic National Committee. See the discussion and references in Wheeler, M. 2017b. We Have No Idea What Emails the Papadopoulos Emails Refer To. *The Empty Wheel*, October 31, 2017.

Note that the Podesta emails were but one of many security breaches now under discussion, including many at state election boards and that we quite accept that some forms of Russian interference during the election happened. As will become clearer below, the question is how much they mattered, with so many other actors also bent on changing minds via Internet propaganda.

⁹For accounts of behind the scenes infighting, see, e.g., Lichtblau, E. 2017. The CIA Had Evidence of Russian Effort to Help Trump Earlier Than Believed. *New York Times*, April 6, 2017. An earlier report was Entous, A., Nakashima, E. & Miller, G. 2016. Secret CIA Assessment Says Russia Was Trying to Help Trump Win White House. *Washington Post*, December 9, 2016.

In early January, the Office of the (outgoing) Director of National Intelligence released a declassified version of a secret evaluation drafted and coordinated by the FBI, the Central Intelligence Agency (CIA), and the National Security Agency (NSA). Its title page bore the legend “ICA Intelligence Community Assessment.”¹⁰ At the time, the document was widely heralded as representing the unanimous view of the entire American intelligence establishment. But this was not true. The report was in fact the product of a specially assembled team of analysts from the three agencies whose work was not circulated to the rest of the intelligence community.¹¹ Almost a third of the document concentrated on broad-brush criticism of “Russian TV,” whose audience in the United States is minuscule. The NSA, which controls the equipment used for electronic eavesdropping and thus should enjoy a uniquely authoritative position, was less confident than the CIA and the FBI, but agreed with the report’s conclusion that a Russian campaign “aspired to help President elect Trump’s chances of victory.”¹²

The new conclusion represented a quantum escalation in claims; as late as October 31, “F.B.I. and intelligence officials” maintained that the DNC hacking “was aimed at disrupting the presidential election rather than electing Mr. Trump” (Lichtblau and Meyers 2016).

Ever more extraordinary revelations cascaded on top of one another. New leaks revealed that the copy of the report given to the President contained a two-page summary of sensational claims about links between the Russian government and Trump that the intelligence chiefs admitted they could not verify. A “dossier” said to have been compiled by a former British intelligence agent who was a key source for many of those allegations quickly appeared in the press, touching off a worldwide firestorm. Not for many months did it become clear that the dossier actually had grown out of a research project originally commissioned by Republican opponents of Trump in the primaries; this was at first financed by a news site supported

¹⁰Intelligence. Office of the Director of National Intelligence, *Assessing Russian Activities and Intentions in Recent US Elections*. Washington, DC. https://www.dni.gov/files/documents/ICA_2017_01.pdf.

¹¹On the compartmentalized process that generated the report, see, above all, Miller, G., Nakashima, E. & Entous, A. 2017. Obama’s Secret Struggle to Punish Russia for Putin’s Election Assault. *Washington Post*, June 23, 2016; Brennan, J. 2017. House Intel Committee Hearing; Brennan on Contact with Russia. *CNN Transcripts*, May 23, 2017. The differences in accounts of the process are clearly outlined in Ritter, S. 2017. Time to Reassess the Roles Played By Guccifer 2.0 and Russia in the DNC Hack *Truth Dig*, July 28, 2017. See also the rather late acknowledgement of the facts in Times, N. Y. 2017. Correction: June 29, 2017. *New York Times*, June 29, 2017.

¹²Intelligence. Office of the Director of National Intelligence, “Assessing Russian Activities and Intentions in Recent US Elections. Washington, DC. https://www.dni.gov/files/documents/ICA_2017_01.pdf.

by Paul Singer, a prominent Wall Street financier, before being taken over by lawyers representing the Clinton campaign and the Democratic National Committee (Vogel and Haberman 2017). Other claims said to derive from other European intelligence services were added to the mix, along with reports that DNC personnel had sought derogatory information on Trump from sources in Ukraine.¹³

Several Congressional committees and at least one federal grand jury are currently investigating these matters. We see no reason to try to anticipate their conclusions, though the revelation that the Clinton campaign and the Democratic National Committee paid for part of the dossier must inevitably raise many new questions (Entous et al. 2017a). For this paper, only a few key points require notice. Firstly, that great powers mix in politics and elections in other countries should not be news. Both the United States and many other countries have plainly done this many times—one thinks, for example of the now well-documented US interventions in Italy, France, and other countries in the early days of the Cold War. This sort of thing is now virtually institutionalized among the major powers. Indeed, several of the social media companies which played major roles in the Republican campaign are known to have sought and sometimes obtained contracts from the United States or United Kingdom to work on elections or public opinion abroad, while many pollsters affiliated with the Democrats also work around the world, in the past including even elections in Russia.¹⁴ Many, though

¹³Ember, S. & Grynbaum, M. 2017. BuzzFeed Posts Unverified Claims on Trump, Igniting a Debate. *New York Times*, January 10, 2017. For the European intelligence agencies, see, e.g., Harding, L., Kirchgassener, S. & Hopkins, N. 2017. British Spies Were First to Spot Trump Team's Links to Russia. *Guardian*, April 13, 2017. For the DNC and Ukraine, see Vogel, K. & Stern, D. 2017. Ukrainian Efforts to Sabotage Trump Backfire. *Politico*, January 11, 2017.

¹⁴Since the election, an enormous literature has grown up on data firms associated with the Trump campaign and also, in some cases, perhaps with Brexit. Much of the attention centers on Cambridge Analytica. Green, J. 2017. *Devil's Bargain—Steve Bannon, Donald Trump, and the Storming of the Presidency*, New York, Penguin., pp. 134–135, describes it as an “off shoot” of a British company, Strategic Communication Laboratories (SCL). Green identifies Robert Mercer as the latter’s “principal owner” but adds that Steve Bannon also had an ownership stake and a seat on the board. All sorts of claims have been made about what are said to be breakthroughs in election and opinion manipulation by psychologists associated with SCL or Cambridge Analytica. A story in the Zurich based *Das Magazin* shortly after the election attracted worldwide attention. Grasseger, H. & Krogerus, M. 2016. Ich Habe Nur Gezeigt dass Es Die Bombe Gibt. *Das Magazin*, December 3, 2016, No. 48. The literature is too vast to discuss here, though we will touch upon it below. A series of articles on the companies published in the *Guardian* introduced many of these themes into English. SCL and Cambridge Analytica have disputed certain claims of these. See Doward, J. & Gibbs, A. 2017. Did Cambridge Analytica Influence the Brexit Vote and the US Election. *Guardian*, March 4, 2017, <https://www.theguardian.com/politics/2017/mar/04/nigel-oakes-cambridge-analytica-what-role-brexit-trump>; Cadwalladr, C. 2017b. Robert Mercer: The Big Data Billionaire Waging War on Mainstream Media. February 26, 2017, <https://www.theguardian.com/politics/2017/feb/26/robert-mercet-breitbart-war-on-media-steve-bannon-donald-trump-nigel-farage>; and Cadwalladr, C. 2017a. The Great British

not all, such operations garner support from various government agencies, sometimes backstage but often quite in the open.¹⁵

Secondly, the use of Internet and social media to reach across borders was virtually inevitable as soon as the technology developed to do it. The utility of these new forms of communication to bypass establishment media in the United States and some other countries (such as Italy and the UK) is now well documented, if variously assessed. That technology mostly developed alongside the rise of giant “platform” companies, such as Google and Facebook; it is mostly Made in America and centered heavily in Silicon Valley, though other countries, including Russia and China, certainly have also built up formidable capabilities. This is a point we shall return to below.

We note that some language of the original NSA, FBI, and CIA report is intriguingly guarded. It alludes to a campaign that “aspired” to help the Trump campaign to victory.¹⁶ That language brings to mind Robert Browning’s famous line about the difference between a man’s reach and his grasp. Whatever hope Vladimir Putin or any oligarch may have entertained, the Russians had no special insight not reflected in American polls or betting markets (which are now widely accepted as good guideposts to conventional wisdom about election probabilities).¹⁷ Trump’s win came as a world-wide shock; on Election Day, his own polls showed him a likely loser, as did betting markets (Green 2017). Like everywhere else, television networks in Russia had been preparing audiences for a Clinton victory.¹⁸ Whatever Flynn, Jared Kushner, or anyone else said to Russian officials before or after

Brexit Robbery: How Our Democracy Was Hijacked. *Guardian*, May 7, 2017, <https://www.theguardian.com/technology/2017/may/07/the-great-british-brexit-robbery-hijacked-democracy>.

¹⁵See, e.g., De Ploeg, C. K. 2017. *Ukraine in the Crossfire*, Atlanta, Clarity Press.

¹⁶Intelligence. Office of the Director of National Intelligence. 2017. *Assessing Russian Activities and Intentions in Recent US Elections. Intelligence Community Assessment*. Washington, DC: Office of the Director of National Intelligence.

¹⁷The literature is now very large, with some pollsters continuing to maintain that polls remain slightly superior. See, e.g., Rhode, P. W. & Strumpf, K. 2008. Historical Political Futures Markets: An International Perspective. Cambridge: National Bureau of Economic Research. Working Paper 14377; Rhode, P. W. & Strumpf, K. 2004. Historical Presidential Betting Markets. *Journal of Economic Perspectives*, 18, 127–142; Rhode, P. W. & Strumpf, K. 2007. Manipulating Political Stock Markets: A Field Experiment and a Century of Observational Data. Available on the web: <http://www.unc.edu/~cigar/papers/ManipNBER.pdf>. Of course, the outstanding feature of the last several years has been the degree to which both polls and betting markets got things wrong, which does not negate the point about private information here.

¹⁸This point seems to be lost in the discussion in the United States; it is not omitted in Europe. See the piece by a strong critic of the current Russian regime in *Die Zeit*: Kowaljow, A. 2017. So Schokiert von Trump Wie Alle Anderen. *Die Zeit*, January 20, 2017, <http://www.zeit.de/politik/ausland/2017-01/russland-donald-trump-wahlsieg-ueberraschung-manipulation-wladimir-putin>.

the election, any outside power meddling in the election could at best only have been picking up an option on defeating Clinton that was monumentally out of the money.

Throughout the campaign, Trump consistently trailed Hillary Clinton in the polls, usually by substantial margins. In Paul Manafort's brief stint as Trump's campaign manager, save for the usual momentary bounce after the Republican Convention, the campaign's fortunes went from bad to worse, admittedly often for reasons that could hardly be laid at Manafort's door. When Steve Bannon, Kellyanne Conway, and the bloc of celebrated far right investors we discuss below jumped into salvage things in mid-August, 2016, the campaign looked doomed. The most likely outcome any outside force could reasonably expect at that time was to embarrass (and seriously rile up) the prohibitive favorite, Hillary Clinton.

The dueling narratives about Putin and Comey, however, require some comments. First of all, they do not cohere very well. Indeed, they come close to contradicting each other. There is plenty of material on the record, for example, to show that Comey knew of the misgivings of the other intelligence agencies when he dropped his October 28th bombshell. But the Director of the FBI was certainly not in league with Vladimir Putin. We look forward to the investigating committees' explanations of why he breached the long-standing protocol that the FBI did not comment on investigations as elections approach, while declining to publicize the developing investigation into ties between the Trump campaign and Russia. We are equally curious about the many reports of dissension within the FBI and agents' complaints to senior Republican politicians advising Trump. These are especially troubling given John Podesta's public suggestion that elements within the Bureau may have hoped to elect Trump and Rudolph Giuliani's suggestive remarks on several occasions.¹⁹ The inquiry also needs to consider the broader process of politicization at work within the US intelligence community, since—most unusually—former agency heads issued clashing public endorsements of the major party candidates.

We think, however, that the evidence that either Comey or the Russians (or both) clearly cost Clinton the election is less clear-cut than often asserted. Moreover, no matter how one assesses these possibilities, focusing excessively on them misses the most important questions about the election.

¹⁹Quigley, A., 2017. Podesta: 'Forces Within the FBI' May Have Cost Clinton the Election, February 21, 2017; Clinton, H. 2017. *What Happened*, New York, Simon & Schuster.

All versions of the Russian story, for example, seem inconclusive, though one—the claims about Internet trolling—is extremely difficult to assess, since virtually all data have been withheld from the public and leaked selectively by obviously interested parties. Let us set aside all arguments about the hackings themselves and focus first on the effects of the major email leaks. In March, Wikileaks had put online a searchable file of Hillary Clinton's emails from her private email server while serving as Secretary of State. Those had been obtained via Freedom of Information requests. Later, Julian Assange had trumpeted a forthcoming series of revelations regarding Clinton. Stories had also appeared about Russian efforts to penetrate Democratic National Committee emails. Some emails leaked into the press in mid-June; a source claiming to be "Guccifer 2.0" claimed credit, though another mysterious website, DC Leaks, also began posting documents.²⁰ But the main drops came a month later. WikiLeaks began unveiling DNC emails in large numbers on July 22nd, just after the Republican Convention and immediately ahead of the Democratic conclave. Trump's modest postconvention bounce quickly melted away and Clinton kept going up in the polls for weeks. Her ascent was so marked that many observers, including, eventually, Donald Trump, concluded that unless his campaign drastically changed course, the election was all but over. That her ascension may have owed more to Trump's own bizarre campaign tactics than anything she did is irrelevant. The point is, she rose. By the time October rolled around, the earlier wave of emails was very old news for most voters. They cannot have turned the tide in favor of Trump.

By contrast, the release of the bulk of the Podesta emails at least comes closer to the moment Clinton flamed out. They were let go on a rolling basis starting on October 7th. But several major stumbling blocks stand in the way of the notion that they played a major role in turning the election around.

Older voting research typically argued that most voters making up their minds at the last minute came from the ranks of those paying the least attention to news and campaigns and with little interest in politics. This view is now increasingly contested, but more late deciders than not appear to resemble the older stereotype (Brox and Giammo 2009). This makes strong claims somewhat problematic right off the bat. There is a

²⁰The literature here is very large, but see on DC Leaks, e.g., Uchill, J. 2016. Report: Russia Tried to Start Own Wikileaks. *The Hill*, August 12, 2016. DC Leaks published some material from various Republican sources and also treated many topics that clearly had no connection with the election. Its relation to Guccifer 2.0 has been widely debated.

real question about the sheer news value the story had for most Americans. For sure, within the Beltway and the Clinton campaign, the messages and doings of John Podesta and his lobbyist brother, along with the unvarnished opinions of Clinton's campaign managers about their candidate, ranked as a towering story. But outside of Washington, DC, it is not obvious that these details engrossed many voters, particularly in the battleground states.

Possibly any controversy that mentioned emails made problems for Clinton, but the point about attention is still material. The day the story broke, the competition for attention was ferocious: The infamous audio hit the airwaves in which Trump boasted about vulgar tactics he used to approach some women who interested him. The firestorm that triggered went on for days; indeed, in some sense, it has not died down to this day. We think it is likely that Trump's remarks on that subject intrigued far more voters than either the emails or a fresh claim about the Kremlin favoring Trump that also cracked the news that day. Most voters probably had never heard of either Podesta brother and likely cannot recognize them even today.

This claim is testable, albeit quite imperfectly, along with the closely related contention of some commentators that the destructive force of the stories derives from their cumulative effects over the month. Google Trends allows one to compare the relative volume of searches on topics by state and time. Tests would be sharper with access to absolute measures of interest rather than proportional scales and if one could easily separate out searches on Clinton from searches on her emails. But even the relative data indicate raise doubts. Searches on the "Podesta emails" and a few closely related search terms certainly do increase across the nation when the story breaks. In the United States as a whole, there is a spike, followed by a steep and rapid decay. But the spike is hardly uniform. By far, the largest happens—surprise—in the District of Columbia. Interest elsewhere is more modest, even in neighboring Virginia, though it ran higher there than in many other states. In the three non-southern consensus battleground states of Michigan, Wisconsin, and Pennsylvania, where Trump eked out crucial wins, it is substantially less: Relative scores are markedly lower, with interest in Wisconsin particularly anemic (41 against the Washington, DC top of 100), which is hard to square with claims that some emails had exceptionally powerful effects there.²¹ Interest in Florida and North Carolina, two other

²¹Allen, J. & Parnes, A. 2017. *Shattered—Inside Hillary Clinton's Doomed Campaign*, New York, Crown. The claim relates to comments about Catholics by two Catholics in the Clinton campaign. We are skeptical; if Clinton had trouble with Catholics, her campaign was its own worst enemy. When she refused an invitation to speak at Notre Dame University, the campaign explained that "white Catholics

states that the Trump campaign also regarded as battleground states at least after mid-August (see below) was also modest and particularly anemic in areas in both that in the end broke relatively heavily for Trump. That Hillary Clinton's lead in the national polls was higher nine days after the Podesta emails story broke does not surprise us and confirms our misgivings.

In the final days of the campaign, Trump did interject more references to the emails into his speeches. Interest revived modestly (in tandem, Google Trends suggests, with searches on Trump and women, which we believe likely dominated again). The flurry rises to about half the level of the earlier peaks—but the pattern of relatively lower interest in most battleground states persists, though the complexities of distinguishing between general searches on Clinton, on her emails, and on Podesta's make drawing firm conclusions impossible. By then, as will become clearer in a minute, many other things were happening that seem far more likely to impress large numbers of voters.

The assertions about Russian Internet trolling and bots (trolls are alive; the bots are automatized) are harder to evaluate. They have never really been systematically detailed. In the strongest version, the Russians assisted the admittedly well-organized and highly professional Trump Internet campaign (or, in some tellings, the Republican National Committee) by flooding battleground states with fake news and messages relayed via Internet "bots"—Internet sites that automatically amplify by bouncing campaign messages, even though they may not even be located in the United States. Depending on who's talking, the aim was to identify likely Trump voters or discourage turnout on the Democratic side by means of negative messages. Less extreme accounts simply allege unspecified Russian Internet support.²²

were not the audience she needed to spend time reaching out to"; Chozick, A. 2016. Hillary Clinton's Expectations, and Her Ultimate Campaign Missteps. *New York Times*, November 9, 2016.

In her book, Clinton cites Appleton, Wisconsin as a place where searches were especially high. This is actually an area that has been badly hurt by the erosion of the US paper industry; see Schwartz, N. 2017. Trade Worries Led Wisconsin Mill Town to Trump. It's Still Uneasy. *Ibid.*, November 24, 2017. We examined Google Trends for "Podesta Emails" and "Podesta Emails Wikileaks" from April 15, 2016 to December 31; Wisconsin's score was a very low 41, where 100 registered highest. We could not examine individual towns, but the site indicates the highest levels of interest in the state came in the areas around Madison and Milwaukee. Compare Clinton, H. 2017. *What Happened*, New York, Simon & Schuster. It is only fair to note that slight differences in timing or exact search terms (whether one adds Wikileaks, for example) can affect results, though not substantially, in our experience.

²²See for the strong claims, e.g., Borger, J. 2017. Investigators Explore if Russian Colluded with Pro-Trump Sites During Election. *Guardian*, July 5, 2017; Clinton, H. 2017. *What Happened*, New York, Simon & Schuster.

We will return to this topic later in the paper, but a brief discussion can clarify issues that could otherwise cause trouble. Firstly, we concur that Russian capabilities in so-called “organic” Internet messaging are well developed. It is also clear that the US and Russian intelligence services have been dueling for a long time, so that it would be surprising if Russian agencies or their cutouts working in this area simply sat out the US election.²³

But the central point is understanding how Trump could reach so far into traditional Democratic territory. And here we think the decisive factor is that the real masters of these black arts are American or Anglo-American firms. These compete directly with Silicon Valley and leading advertising firms for programmers and personnel. They rely almost entirely on data purchased from Google, Facebook, or other suppliers, not Russia. American regulators do next to nothing to protect the privacy of voters and citizens, and, as we have shown in several studies, leading telecom firms are major political actors and giant political contributors (Ferguson et al. 2013, 2017). As a result, data on the habits and preferences of individual Internet users are commercially available in astounding detail and quantities for relatively modest prices—even details of individual credit card purchases.

The American giants for sure harbor abundant data on the constellation of bots, I.P. addresses, and messages that streamed to the electorate. But they have been very coy about releasing that data or making it available to independent researchers. It now seems reasonably clear that Facebook recognized that something unusual might be afoot in June of 2016 and, in contrast to the Democratic National Committee, went immediately to the FBI with the news.²⁴ The company’s subsequent public disclosures have clearly been grudging and piecemeal, with few details offered, though we now know that prominent Democrats repeatedly implored the firm to investigate and stop dismissing notions that nothing significant could have occurred (Entous et al. 2017b). The firm left it to other researchers to point out that the total “reach” of any effort undertaken by Russian actors should not be measured by the number of times Americans looked at the ads Facebook finally turned over to Congressional committees. Their sites also posted content, which users could share with their friends and acquaintances.

²³We are grateful to Roger Trilling for making this point to us. For an example, see Lubold, G. & Harris, S. 2017. Russian Hackers Stole NSA Data On U.S. Cyber Defense. *Wall Street Journal*, October 5, 2017.

²⁴An incisive discussion is Wheeler, M. 2017a. Facebook Anonymously Admits It Id’d Guccifer 2.0 in Real Time. *The Empty Wheel*, September 24, 2017.

Testimony by tech company executives at a hearing before the Senate Intelligence Committee suggested that as many as 126 million Americans might have come into web contact with various ads on Facebook while another 20 million people may have been reached via Instagram.²⁵ Another study that examined only a sliver of such sites suggested that literally millions of pages of content might in fact have been shared by users (Albright 2017a). These numbers, however, need to be put in context: They represent a tiny fraction of the “33 trillion posts Americans saw in their Facebook news feeds between 2015 and 2017...Facebook reported that a quarter of the ads were never seen by anyone. And—with the average Facebook user sifting through 220 news-feed posts a day—many of the rest were simply glanced at, scrolled past and forgotten” (Ruffini 2017).

In the absence of data transparency, we are reserved about all claims by Facebook, Twitter, Google, or anyone else about what ads they did or did not sell or the uses of the sites; we have trouble understanding why several Congressional committees were so slow to require full public disclosure of exact information, especially once the companies admitted that the ads already ran in public. For the same reason, we are cautious about assertions by Trump campaign workers that they did not find Twitter very useful, though that assertion is potentially very telling, since so many more bots are keyed to Twitter, rather than Facebook (LoBianco 2017).

We take much more seriously the findings of empirical studies of overall election communication patterns by independent researchers who gathered their own data. Jonathan Albright has attempted to map the “ecology” of both left and right networks in several recent studies. His work emphasizes the unusually dense, ramified character of the right-wing messaging networks that developed over the last few years: “to put it bluntly, ‘right-wing’ news is everywhere: Twitter accounts, Facebook pages, small issue-based websites, large news websites, Wordpress blogs, Google Plus (?), Pinterest pages, Reddit threads, etc.” (Albright 2016).

A Harvard study of the *Internet* in the 2016 presidential election makes a similar point: “Our clearest and most significant observation is that the American political system has seen not a symmetrical polarization of the two

²⁵See the discussion in Timberg, C. 2017. Russian Propaganda May Have Been Shared Hundreds of Millions of Times New Research Says. *Washington Post*, October 5, 2017. The study, by Jonathan Albright, posted on Tableau Public, is here: <https://public.tableau.com/profile/d1gi#!/vizhome/FB4/TotalReachbyPage>. On the question of readers effects, see the discussion below of Allcott, H. & Gentzkow, M. 2017. Social Media and Fake News in the 2016 Election. *Journal of Economic Perspectives*, 31, 211–236. For the Congressional testimony, see especially Madrigal, A. 2017. 15 Things We Learned from the Tech Giants at the Senate Hearings. *The Atlantic*, November 2, 2017.

sides of the political map, but rather the emergence of a discrete and relatively insular right-wing media ecosystem whose shape and communications practices differ sharply from the rest of the media ecosystem, ranging from the center-right to the left. Right-wing media were centered on Breitbart and Fox News, and they presented partisan-disciplined messaging, which was not the case for the traditional professional media that were the center of attention across the rest of the media sphere” (Faris et al. 2017).

Such studies suggest that stories hyping “the sophistication of an influence campaign slickly crafted to mimic and infiltrate U.S. political discourse while also seeking to heighten tensions between groups already wary of one another” by the Russians miss the mark (Entous et al. 2017c). By 2016, the Republican right had developed Internet outreach and political advertising into a fine art and on a massive scale quite on its own (Faris et al. 2017; Albright 2016). Large numbers of conservative websites, including many that tolerated or actively encouraged white supremacy and contempt for immigrants, African-Americans, Hispanics, Jews, or the aspirations of women had been hard at work for years stoking up “tensions between groups already wary of one another.”²⁶ Breitbart and other organizations were in fact going global, opening offices abroad, and establishing contacts with like-minded groups elsewhere. Whatever the Russians were up to, they could hardly hope to add much value to the vast Made in America bombardment already underway. Nobody sows chaos like Breitbart or the Drudge Report, as the New York Times documented in one Idaho town (Dickerson 2017).

Some firms could add value though, but every one of them was as American as apple pie. With no publicity, the tech giants—Google, Facebook, Twitter—were all trying to muscle in on the richly rewarding arena of campaign consulting. Their aim was not to “weaponize” Internet ads, in the ominous-sounding term that analysts of Russian Internet now throw around—their interest lay in *monetizing* them, just as they have restlessly tried to do in everything they engage in. Two scholars who analyzed these efforts describe how the companies went about this: “For example, these firms offer an extensive array of campaign services—including advising

²⁶Note that Breitbart is strongly pro-Israel, as the site explained repeatedly in the wake of Charlottesville. Steve Bannon’s own movies are also quite sympathetic to African-American problems. But these facts hardly exhaust Breitbart or Bannon’s relationships to the substantial segment of the far right that is openly anti-Semitic and white supremacist. See Bernstein, J. 2017. Alt-White: How the Breitbart Machine Laundered Racist Hate. *BuzzFeed*, October 5, 2017. Cf. also the discussion in Green, J. 2017. *Devil’s Bargain—Steve Bannon, Donald Trump, and the Storming of the Presidency*, New York, Penguin.

campaigns on everything from the content of ads and other communications to the specific groups they might benefit most from targeting, and how best to reach them...all three of these firms have dedicated partisan teams that work with campaigns. Staffers work with campaigns to guide advertising buys, boost engagement around online ads, and shepherd the use of their platforms” (Kreiss and McGregor 2017).

The researchers’ assessment that such services “were far more consequential in terms of the election outcome,” with a “far greater reach than Russian bots and fake news sites” strikes us as spot on (Kreiss and McGregor 2017). As Albright cautioned in an earlier study, “before we keep pointing fingers at specific countries and tweeting about companies ‘hacking the election,’ as well as to solve the scourge of ‘fake news,’ it might be good to look *inward*. By this, I mean we should start the quest for transparency in politics with a few firms based in New York City and Silicon Valley.”²⁷ We are confident that it will eventually become clear that Russian efforts were distributed over many platforms besides Facebook, making total expenditures appreciably higher. But they will still pale beside those of the US Alt Right networks and the Trump campaign’s own investments, which were at once gigantic and carefully targeted (Gold and Dwoskin 2017).

The notion that Republican vote suppression campaigns needed Russian assistance is particularly silly. It is almost laughable given the barely disguised pronouncements of so many Republican election officials in Michigan, Pennsylvania, Wisconsin, North Carolina, and other states and—until efforts to smother turnout became controversial—the unguarded comments of Trump’s own campaign (Wines 2016; Bump 2017; Barajas 2016).²⁸ Suggestions that Internet campaigning was responsible for Clinton’s poor showing in the crucial Detroit area are particularly difficult to accept, since about 40% of the city’s population has no *Internet* access, because they are too poor to interest the local telecom oligopoly (Rogers 2017).

Not surprisingly, the evidence revealed thus far does not support strong claims about the likely success of Russian efforts, though of course the public outrage at outside meddling is easy to understand. The speculative character of many accounts even in the mainstream media is obvious. Several,

²⁷Albright, J. 2017b. Who Hacked the Election? Ad Tech Did. Through “Fake News,” Identity Resolution, and Hyper-Personalization. *Medium*, July 31, 2017.

²⁸See also Hajnal, Z., Lajevardi, N. & Nielson, L. 2017. Voter Identification Laws and the Suppression of Minority Votes. *Journal of Politics*, 79. Bentele, K. & O’Brien, E. 2013. Jim Crow 2.0? Why States Consider and Adopt Restrictive Voter Access Policies. *Perspectives on Politics*, 11, 1088–1116.

such as a widely circulated declaration by the Department of Homeland Security that 21 state election systems had been hacked during the election, have collapsed within days of being put forward when state electoral officials strongly disputed them (Greenwald 2017), though some mainstream press accounts continue to repeat them.²⁹ Other tales about Macedonian troll factories churning out stories at the instigation of the Kremlin are clearly exaggerated. When reporters from *Wired* and CNN showed up to check, the major inspiration turned out to be Adam Smith and the spirit of free enterprise: Out of work locals had discovered that they could monetize clicks on advertising sites. More than a few had tried out several candidates before discovering that Trump ads generated more clicks than anyone else's.³⁰

The paid ads Facebook has disclosed were hardly on the scale one would expect for an all-out effort (\$100,000), though (as noted above) their reach can be vastly extended by individual sharing and we expect more action on other platforms will turn up. A more serious problem for strong claims is timing, since the buys were scattered through 2015, 2016, and 2017, and across states, and appear to have focused often on states that had no chance of ever tipping in favor of Clinton. Subsequent revelations by Facebook underscore the importance of this issue, since more than half of its ads are admitted to have run after the election (Isaac and Shane 2017). The Senate Intelligence Committee hearings produced truly microscopic numbers for putative Russian efforts directed at the key battleground states of Wisconsin, Pennsylvania, and Michigan: For Wisconsin, \$1979, with all but \$54 dollars of this spent during the primary. Russian Facebook spending in the other two was even more minuscule: Pennsylvania absorbed \$823 and Michigan \$300 (Madrigal 2017; Ruffini 2017). Unless Facebook discloses some vast new trove, the conclusion has to be that this was no full court press.

The few individual cases that have so far become public only increase one's skepticism. One episode in Texas ballyhooed as a direct effort to affect the election proves on examination to be flimsy indeed. This involved a

²⁹We do not mean to suggest that some state and local authorities were not hacked; that seems plain, but situations like those Greenwald details in his account do not help by exaggeration. Claims that sites were hacked but no votes or data on potential voters were affected also raise additional questions. State and federal authorities should be compelled to coordinate their claims and resolve differences for basic credibility.

³⁰Claims that Macedonians were heavily engaged by Russian agents to work on behalf of Trump, for example, look grossly exaggerated. In a city acknowledged to be a center of Internet trolling, a reporter for *Wired* found free enterprise—money for clicks on sites—driving the process. Subramanian, S. 2017. Fake: Inside the Macedonian Fake News Complex. *Wired*, February 15, 2017. So did CNN Money. Money, C. 2017. The Fake News Machine: Inside A Town Gearing Up for 2020.

series of rallies called in late October and early November 2016 in favor of Texas Independence and against immigrants and Hillary Clinton (Bertrand 2017). But the idea that such a campaign could help move a pro-Clinton state into Trump's column can only be described as harebrained: Texas was already solidly for Trump. The project's influence can be easily tested with Google Trends (and the election results in Texas); it made no discernible impact at all.³¹ Another widely touted case in Florida fails the same tests, though there at least a battleground state was involved (Collins et al. 2017).

These are all admittedly individual cases. More systematic assessments are hobbled by the slowness of American authorities and the Silicon Valley giants to release much data and by the entrance into the debate of various groups with obvious foreign policy axes to grind (Greenwald 2017). More than a few studies have given up sifting through the welter of Internet news and commentary in favor of resting identifications of sites as "Russian" or "Russian influenced" on the basis of views discussed that the analysts find politically distasteful. This leads to inflated measures of Russian influence that count websites that are plainly not Russian inspired at all, but simply nonmainstream or even, sometimes, it appears, simply critical of Likud Party interpretations of Israeli interests.

One careful and comprehensive assessment of Internet messaging in the final ten days of the campaign has appeared, however, and its findings are eye-opening. The researchers attempted to measure the targeting of individual states by "tweets with junk news, links to unverified WikiLeaks pages, or links to Russian content (such as Russia Today or Sputnik)." They suggest that "when links to Russian content and unverified WikiLeaks stories are added to the volume of junk news, fully 32% of all the successfully catalogued political content was polarizing, conspiracy driven, and of an untrustworthy provenance." Then they deliver what they think is their punch line: "Average levels of misinformation were higher in swing states than in uncontested states, even when weighted for the relative size of the user population in each state" (Howard et al. 2017).

This study is instructive on several accounts. As the authors recognize, its measure of fake news clearly embraces far more than Russian sourced material; in all likelihood, most of what it counts is coming from the far right, mixed perhaps with some content originating from far left sources with no

³¹Note that there is no claim that all that attempts at rallies do is stimulate searches; we simply accept the now common research idea that many Internet operations can be at least imperfectly checked by studying trends in search behavior.

links to Russia. But what stands out is the quantitative evidence of how poorly all this content was actually targeted on swing states. The test the study performs is extremely weak: A comparison of the numbers of swing states above and below the US average. It finds somewhat more swing states rank above average in fake news.

A stronger test supports a strikingly different conclusion: As the figures quoted above in the Senate Intelligence Committee hearings suggest, in fact any targeting was very poorly executed. Swing states were not difficult to identify: Many polls and news stories, not to mention the presidential campaigns themselves, talked of little else. If we lay aside quibbles about how many states really qualified as “swing” states and simply accept the study’s measures, then a much more revealing test is easy to apply. Were targeting perfect, all the states identified as swing should stand at the very top of the fake news ranking. To the extent non-swing states crowd those states out, would-be targeters have missed their mark. In fact, the essay’s Table 2 testifies to a gang that can’t shoot straight: The state with by far the heaviest dose of fake news was West Virginia, which was a lock for Trump. Most other states in the top rankings are also non-swing. By contrast, Wisconsin and other crucial states show near the bottom. The conclusion has to be that targeting was very poor; if you treated the question as a special case of an exam in American studies, then only 7 of the 16 swing states were correctly identified—a failing grade by most standards.

So much for Twitter. No comparably broad survey of Facebook has so far been published. What has been selectively leaked about isolated swing states on Facebook raises suspicions of cherry picking; serious targeting using Facebook, like Twitter, could not focus simply on one or two states. Doubts are increased by a carefully documented study of a sliver of the known sites. The author rightfully draws attention to the defects of simply using views of the ads, and his analysis of the sharing of various page contents is illuminating. But his time graph also shows a very large part of the effort came after the election. As he notes, the pattern suggests that many of the pre-election ads may indeed have attempted to influence voters, but the broader record he presents is consonant with the indifferent targeting revealed in the Twitter study (Albright 2017a; Timberg 2017). Efforts to distort elections have to precede or coincide with Election Day; afterward, the horse has left the barn.

Strong claims about the potency of relatively small-scale and poorly targeted Internet appeals and propaganda also fit badly with the known facts of how political advertising reaches voters. In 2016 television, not the Internet, was still the main source of campaign news for Americans.

Several studies have attempted to compare the effectiveness of television ads vs. Internet advertising; in all of these, the amount of repetition necessary on average to change minds seems very high; the fact that as many as ten million Americans might have seen one or another ad sounds impressive but it is anything but conclusive (Allcott and Gentzkow 2017; Isaac and Shane 2017). Even without making strong assumptions about rates of repetition, on the evidence thus far it seems likely that the number of minds changed or immobilized by any Russian trolls could not have been large by comparison with all the other sources bombarding voters.

The Internet trails well behind TV, not just in use, but in effective influence. Surveys suggest that only 4% of American adults who use the web trust the information they get from social media “a lot”; a mere 30% trust it even “some” (Mitchell et al. 2016). It is worth emphasizing that no matter how often one hears that the Internet has divided Americans into single-minded camps walled off from other points of view, much empirical evidence points in the opposite direction. The echo chamber claim overlooks the range and number of alternative views that retweets and messages from friends and acquaintances expose Americans to. In addition, the biggest increases in political polarization over the last decades occurred in the segments of the electorate that are least connected to the Internet.³²

One can always riposte that in an election this close, any feather tossed on the scales could prove decisive. That response makes more mathematical than practical sense, however. In the campaign’s final days, feathers were flying everywhere—and virtually none were imported.

3 The Comey Intervention

The initial evidence, for example, that Comey tipped the scales looked very compelling and continues to be widely repeated: A striking graph seemed to show Clinton’s support collapsing immediately after his announcement. Some studies of Trump and Clinton’s campaign echo this judgment. Eventually, however, it transpired that Clinton’s polls started falling in surveys taken before but mostly not released until after the announcement (Cohn 2016). Skeptics also observed that a highly publicized October 24th notice of sweeping price hikes for health-care insurance under President

³²Boxell, L., Gentzkow, M. & Schapiro, J. M. 2017. Is the Internet Causing Political Polarization? Evidence From Demographics.

Obama's Affordable Care Act appeared to fit the data even better—and that this, too, was a development that Trump seized upon in his campaigning. Curiously, postcampaign studies devote virtually no attention to this health-care setback, though Bill Clinton himself had gone off script earlier out of anxiety about the issue's potential importance.³³

Since then much of the argument has been conducted in terms of how best to aggregate polls that did indeed appear to be turning before Comey spoke out. The problem is easy to state but hard to assess concretely. Evaluating individual polls is difficult and time-consuming (and often impossible, because their sponsors often reveal so little). Many analysts therefore simply average them all. But if you insist on aggregating polls on a rolling basis over several days, recognizing real turning points inevitably is very difficult. After their claims were challenged, some analysts who originally blamed Comey agreed that in principle some adjustments were necessary. Then they proposed “corrections” that reinstated, almost miraculously, their original conclusions. By contrast, a committee of the American Association of Public Opinion Research reached a negative verdict: It concluded that Comey's announcement “had an immediate, negative impact for Clinton on the order of 2 percentage points. The apparent impact did not last, as support for Clinton tended to tick up in the days just prior to the election” (Ad Hoc Committee 2017).

The argument rages still. Our sympathies are firmly with the skeptics. Though no single indicator is likely to resolve such issues, it is striking that the price of winner-take-all contracts on a Trump victory doubled in the days ahead of Comey's announcement—a strong indicator that somebody's sentiment was changing.³⁴ But we also believe that discussions of the election's final days have ignored a raft of other potentially important complicating factors.

Save for Clinton's own memoir and a handful of other discussions, most accounts blaming Comey are importantly skewed: Implicitly they assume the mass media were passive relay devices. That hardly does justice to the quantitative evidence of the media reaction: Empirical studies suggest that

³³For the announcement of the increases, see <http://money.cnn.com/2016/10/24/news/economy/obamacare-premiums/index.html>; Wheeler, M. 2016. The Obamacare Not Comey Effect. *The Empty Wheel*, December 11, 2016. This has a convenient figure with some dates, though the shape of the figure is precisely what the arguments about averaging are about. For Bill Clinton, Allen, J. & Parnes, A. 2017. *Shattered—Inside Hillary Clinton's Doomed Campaign*, New York, Crown.

³⁴There is of course the possibility that something leaked; it could be either polls, which in our experience leak like sieves and definitely move markets; or someone with knowledge of Comey's deliberations, which would underscore Podesta's point cited earlier.

the media piled on when the news came out. Stories about Clinton's credibility and character crowded out all other themes related to her candidacy for more than a week (Patterson 2016a).

This should put a different face on matters: Mass media hype of a dubious pronouncement by an FBI Director raises questions of another order. If the major media manufactured a mountain out of a hill, we would like to know why. A key question should be the balance struck between questions about each of the protagonists. In theory, the media could have lavished more attention on Comey's departure from FBI norms than old questions about Clinton. The stories bubbling up about discord within the FBI could have received more attention, instead of being virtually buried. These would inevitably have raised questions about partisan intent, likely weakening whatever influence the episode had.

4 Beyond the Russians and Comey

An obvious background factor—that the Clinton campaign emphasized candidate and personal issues and avoided policy discussions to a degree without precedent in any previous election for which measurements exist—adds further complexity (Fowler et al. 2016). It pushes the inquiry back one critical stage: Why did the campaign say so little about policy, when articulated positions on appealing issues could have provided a base to fall back upon in adversity? We believe this question has a clear answer discussed below, and it has nothing to do with the FBI.

But the lame Clinton campaign and even its now famous refusals to campaign in Wisconsin or buy earlier advertising in Michigan are not the only factors that likely helped Trump burst through the sound barrier at the end. The poll analysts who lovingly chronicle every twist and turn in surveys have mostly been strangely uninterested in exploring the extent to which vote suppression figured in the battleground states and some others where outcomes ran close, notably North Carolina. The omission is particularly odd given, as mentioned above, the disarming candor of key Republican election officials in so many states.

Analysts have also closed their eyes to another factor that surely had major effects on Democratic prospects in all three key non-southern battleground states that Clinton lost by a hairsbreadth—Wisconsin, Michigan, and Pennsylvania. Each was the site of sweeping and successful anti-union drives led by employers and Republican politicians. As Table 1 indicates all three rank at or near the very top of states showing declines in unionization rates

Table 1 Union membership decline 2008–2016: Three non-southern battleground states that Clinton narrowly lost all rank at or near top—States in italics (Source Calculated from data in Hirsch and Macpherson 2017)

<i>Wisconsin</i>	6.9
Alaska	5.2
Hawaii	4.7
Nevada	4.6
<i>Michigan</i>	4.4
Arizona	4.3
Massachusetts	3.7
<i>Pennsylvania</i>	3.4

In order from top; national average decline: 1.70

between 2008 and 2016—cliff-like drops that occurred while a Democratic President sat in the White House, controlling both the Labor and the Justice Departments. We do not find it mysterious that blue-collar workers in those states might be a tad less enthusiastic about what many described as an Obama “third term” or perhaps even wonder what the Clinton Foundation was doing as the only institutions that protected their livelihood were destroyed or vastly weakened.

Pundits and scholars alike have also closed their eyes to even the grossest facts about political money in the final days. Many campaign accounts implicitly repeat Trump’s own nostrum that he was not dependent on outside money and take it for granted that he was running a lean campaign. We will show below that by October this was campaign hype, pure, and simple.

5 Follow the Money

What happened in the final weeks of the campaign was extraordinary. Firstly, a giant wave of dark money poured into Trump’s own campaign—one that towered over anything in 2016 or even Mitt Romney’s munificently financed 2012 effort—to say nothing of any Russian Facebook experiments. The gushing torrent, along with all the other funds from identifiable donors that flowed in the campaign’s final stages should refocus debates about that period (see Fig. 1). Maybe all that happened is that money talked, not least in the famous last ad invoking Soros, Blankfein, and Yellin apparently focused on the battleground states.

Bolstering suspicions that a wave of last minute money might actually be the most basic explanation for the Clinton collapse is a fact that virtually no

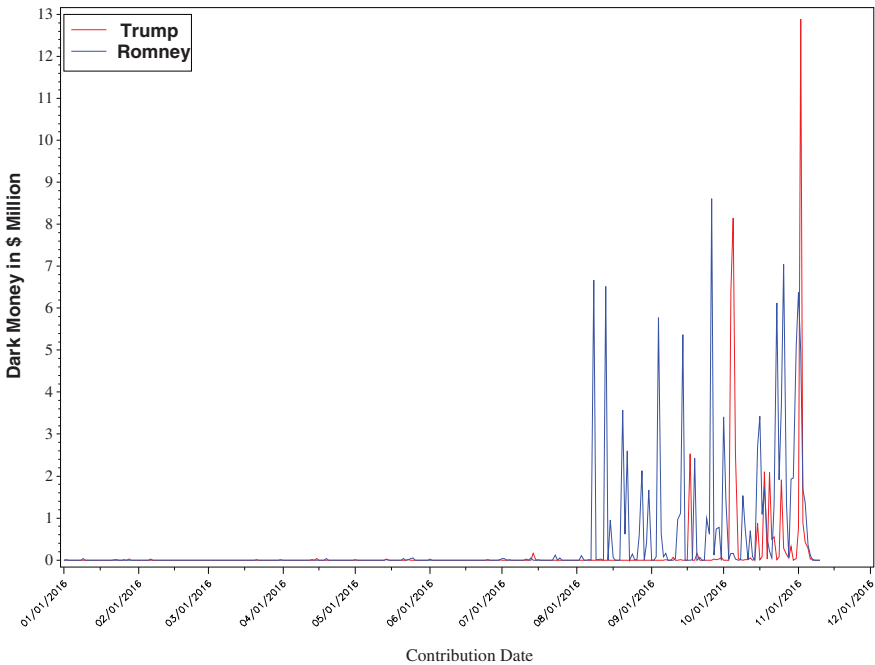


Fig. 1 The last-minute surge of dark money for Trump in 2016 far exceeded that for Romney in 2012 (*Source* Computed by Authors from FEC and IRS data)

analysts have reflected upon: Her late October fall in the polls was not unique. Democratic chances of taking the Senate unraveled virtually in lockstep.

This was no accident, and here one can trace a bright green thread. Earlier in October, when Trump's case still appeared hopeless, Senate Republican Majority Leader Mitch McConnell and his entourage started pitching many famous businessmen and women. Hillary Clinton in the White House, ran their argument, would be awful, but losing control of the Senate would be Armageddon. McConnell, like most politicians, had a history of crying wolf, but by mid-October, polls and betting odds alike suggested that chances of the Republicans losing control of the Senate were excellent (Trojan and Schouten 2016; Blumenthal 2017; Isenstadt 2016).

Nixon's Attorney General, John Mitchell, once famously quoted an old adage that when the going gets tough, the tough get going. In 2016, the tough, or at least the super-affluent, certainly got going. Our data show that yet another gigantic wave of money flowed in from alarmed business interests, including the Kochs and their allies, who were not actively supporting

Trump.³⁵ Officially, the money was for Senate races, but our observation is that late-stage campaigning for downballot offices often spills over on to candidates for the party at large. It is much easier to cooperate with state and national party organizations and push the whole ticket, whatever poses individual Republican Senate candidates were striking. Statistically sorting out the joint impact of these two ocean swells is not possible given existing data, but one fact is very telling. For the first time in the entire history of the United States, the partisan outcome of Senate races coincided perfectly with the results of every state's presidential balloting (Enten 2016).

The dual unraveling of the Democrats is apparent in polls and Iowa market contract prices. Figure 2 graphs the Iowa Electronic Market prices for winner-take-all presidential contracts against the prices of a contract on the combination of a Republican House and a Democratic Senate. Because almost nobody believed the Democrats could win back the House by then, variation in the Congressional contract reflects changes in perceptions of Democratic Senate prospects. The two declines very closely track each other, with the difference that Clinton, who had proportionately more money than many hapless Democratic Senate candidates, was able to scramble back.

The notion that Comey or even the Russians could be responsible for both collapses is outlandish. Something else must in large part have driven both outcomes.³⁶ Parallel waves of money is the obvious explanation and our data show that both occurred precisely in the relevant time period.

³⁵We expect to update our earlier Ferguson, T., Jorgensen, P. & Chen, J. 2016. How Money Drives US Congressional Elections. Institute for New Economic Thinking, Working Paper #48; and will analyze the Congressional wave in detail there.

³⁶Enns, P., Lagodny, J. & Schuldt, J. P. 2017. Understanding the 2016 US Presidential Polls: The Importance of Hidden Trump Supporters. *Statistics, Politics and Policy*, 8, 41–63. They compare Trump's showing in various state polls with surveys of Senate races in the course of building an interesting case for the notion of a submerged pro-Trump vote that polls largely missed. We lack the space to take up their main arguments here and can only state some key points relevant to our own discussion. Firstly, we are not as impressed by the customary arguments in favor of unchanging preferences that motivates their paper. 2016 was so extraordinary an election that we find it hard to believe that substantial numbers of voters were not in fact wavering. We interpret their findings as really about a class of so-called "leaners." If viewed in those terms the role of a wave of political money becomes straightforward, but that is a longer discussion. We would note that the parallel changes in the Senate and Presidential campaigns that we discuss here do not imply that the different campaigns start from the same levels; they simply change in the aggregate. That is our point.

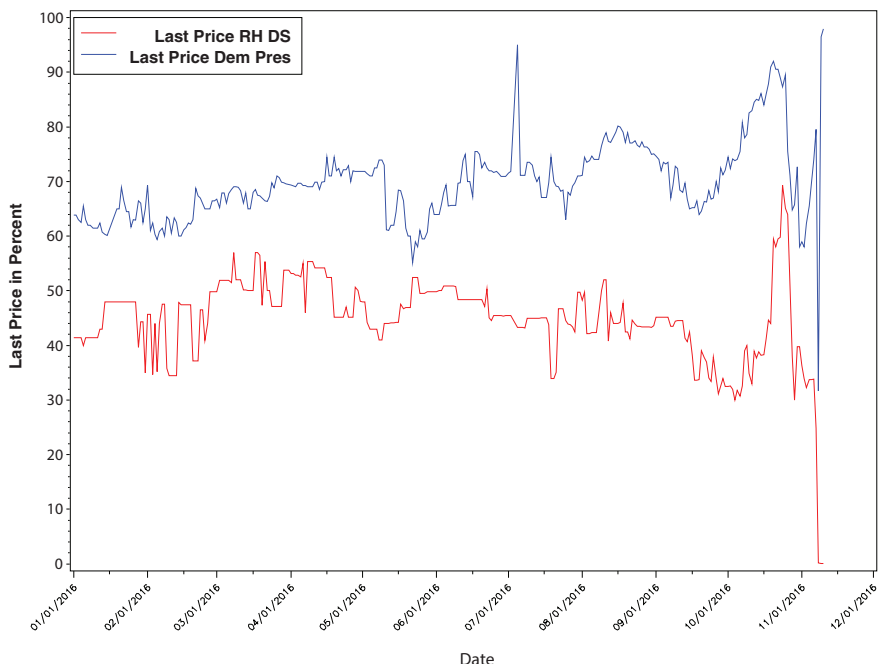


Fig. 2 The simultaneous late October fall of Democratic Senate hopes with Clinton decline (Iowa electronic market prices for Clinton presidency and for Republican House plus Democratic Senate) (Source Iowa market data, <https://tippie.biz.uiowa.edu/iem/>)

6 Posing the Right Questions

In an election as close as that of 2016, one could debate forever how all these factors played out, especially since big, nationally representative voter surveys are likely to mirror only imperfectly the peculiarities of a few battleground states. In the spirit of Sir Peter Medawar's dictum that science involves the art of the soluble, accordingly, we think that a far more fruitful approach is to alter the question.

It is time to focus on the dominating fact that became visible in the 2014 congressional elections: That American politics has strayed into some strange new Twilight Zone—and try to understand how this sovereign fact shaped the shocking outcome of the presidential election.

This task, in our view, requires framing clear answers to three questions. The first is what drove the Republican primaries so badly off script. At the start, for most observers, the dominant narrative was crystal clear: Jeb Bush

would once again summon the legendary Golden Horde that had powered the campaigns of his brother and father and float to victory on a tidal wave of money. The Kochs and other well-heeled interests would promote challengers even further to the right, but in the end the “Kochtopus” would close ranks with the rest of the party after Jeb! won. Champions of the religious right and libertarians would also dip their toes into the water and try to fire up their supporters. They would shake, rattle, and roll and then, as they ran out of money, they would bow out with more or less grace. With surging hopes for a cabinet position or a slot on Fox News they would fall in with the great Republican Crusade against a Second Coming of the Clintons.

Obviously, most of this never happened, though it is interesting to see how some of the also-rans, notably the evangelicals, found paths to endorsing a nominee whose public comments about women suggested he was likely much more comfortable with Mary Magdalen 1.0 than the Virgin.³⁷

The second question concerns the stunning course of the Democratic campaign. This is every bit as rivetingly mysterious as the Trump phenomenon: Anyone who predicted as the campaign got underway that a professed democratic socialist would win more than 13 million votes running against Hillary Clinton, would openly attack Wall Street’s headlock on the Democratic Party on prime time TV, and actually win primaries in big industrial states like Michigan while sweeping through western caucuses, would have been laughed off the stage. The Sanders phenomenon needs a searching examination. We suspect it is every bit as important for the future as the outcome on the Republican side.

Finally comes the most immediate mystery of all: What explains the roller coaster course of the Trump campaign? How the real estate magnate breezed past the rest of the Republican field merits a closer look than it has so far received. Was his early success truly allowed to his celebrity candidacy or were other factors important? Did he really pay for the whole campaign himself, as he kept saying? And did he run on a shoestring? Are the oft-repeated claims that he enjoyed little support in Silicon Valley aside from Peter Thiel really true?

Once he won the nomination, the main questions are two: Firstly, how much of the party consolidated around him and how did that affect the

³⁷During the campaign, Trump reportedly committed to repealing the 1954 Johnson Amendment, which bans churches and some other nonprofits from engaging in political activity Vogel, K. & Goodstein, L. 2017. In Tax Debate, Gift to Religious Right Could Be Bargaining Chip. *New York Times*, November 26, 2017.

financing of the campaign? Was his candidacy still mostly self-financed or did Trump, Inc., begin selling shares? If so, who purchased them? Secondly, how did the Trump campaign climb out of the crater that it had dug itself into by midsummer? As late as August 14, 2016, Trump's chances appeared almost hopeless: You could buy a contract that would pay a hundred dollars in the event he won for twenty-two dollars on the Iowa Trading Markets Exchange.

But then something eerie happened. Conservative billionaire daughter Rebekah Mercer personally buttonholed Trump at a fundraiser. She advised him to stay in the race, but to fire Paul Manafort and turn over direction of the campaign to Steve Bannon and Kellyanne Conway (Green 2017). Trump took her advice, and the rest is history. But what exactly did that dynamic duo do to bring about perhaps the greatest turnabout in American electoral history? If it wasn't just the Russians or Comey, what exactly was the recipe? A data processing miracle conjured up by Cambridge Analytica, the mysterious data firm at least partly owned by the Mercers that worked alongside Giles-Parscale, the Dallas digital outfit that had long worked for Trump?³⁸ Or were there more fundamental flaws in Clinton's campaign that Bannon and Conway's strategy exploited—besides the confusion and restless infighting emphasized in some excellent postelection studies (Allen and Parnes 2017) (Brazile 2017)? Most importantly, did other powerful but less heralded forces work in the background with the new leadership to provide the campaign with the racer's edge? Forces that perhaps still figure importantly in the new administration?

7 The Twilight Zone

All efforts to grapple with these questions quickly run into a striking paradox—one that betrays a revealing clue about the nature of the 2016 shock. In 2014, signs of a dramatic departure from business as usual could be read off voting returns, albeit in a very unconventional way: To perceive them, one had to look past the details of the partisan split and changes in seats to focus on voting turnout in a long-term historical perspective.

³⁸Cadwalladr, C. 2017a. The Great British Brexit Robbery: How Our Democracy Was Hijacked. *Guardian*, May 7, 2017 as well as the literature cited in above. Many of the claims advanced about the firm's methods appear to be overhyped. See also Barajas, M. 2016. "Project Alamo": Lessons From Inside Trump's SA-Based Digital Nerve Center. *San Antonio Current*, October 27, 2017.

2016 is very different. We agree with analysts who suggest that a finely textured analysis of the presidential vote can detect some far-reaching changes in the attitudes of some voters. But these alterations are mostly subtle. No matter how anyone slices and dices the election returns, it would be a stretch to claim that they add up to anything momentous enough to account for the stunning political shifts that are happening right in front of everyone's eyes. Neither turnout nor the partisan division of the vote at any level looks all that different from other recent elections. As several political scientists quickly proclaimed after the dust settled, signs of major change are virtually nonexistent by the standards of election markers that conventional political science relies on. Indeed 2016's alterations in voting behavior are so minute that the pattern is only barely differentiated from 2012. If one considers only aggregate returns, the election that produced Trump and Sanders looks like a "remarkably ordinary election outcome, primarily reflecting partisan patterns familiar from previous election cycles" (Bartels 2016).³⁹

We think this is like trying to make sense of the last days of Pompeii while resolutely ignoring Mt. Vesuvius. So where is the decisive evidence of historic upheaval? This question has a simple answer in our view: Stop focusing simply on voting patterns and analyze the election in terms of the investment approach to political parties that we normally employ.

Essentially a method for investigating how industrial structures and social conflicts figure in political outcomes, this approach developed out of the broader literature on industrial structure fitfully advanced over several generations by such scholars as Gerschenkron, Kehr, Rosenberg, and Kurth.⁴⁰ Its starting point is the acknowledgment that in most modern countries, political action is far more costly in terms of both time and money than classical democratic theories imagined (Ferguson 1995a). As a consequence, popular control of the state depends on the extent to which ordinary citizens can bear those costs. Nothing metaphysical is implied here: To control the state,

³⁹See also Sides, J. 2016. Five Key Lessons From Donald Trump's Surprising Victory. *Washington Post*, November 9, 2017.

⁴⁰Kehr and Rosenberg wrote their classic works mostly in the interwar period. See, e.g., Kehr, E. 2012. *Schlachflottenbau und Parteipolitik 1894–1901*, Paderborn, CT Salzwasser-Verlag GmbH & Company. KG; Kehr, E. 1977. *Economic Interest, Militarism, and Foreign Policy*, Berkeley, University of California Press. Rosenberg, A. 1991. *Geschichte der Weimarer Republik*, Hamburg, Europaische Verlagsanstalt; Rosenberg, A. 1939. *Democracy and Socialism*, New York, Knopf. A generation later, the approach returned, mostly at the hands of authors from the right, rather than the left. See in particular, Gerschenkron, A. 1966. *Bread and Democracy in Germany*, New York, Howard Fertig; Gerschenkron, A. 1962. *Economic Backwardness in Historical Perspective*, Cambridge, Harvard University Press. Among Kurth's works, see especially Kurth, J. 1984. The Political Consequences of the Product Cycle: Industrial History and Political Outcomes. *International Organization*, 33, 1–34.

citizens need to be able to share costs and pool resources easily. In practical terms, this requires functioning organizations—unions, neighborhood organizations, cooperatives, etc.—in civil society that represent them without enormous expenditures of time and money. There is one and only one guarantee of this: Those organizations have to be controlled by and financially dependent on them. If existing parties are not controlled by voters, then they have to undertake the comparatively expensive process of running candidates of their own. To the extent that “secondary” organizations flourish, or the population directly invests its own resources in candidates, popular control of the state and effective mass political movements will flourish (Ferguson 1995a).

Where investment and organization by average citizens is weak, however, power passes by default to major investor groups, which can far more easily bear the costs of contending for control of the state. These normally align in distinctive blocs arising out of historically specific patterns of industry structures (where “industry” embraces finance, mining, agriculture, and services alike). In most modern market-dominated societies (those celebrated recently as enjoying the “end of History”), levels of effective popular organization are generally low, while the costs of political action, in terms of both information and transactional obstacles, are high. The result is that conflicts within the business community normally dominate contests within and between political parties—the exact opposite of what many earlier social theorists expected, who imagined “business” and “labor” confronting each other in separate parties. Few indeed are the labor movements today that can realistically expect to control parties of their own (Ferguson 1995a).

Analyzing elections, accordingly, should begin with at least an implicit evaluation of the state of mass organization. But the next step is a careful assessment of the industrial structure, particularly of large firms, followed by the application of the fundamental principle of the investment theory of partisan competition: Only candidates and positions that can be financed can be presented to voters. As a result, in countries like the United States and, increasingly, Western Europe, political parties are first of all bank accounts. With certain qualifications, one must pay to play. Understanding any given election, therefore, requires a financial X-ray of the power blocs that dominate the major parties, with both inter- and intraindustrial analysis of their constituent elements.

Such analysis normally embraces both institutional and personal factors. It brings into play a much broader “spectrum of political money” than just formal campaign spending (Ferguson 2014a). In the United States and some other developed countries, however, that last category bulks so large that

breaking it down sheds real light on political dynamics. Indeed, the United States may be in a class by itself in this regard.

We are the first to admit that analyzing campaign financing is astonishingly difficult, despite the surface transparency of the records. In federal elections in the United States, two different streams of contributions are reported to two different government agencies—the Federal Election Commission and the Internal Revenue Service. Each of these agencies uses a different reporting system with radically different formats and disclosure deadlines (Ferguson et al. 2013). Almost the only thing the two bureaucracies have in common is their low level of zeal for ensuring that the money they track is reported with all the basic information required by law. That nonchalance and the lack of standardization makes scrutiny of the data absurdly difficult.

Contributors, for example, routinely employ different forms of their names and combinations of initials for different donations. They often list different addresses and—depending on their situations—inconsistently report occupations and employers. Business executives who chair giant corporations, for example, will sometimes cheekily list their occupations as “retired” or assign any of several firms they have relationships with as their employer of record. On occasion, active bankers report working in units long ago gobbled up by some other giant. Corporations employ a raft of similar (mostly legal) dodges, especially with subsidiaries. And that is before one gets to the now famous category of “dark money,” where the true source of the financing is shrouded by streaming the lucre through faux “charities” that are not required to disclose donors.

We have developed complex statistical routines to pierce most of these veils and identify contributors, including assigning them appropriate industry codes. We discuss these methods in more detail in Ferguson et al. (2013) and Ferguson et al. (2016).⁴¹

Proceeding in this way yields many insights that are simply not available if one looks only at voting patterns. The results make it easy to specify precisely what is distinctive about the 2016 election. We can also explain

⁴¹The possible errors and limitations in these codes need to be borne in mind, as outlined in our 2013 article. Though no system is perfect, we believe the big business assignments are of very high quality. In the much larger universe of smaller firms, the data likely become less reliable as firms get smaller and smaller. An offset to that is that truly small firms account generally for very little money.

In the data for 2016, we believe too many smaller firms show in the broad private equity classification; for many purposes they might better be added to the statistics for hedge funds and treated together as a broader “finance” classification. By contrast, the big business data for private equity, which figured importantly in the last stages of the Trump campaign, is of much higher reliability.

very simply what brought about the dramatic changes that we identify and provide real answers to the three questions about the course of the election posed above.

We consider each of these issues one after the other. We tackle first the question of what made 2016 so extraordinary, then explain the factors driving the change, before presenting our answers to the three sets of questions posed earlier.

8 What Changed

Tables 2 and 3 display some statistics that show directly what was so remarkable about the 2016 election. They testify to the entry of dramatic new forces into the political system—eruptions of a kind that are extremely rare in American history.

The first compares small donations (less than \$200 in total from donors, the threshold for FEC reporting) for the Democratic and Republican presidential candidates in 2016. For comparison, Table 3 displays comparable figures for 2012 major party candidates. The totals are of real interest in their own right, but the relative proportions large and small contributors are what is telling. 2016 almost perfectly inverts the pattern of the earlier election. In 2016, Donald Trump attracted a higher percentage of small contributions than President Obama did in 2012.

Fully comparable data for earlier elections does not exist, in part because price changes have gradually lowered the value of contributions below the legal threshold, which hasn't changed since 1979 (thus rendering more recent donations truly "small") and also due to drastic regulatory changes earlier in the seventies. We thus have to be cautious. But we believe that the 2012 pattern is representative of essentially all presidential elections since the New Deal, with the possible exception of 1964, when so many big businesses and wealthy Americans deserted Barry Goldwater, the Republican nominee, for President Lyndon Johnson (Ferguson and Rogers 1986). Normally in general elections, the Democratic candidate attracted more small money. Trump shattered this pattern, which we regard as the equivalent of forcing water suddenly to flow uphill. Failed Republican primary candidates, especially Evangelicals, have often attracted relatively high percentages of small funds, but that reflects their inability to secure larger donations—compare the discussion of 2012 in (Ferguson et al. 2013). The striking novelty here is the massive weight of small contributions in a campaign that brought in really large amounts of money.

Table 2 2016 Presidential candidates breakdown of contributions by size, grouped by "Firms." Includes super PACs, independent expenditures, and other forms of big money (As % of total contributions, nos. rounded) (Source Computed by Authors from FEC and IRS data)

Democratic candidates					
Total amount	Clinton	Sanders	O'Malley	Webb	
<200 (unitemized)	17.2	59	9.5	42.5	
≤250	1.7	6.2	2	3.9	
251–499	1.6	5.8	0.6	1	
500–999	2.9	8.1	4.9	9	
1000–9999	16.5	16.2	57.3	39.5	
10,000–99,999	12.6	1.8	13.9	4.1	
≥100,000	47.4	3	11.8	0	
Republican candidates					
Total amount	Trump	Bush	Carson	Christie	Cruz
<200 (unitemized)	38.4	1.7	57	1.6	27
≤250	2	0.1	5	0.3	4
251–499	1	0.1	5	0.2	3
500–999	2.6	0.6	8	0.8	5
1000–9999	9.1	19.8	20	26.1	19
10,000–99,999	6.7	25.2	3	15.2	7
≥100,000	40.4	52.5	2	55.8	34
Total amount	Fiorina	Gilmore	Graham	Huckabee	Jindal
<200 (unitemized)	27.2	0.9	2.8	27.4	2.3
≤250	2.4	0.5	0.4	1.6	0.3
251–499	1.8	0.1	0.4	1	0.1
500–999	4.8	1.4	1.8	2.8	0.5
1000–9999	17.9	20.5	33.2	19.2	21.1
10,000–99,999	7.9	29.4	21	2.9	20.1
≥100,000	37.9	47.3	40.5	45.1	55.6
Total amount	Kasich	Pataki	Paul	Perry	Rubio
<200 (unitemized)	5.7	1.5	22.1	3.1	10.4
≤250	1	1	2.3	0.6	0.8
251–499	0.5	0.1	1.5	0.1	1.2
500–999	1.4	1.3	3.1	1	2.7
1000–9999	14.1	27.5	14.7	28.8	23.2
10,000–99,999	8.2	55.4	9.1	18.5	6.2
≥100,000	69.2	13.1	47.1	47.9	55.5
Total amount	Santorum		Walker		
<200 (unitemized)	13.6		13.3		
≤250	1.6		0.7		
251–499	1.2		0.6		
500–999	3.5		2.4		
1000–9999	37.5		19.5		
10,000–99,999	9.3		18.6		
≥100,000	33.3		45		

Table 3 Size comparison of 2016 and 2012 contributions (numbers rounded) breakdown of all itemized contributions, grouped by “Firms,” percentages of totals including super PACs, independent expenditures, and other forms of big money by size (in % of all contributions to candidate) (Source Computed by Authors from FEC and IRS data)

Total amount	Trump 2016	Sanders 2016	Obama 2012	Romney 2012
<200 (unitemized)	38	59	37	18
≤250	2	6	2	1
251–499	1	6	2	1
500–999	3	8	3	3
1000–9999	9	16	15	17
10,000–99,999	7	2	21	23
≥100,000	40	3	20	36
Total amount	Clinton 2016			
<200 (unitemized)	17			
≤250	2			
251–499	2			
500–999	3			
1000–9999	17			
10,000–99,999	13			
≥100,000	47			

With respect to the Sanders campaign, these tables show something we are confident is without precedent in American politics not just since the New Deal, but across virtually the whole of American history, waiving the dubious case of the legendary 1896 election: A major presidential candidate waging a strong, highly competitive campaign whose support from big business is essentially zero.⁴² We are hardly the first to notice this fact, but like many other others, we had trouble believing our eyes. Thus, we checked carefully. Sanders stands out not only for the high percentage of small contributions but also the minuscule totals of large contributions in the aggregate. Later in this essay, when we consider the sectoral breakdown of contributions, we will see that the handful of small donations scattered among our counts of big business contributions to Sanders clearly derive

⁴²1896 is often considered to be an election which pitted populist farmers against a business community united around the Republican standard bearer. This is simply false; see the discussion in Goodwyn, L. 1976. *Democratic Promise*, New York, Oxford University Press. The silver companies backing Bryan, an editor of a newspaper they supported, were among the largest firms in the United States—true giants, which is a reason why they so easily brushed aside the genuine Populists. See the discussion in Ferguson, T. 1995b. Party Realignment and American Industrial Structure: The Investment Theory of Political Parties in Historical Perspective. *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*. Chicago: University of Chicago Press.

from many lower level employees, not top management. The few large contributions arise from aggregated contributions from a handful of unions (the official union leadership of most unions supported Hillary Clinton, see below). In 2016, Bernie Sanders was *sui generis*—not at all comparable to Ron Paul, whose 2012 campaign was hoisted aloft in part by a Super PAC funded by Peter Thiel and other mega-donors (Ferguson et al. 2013). He was exactly what he appeared to be, something truly new under the American sun.

The similarity in the voting patterns of 2012 and 2016, then, is deceiving. Behind the similarities lurk dramatic changes in patterns of political investment, testifying to the mobilization of powerful new forces into the political arena. The obvious next question is why they occurred in 2016.

9 Misery in a Dual Economy

To the question why such big changes in 2016, our answer is straightforward: The mass movements that formed behind Trump and Sanders are consequences of the development of a *dual economy* in America.

The theory of a dual economy is best regarded not as a fully elaborated set of propositions, but as an evolving set of facts that various researchers have uncovered in the course of ongoing research. At the start, a word of warning: The scholars working in this area depart from different standpoints and use various methods, so their treatments of certain issues can differ sharply. Several whose work is clearly relevant, do not use the term “dual economy” at all. But they spotlight a set of facts that is crucial to understanding how American politics passed into the Twilight Zone. Here our intent is not to exhaustively survey the whole body of work, but to outline what matters most for understanding 2016.

Peter Temin crystallized the discussion (Temin 2015, 2016). His starting point was the now well-documented extreme polarization of income and wealth over the last generation in the United States and many other developed countries, even while real earnings for most workers stagnated. Temin looked beyond distribution to consider the evolution of the structures of industry and work that generate the disparities. He adapted a famous model developed by W. Arthur Lewis for the analysis of countries in what was then known as the Third World and applied it to the contemporary United States. He treated the US economy as consisting of two sectors. The first, the “primary” or “core” sector, embraces about “thirty percent of the population” (Temin 2015, 2016). It is dominated by finance, technology, and electronics

(FTE, in Temin's shorthand) and "consists of skilled workers and managers who have college degrees and command good and even very high salaries in our technological economy." The sector includes, in other words, the very rich and rapidly shrinking middle classes.

The other "secondary" or "peripheral" sector he saw as populated by "low-skilled workers who are suffering the ills of globalization in its various aspects." He often refers to this other part of the economy as the "low wage sector," and highlights the role of politics and technology in reducing the demand for semi-skilled workers (Temin 2015).

Temin treats education as a source of both human capital in a Neoclassical sense, but also (along with families and neighborhoods) "social" capital. He views education as the passport that allows its holder to transit from one sector to the other.

Refreshingly, Temin flatly rejects median voter models of the political system and accepts the investment approach to analyzing politics. He notes that primary sector workers, especially the very richest Americans whose income has grown the most, now champion low taxes. The resulting dismantling of public education and attack on the welfare state relies heavily on racial politics for political cover. The result is that chances are vanishing for most Americans of any race to enjoy a middle-class standard of living.

Servaas Storm arrives at broadly similar views by a different path. He examines how bad macroeconomic policy—the unwillingness in the 1980s and after to pursue Keynesian policies of full employment—paved the way for the tendency for dual economies to develop not just in the United States, but plant roots in economies all over the developed world. Storm is highly critical of mainstream macroeconomists for failing to recognize that their measures of potential output (used to define "full" employment) fail to reflect the true extent of the shortfall in aggregate demand because they simply track actual output with lags. Lower demand reduces income, which soon leads to lower estimates of potential output (Storm 2017).⁴³

Prolonged demand weakness, Storm argues, is more than many enterprises can resist. It tempts them to rely on low wage labor. This depresses measured productivity in many sectors in which it formerly grew, consigning productivity increases to a handful of industry branches in which rapid technological change dominates. Storm traces how over time many

⁴³See also Costantini, O. 2015. *The Cyclically Adjusted Budget: The History and Exegesis of a Fateful Estimate*. Institute for New Economic Thinking Working Paper No. 2, on the Internet at: <https://www.ineteconomics.org/research/research-papers/the-cyclically-adjusted-budget-history-and-exegesis-of-a-fateful-estimate>; and the work by Antonella Palumbo and others cited therein.

workers are steadily pushed out of the primary sector into the low wage sector. The stream of workers into the low wage sector accelerates the fall in sectoral productivity: Turnover is too high for many workers to sensibly invest in firm-specific skills and if there is any incentive for them to learn anything, it is mostly general skills that will make them attractive to the next employer, whom they can be sure they will soon be encountering.

Like Temin, Storm does not see the flow of workers out of the primary into the low wage sector as arising from a single factor. The flow varies by context, driven alternately by foreign trade, technological change, immigration, foreign direct investment, labor market regulation, and attacks on trade unions, as well as the business cycle.⁴⁴

Two other analysts do not couch their analyses explicitly in terms of a dual economy, but describe economic processes that are plainly integral to its workings. William Lazonick has shown how the rise of start-up firms like Cisco and Microsoft propelled sweeping changes in the structure of American business. These boisterous infants of the “New Economy” faced the problem of attracting personnel with the right mix of technical knowledge and skills. Managers and technical workers in older firms could reasonably look forward to rewarding careers inside one firm. To encourage workers to move, the New Economy firms offered stock options on a vast scale (Lazonick 2009, 2016, 2017).

For New Economy firms, the stock market was vital, both as a way for venture capital to exit and take profits and as a way to confer value on the stock options, not as a source of initial funding. But the spectacle of financiers and managers becoming mega-rich almost overnight turned heads in the rest of the corporate economy. With Drexel Burnham Lambert promoting leveraged buyouts via the junk bond revolution and thus upending Wall Street’s traditional relations with industry, top managements of older firms found the new ideology of shareholder value irresistible. They piled on stock options for themselves and dismantled older career ladders that provided scaffolding for long-term commitments to the firm by workers and managers. They cut back on R&D and other overhead expenses that only made

⁴⁴In a paper published just as this goes to press, Lance Taylor assesses the importance of the spread of low wage markets vis a vis possible monopoly in certain industries as a factor in increasing inequality. His inquiry, though preliminary, is exceedingly important, given that many mainstream economists are now pointing to the latter as a driving force. Taylor concludes that outside of the information sector (roughly our “telecommunications” and “computers”), monopoly is not as important as efforts to lower wages. See Taylor, Lance. 2017. “Why Stopping Tax Reform Won’t Stop Inequality,” Institute for New Economic Thinking, December 15, 2017, <https://www.ineteconomics.org/perspectives/blog/why-stopping-tax-reform-wont-stop-inequality>.

sense for firms intent on producing a new generation of innovative products and concentrated instead on getting their stock prices up. Firms increasingly used their internal funds to buy back their stock instead of making continuing investments in their products and processes. Stock buybacks were a crucial factor in the stupendous rise of top management compensation relative to average workers rewards. In certain crucial sectors such as pharmaceuticals and electronics, firms often sustain themselves by appropriating technologies and inventions developed in government-supported laboratories (typically at nominal costs) and gobbling up smaller competitors (Lazonick 2009, 2016).

Older notions of a career spent mostly inside one firm become increasingly obsolescent for many other workers besides managers, technical personnel, and scientists. But not because they were all luxuriating in stock options. David Weil has demonstrated in painstaking detail that as top managers of large firms ladled out stock options to themselves, they also reorganized their production processes by contracting out more and more labor—a strategy that allowed them not only to reduce the wages and benefits of ordinary workers they retained but also remove themselves from legal responsibility for monitoring how their lower wage client firms treated their workers. This strategy of “fissuring” the workforce led to enormous reductions in the number of permanent workers in primary sector firms and swelled the number of jobs in the low wage sector. As Weil shows in an especially perceptive discussion, the process creates powerful incentives for low margin firms under pressure in the low wage sector to skirt laws on wages and hours, including the theft of employee wages. Large firms can then plead that any resulting legal problems are the responsibility of the contractors, not them, and point to economic theories that claim that wage theft cannot be a viable long-term business model as proof they can’t be pursuing such a strategy (Weil 2017).

10 Why Upheaval in 2016?

This in broad outline is how the dual economy has developed over several decades in the United States. But if one accepts the reality of structural changes of this sort, then an obvious question requires an answer: How does a long-term process suddenly come to figure so dramatically in the recent election?

Part of the answer is implicit in the earlier discussion of 2014: We do not believe that the upheavals of 2016 marked the first time the dual economy affected US elections. Though we cannot fully discuss the issue here, we are

confident that a close study of recent elections would reveal traces of the dual economy's influence, sometimes in ways that are not as obvious as in 2014. But our basic answer is that the 2016 eruptions constitute a tipping point—a moment when the many pressures that had been squeezing voters for a long time cumulated to a point where, quite literally, daily existence for many had become close to unlivable. There is strong evidence that many citizens were searching desperately for ways out of what looked (and in fact are) dead-end situations. Many rebelled as they listened to commentators tell them that the US economy was really doing better than it had in many years and that they should be celebrating America's exit from the Great Recession. They were unmoved by the chorus of conventional politicians trying to sell old nostrums that by 2014 were plainly obsolete for them in their communities. Empty slogans no longer appealed, they just disgusted or enraged. When two politicians broke through the big money cartels that dominate both major parties, popular enthusiasm surged almost overnight to seismic levels, shocking elites in both parties and flummoxing the entire American establishment.

With the same caution as before—that we have room here only for sketches—let us briefly consider how the dual economy weighed down so many Americans, making them desperate for relief.

First, there is the obvious: The grinding reality of continuous, unyielding low pay over many years that Storm, Temin, and other analysts place at the center of their analyses. By 2016, this had been going on for a full generation. For workers in the low wage sector, chances of sustained improvements in well-being were remote—roughly comparable to the odds of winning one of the lotteries that have spread like a flu virus through fiscally pressed states. This put many stresses on workers which are impossible to inventory here. But we would single out the record over time of children living at or near poverty levels. This is almost beyond belief and characterized by especially grotesque racial and ethnic disparities.⁴⁵

Assessing the discontent of different groups of workers is difficult, because few reliable behavioral statistical indicators exist. Strike levels, for example, have been low for decades. That, however, is likely a result of the costs of mounting strikes and the dismal prospects for success. In a world in which capital is far more mobile than workers, and where employers are routinely

⁴⁵A fine set of statistics is produced regularly by the National Center for Children in Poverty at the Millman School of Public Health, Columbia University at: http://www.nccp.org/publications/fact_sheets.html.

able to violate labor laws with impunity, corporate America is simply too strong. The fatal weakness of “exit, voice, and loyalty” models—that they do not incorporate an explicit cost function—are visible here for all to behold (Hirschman 1970). The same holds for measures of labor union strength. They have been in steady decline in the United States and many other developed countries for many years.⁴⁶ An interesting indicator suggestive of a possible tipping point, however, may be the expressed interest in minimum wages. Agitation for minimum wage increases, of course, reflects not only bottom-up dissatisfaction but specific support from various activist and elite philanthropic organizations along with policymaking circles concerned about social unrest. Still, it is striking that a Google Trends analysis for the United States shows steadily rising interest in minimum wages. This is likely related to the waves of protest about inequality that have broken out worldwide since the Occupy movement exploded into the headlines in 2011, (with, like the minimum wage discussion, important early encouragement from more liberal policymakers and business groups (Ferguson 2014b)).

In the United States, however, indices pointing to literally unendurable situations have been flashing red for almost two decades. Recently, as some have exploded, they have finally attracted attention. The best known studies are those of Anne Case and Angus Deaton. Their basic argument is that “after decades of improvement, all-cause mortality rates among white Non-Hispanic men and women in middle age stopped falling in the United States and began to rise.” Although “mid-life mortality continued to fall in other rich countries, and in other racial and ethnic groups in the United States, white Non-Hispanic mortality rates for those aged 45–54 increased from 1998 to 2013” (Case and Deaton 2017).

This rise in mortality, which contrasts so glaringly with patterns in other wealthy countries and inevitably brings to mind comparisons with the former Soviet Union, chiefly affects white workers and their spouses with low levels of education and wages. In their efforts to frame explanations, Case and Deaton caution that “we are still far from a smoking gun or a fully developed model.” But they propose a “preliminary but plausible story” of how “*cumulative disadvantage* over life, in the labor market, in marriage and child outcomes, and in health, is triggered by progressively worsening labor market opportunities at the time of entry for whites with low levels of education” (Case and Deaton 2017). Shannon Monnat and other researchers,

⁴⁶See, e.g., Trade Union Density, OECD. Stat, https://stats.oecd.org/Index.aspx?DataSetCode=UN_DEN.

including Case and Deaton in more recent work, have explored how experiences of persisting pain has contributed to the wave of opioid use roiling so many communities in recent years (Monnat and Brown 2017).

Everyone studying these matters recognizes that no one sort of locale has a monopoly on these dismal conditions. They are found everywhere, if one looks, from large cities to rural hamlets. But Monnat and others have drawn attention to the role *place* plays in the process.

A growing literature in mainstream economics and urban studies celebrates the role cities and especially “world cities” are said to play in stimulating economic growth in the age of globalization (Glaeser 2011). But the United States and many other countries are today dotted with ruins of once-great industrial or mining areas that have never recovered from hammerings they received from the flood of competing imports or the relocation of their production centers that also followed from economic globalization. For all the brave talk by mainstream economists, foundations, and politicians about “Pareto improvements,” “comparative advantage,” and the “income-augmenting” role of international trade, in many places economic activity has never recovered (Autor et al. 2016). Older mining and industrial plants stretch like Halloween skeletons over desolate, slowly depopulating landscapes. Younger people leave for cities, as aging residents, with little prospects in the New Economy, struggle to get by on disability or Social Security, as they or their children often turn to opioids and other drugs.

In the United States, the collapse of the housing bubble compounded these problems; home values in many of these communities left behind have not recovered, leaving individual home owners—those who still have their dwellings, that is—close to underwater or actually insolvent (Zonta et al. 2016). We note, grimly, that surveys that track only incomes miss much of the action that matters here, which concerns liabilities as much as assets.⁴⁷ And we are not surprised that economically sensitive analysts who take the time to sort out effects by place find that big surges in imports, such as those that hit both Germany and the United States in the last generation, led to striking political changes (Autor et al. 2016, 2017, Dippel et al. 2015). We think it is inevitable that citizens living for long periods in immobile economic and social circumstances will increasingly find that large chunks of the “common sense” of other, more globally oriented parts of the country grate on them, and indeed, come to seem almost meaningless or downright

⁴⁷So, of course, do studies that do not carefully track the actual experiences of districts with regard to plant relocation and imports, which are quite different things.

perverse. The realities of life in the contrasting prosperous areas—which scatter across individual countries like islands in archipelagos, not giant territorial blocks, diverge too much. Behind all the talk of increasing demographic division in the United States, in other words, we suspect are some real but less-mentioned divisions by place that provide the raw material with which demagogues and politically oriented commentaries go to work. The tendency toward growing isolation, (thanks to sheer facts of income imbalances and a rapidly differentiating media environment), plus some hard work and a lot of money can make it seem as though each side lives in a bubble, because they do.

But alas, the miserable incomes and precarious life conditions that dual economies generate for more and more citizens define only part of the problem. The thousand natural shocks that workers in the low wage sector are heir to are multiplied many times by the decay of educational opportunities and the welfare state.

Let us start with education, which, as Temin observes, is the royal road to the middle class, if hardly the 1%. As he shows, the incessant drumbeat for lower taxes, which echoed in both (investor-driven) parties since the mid-1970s, led to drastic declines in funding for public education. Many state university systems today have withered away to an astonishing extent. Often state support provides a third or less of total revenues. Public K-12 education has been hammered in virtually all major cities and, increasingly, even in suburbs.

The collapse of state support closes off college to many low-income students. That is terrible and demoralizing in itself. But the mixed public and private US system has come up with a partial solution that is uniquely pathological: It struggles to make up the public shortfall by encouraging massive private borrowing (Cillufo 2017). There is little doubt that investment in education has high social rates of return. The social rate of return on government grants and lending at low rates to students who can do the work should therefore be high (with one qualification noted below.) Instead, most Republicans and some Democrats—encouraged by handsome campaign contributions from private lenders—have done their best to bottle up governments at all levels from acting. (Swann 2017) This forces many students to turn to private financiers, who often lend at double digit rates or higher, even after the 2008 crash when interest rates fell to historically low levels. The hideous practice of students trying desperately to mortgage streams of their future income to individual private lenders—a modern form of debt peonage—is now appearing, as trapped would be borrowers desperately seek escape from dead-end jobs in the low wage sector.

The mountain of student debt that has built up now competes with credit card and auto debt and ranks respectably even against housing debt.⁴⁸ Since the Great Recession, however, a more subtle and deadly effect has appeared. In part, this arises from the austerity policies that nearly all major developed countries have pursued since the 2008 collapse. But a portion of it is a direct consequence of the growth of the dual economy that the mainstream literature has yet to spotlight: The primary sector cannot shrink consistently over time, without impacting the demand for professionals and trained personnel. A widening dual economy, that is, implies a slowly building crisis in the professions and managerial and technical training as students come out the other end of the education system and find the pool of available positions constrained.

This problem—which is separate from, but in practice compounded by, offshoring of middle-class work made possible by improvements in telecommunications—shows up in many countries besides the United States. As so often, however, the incentives for individual institutions in the sprawling US system make everything worse: Institutions, public and private, use every means at their disposal to herd paying students through. Many lower their standards and encourage students to borrow. The result, increasingly, is a race to the bottom, a macabre confirmation of convergence of developed economies with many developing countries that inspired the Lewis model: A proliferation of increasingly meaningless degrees whose holders emerge with heavy debts but only remote prospects for middle-class positions.

The tendency to try to use private debt to plug holes in individual lives left by the retraction of a desperately squeezed public sector produces many other pathologies. One is particularly important: health care.

The basic problem of the US medical care system—its fabulous costs and wretched outcomes relative to health care in most of the rest of the world (including all of the developed world) is well documented (Ferguson and Johnson 2011). The Obama administration's Affordable Care Act brought some real improvements, but it did not solve the most basic problem facing average citizens: That serious medical problems capable of bankrupting them can strike almost anyone, anytime, even high up in

⁴⁸We are grateful to Orsola Costantini for discussions as she prepares her own study of consumer debt. See her *A Burning Debt: The Influence of Household Debt on Investment, Production, and Growth in the U.S.* Conference Paper, Edinburgh, Scotland. Institute for New Economic Thinking; https://www.ineteconomics.org/uploads/papers/Costantini_Oct2017_INETpaper.pdf.

the middle class. Too many issues with coverage and charges, especially so-called “balance billing,” were left unresolved. The Affordable Care Act also did not go very far to actually make medical care affordable; large numbers of American are forced to go without food or medicines that they need, especially when they are sick, and the public demand for limits on the costs of medical care is strong (DiJulio et al. 2017). For political reasons, the Obama administration, the Clinton campaign, and a vast number of allied analysts sought to downplay the harsh realities during the 2016 election, but on one occasion in early October, Bill Clinton slipped off message. To the consternation of the campaign (which immediately muzzled him), he told the truth: “You’ve got this crazy system where all of a sudden 25 million more people have health care and then the people who are out there busting it, sometimes 60 hours a week, wind up with their premiums doubled and their coverage cut in half...It’s the craziest thing in the world” (Allen and Parnes 2017).

In the money-driven US political system, regulatory policy rarely helps ordinary Americans, as millions of homeowners bitterly discovered when the housing bubble burst. In the long run-up to the financial crisis, major financial regulators like the Securities and Exchange Commission, the Commodity Futures Trading Commission, and the Federal Reserve—not to mention the Treasury—acted like textbook examples of industry-captured vehicles. Before the crash, only one state attorney general—Eliot Spitzer—ever mounted a challenge with real teeth, while isolated activist regulators, notably Brooksley Born, were rolled by the massive weight of industry political power (Epstein and Montecino 2016; Ferguson and Johnson 2009a, b). After the crash, no major financiers went to jail, while first the Republicans and then the Democrats bailed out Wall Street but not Main Street. Citibank and other institutions kept piling on leverage and thinning out their capital but then were rescued, while losses to pensions and housing values of ordinary Americans were never made good—as many Americans certainly still recalled in 2016. Monopolistic practices in telecommunications cost consumers hundreds of millions of dollars, with (at best) mild checks—no matter which party is in power, thanks in major share to the power of political money (Cooper 2016; Ferguson et al. 2017). No regulator does much to protect consumer privacy. Virtually the only thing one can trust about antitrust policies is that authorities in charge are far more likely to have qualms about, say, cement companies than real giants whose charges for cable or wireless service come almost miraculously close to each other.

11 Republican Orthodoxy Is Disrupted

As the presidential race began in earnest in 2015, the chances of any candidate seriously addressing the issues thrown up by the dual economy looked slim indeed. Most observers expected a rerun of a movie everyone had seen before: A battle between representatives of the two political dynasties that had dominated American public life for most of the period in which the dual economy took root: The Bush and Clinton families.

That prospect turned off an indefinite number of Republicans, especially conservatives. It also gave rise to a whispering campaign that occasionally broke into the open suggesting that Jeb Bush might really be a much weaker candidate than his predecessors and could be vulnerable. But at the outset, the shape of the political coalition that seemed destined to dominate looked set. It was a twenty-first century version of the older Republican establishment bloc dominated by multinational finance, oil, and other globally oriented industries that had carried two earlier Bushes to victory (Ferguson and Rogers 1986; Ferguson 2005).⁴⁹ In such an alignment, it was foreseeable—and actually did happen—that as the campaign started, Jeb Bush would unveil a gigantic war chest that was plainly designed to overawe both the media and any challengers who might be tempted to critically evaluate his proposals and past record.

The next step in the grand design would then be a series of debates as highly choreographed as a Japanese tea ceremony. Endorsements and accolades from party leaders would cascade down on the Anointed One, along with yet more money. According to a popular academic theory of nominations (one that we have never embraced, since it fails to recognize the critical role of political money, both direct and indirect), the resulting consensus of party leaders would make Bush's triumph inevitable.⁵⁰

As Bush and the doomed also-rans slogged through the primaries, it could be confidently forecast that the range of issues they would discuss would be astonishingly narrow. To many spectators, the truncated range would sound eerie, as though everyone on stage in the debates was in the iron grip of some powerful force blocking normal human speech. This, of course, was because they were: The investment approach to party competition emphasizes the

⁴⁹The discussion in the 2005 paper was truncated; the full version is available on the web as Working Paper #32 of the University of Texas Inequality Project: http://utip.lbj.utexas.edu/papers/utip_32.pdf.

⁵⁰See the discussion in Gelman, A. 2016. 19 Things We Learned From the 2016 Election. *Statistical Modeling, Causal Inference, and Social Science*, December 8, 2016. On the web at: <http://andrewgelman.com/2016/12/08/19-things-learned-2016-election/>.

decisive role of political money in conditioning political appeals. No matter how many Americans want to preserve Social Security, pursue economic policies that target rising wages, or close off the possibility of personal bankruptcy due to medical expenses (to take three issues on which the direction of public opinion even in many Republican primaries is fairly clear) only appeal that can be financed have any prospect of making it into the political arena (Ferguson 1995a).

From this standpoint, candidates' messages in the Republican Party were almost as predictable as eclipses. You just needed to put them in the context of their donor base(s). This major media sites that reveled in complex voting statistics somehow never managed to do.

In Bush's case, everyone knew what he stood for before he said it, indeed, even if he sometimes hesitated to say it, out of calculated discretion. He, like his father and brother, favored free trade, including the Trans-Pacific Partnership; multilateralism; the traditional structure of US alliances; close relations with both Israel and Saudi Arabia; a huge worldwide military; and all the wars waged during the various Bush presidencies. He did not like Iran, but his criticisms of the nuclear accord negotiated by Obama were formal and not entirely credible. The best guess was that James A. Baker, who had served his father and rescued his brother in the Florida imbroglio, and other like-minded establishment types, would prevail when push came to shove. A Bush administration would find some way to live with the deal, which even Baker was on record as half-heartedly opposing.

On Ukraine, Syria, and other issues, Bush would be dependably anti-Russian without being hyper-shrill. Like the rest of his family, he believed close relations with China were vital to preserving world order, while also being completely committed to maintaining the American Seventh Fleet as a bedrock of the American alliances with Australia, Japan, and—very carefully—Taiwan. He opposed Obamacare and network neutrality, both red lines for Republicans, and claimed to be suspicious of climate change, though many in the GOP suspected he might be more flexible on the last. Virtually everyone realized that, like his brother George W., he really would like to trim Social Security and replace it with private investment schemes administered by Wall Street, but the logic of not making a big point of that in the campaign was apparent. Of course, he could be relied upon to cut taxes yet again and further deregulate industry.

Those positions dovetailed with the mammoth business coalition that enlisted behind Bush. Table 4 breaks out the financing for all Republican primary candidates in terms of industries (including Trump up to May 4, when Ted Cruz, his last serious challenger, withdrew following a disastrous

Table 4 Industrial structure and the GOP race (Source Compiled by the authors from FEC and IRS data)

Industry (N)	Trump % of firms	Trump % of money	Bush % of firms	Bush % of money	Carson % of firms	Carson % of money	Christie % of firms	Christie % of money
Mining (26)	7.69	0.07	15.38	84.85	11.54	0.61	0.00	0.00
BB only (2)	50.00	0.03	100.00	89.58	50.00	0.41	0.00	0.00
Coal Mining (147)	3.40	0.19	2.04	1.31	5.44	0.36	0.68	0.41
BB only (2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounting (275)	3.27	0.69	1.82	48.77	6.55	2.49	1.09	13.13
BB only (3)	66.67	0.13	100.00	58.37	100.00	1.99	100.00	15.75
Casinos (19)	15.79	0.20	36.84	29.43	5.26	0.01	26.32	27.61
BB only (9)	22.22	0.16	55.56	31.64	11.11	0.02	44.44	26.88
Service General (2346)	1.41	0.35	3.58	28.56	3.88	1.74	1.36	1.72
BB only (57)	10.53	0.19	38.60	50.39	24.56	1.29	19.30	1.04
Residential (16)	0.00	0.00	43.75	69.87	25.00	0.62	6.25	0.66
Heavy Constr. (5488)	1.46	1.26	2.92	17.63	4.01	2.78	0.77	10.32
BB only (9)	22.22	0.38	55.56	13.83	55.56	0.62	22.22	2.12
Waste Mgt. (8)	12.50	2.92	12.50	13.74	12.50	4.39	0.00	0.00
BB only (2)	50.00	4.01	50.00	18.83	50.00	6.01	0.00	0.00
Food (1668)	1.38	0.73	2.64	48.39	4.02	3.22	1.32	8.92
BB only (34)	11.76	1.10	29.41	62.17	32.35	2.49	14.71	4.49
Tobacco (15)	0.00	0.00	20.00	31.33	20.00	3.83	0.00	0.00
BB only (3)	0.00	0.00	66.67	23.49	100.00	4.54	0.00	0.00
Textiles (13)	7.69	0.07	0.00	0.00	23.08	8.47	0.00	0.00
Apparel (23)	4.35	1.16	21.74	8.83	8.70	0.89	8.70	0.93
BB only (5)	0.00	0.00	60.00	2.71	40.00	1.03	40.00	1.07
Agribusiness (120)	0.83	0.25	2.50	13.23	3.33	1.03	0.83	0.25
Paper (300)	2.00	0.15	6.67	27.10	8.00	1.48	1.67	0.60
BB only (8)	25.00	0.10	50.00	6.15	62.50	0.80	0.00	0.00
Printing and Pub (14)	21.43	2.08	21.43	66.93	21.43	1.72	0.00	0.00
BB only (1)	100.00	1.96	100.00	91.51	100.00	0.07	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Trump % of firms	Trump % of money	Bush % of firms	Bush % of money	Carson % of firms	Carson % of money	Christie % of firms	Christie % of money
Chemical (695)	3.02	1.86	4.60	38.52	7.77	3.71	0.72	1.14
BB only (16)	18.75	0.32	50.00	48.87	50.00	5.82	12.50	2.87
Oil (3987)	1.66	0.37	5.12	40.96	5.72	1.46	0.85	3.25
BB only (62)	22.58	0.10	56.45	44.13	38.71	0.54	6.45	2.26
Rubber (318)	2.52	1.36	1.89	18.34	8.18	9.95	0.00	0.00
BB only (1)	0.00	0.00	0.00	0.00	100.00	12.11	0.00	0.00
Glass (339)	2.06	0.42	1.47	61.50	6.19	16.02	1.18	3.69
BB only (2)	0.00	0.00	100.00	96.62	0.00	0.00	50.00	3.03
Steel (1215)	2.14	2.50	2.63	30.98	6.09	10.21	0.41	0.81
BB only (8)	12.50	3.70	25.00	20.37	50.00	32.74	12.50	1.40
Cosmetics (16)	0.00	0.00	31.25	16.89	12.50	0.09	6.25	0.01
BB only (9)	0.00	0.00	44.44	18.71	22.22	0.11	11.11	0.02
Altern Energy (22)	4.55	1.56	0.00	0.00	0.00	0.00	0.00	0.00
Electronics (121)	12.40	1.16	9.92	7.47	28.93	7.38	4.96	5.31
BB only (13)	23.08	0.92	38.46	14.17	61.54	6.67	15.38	3.08
Guns, Ammo (8)	12.50	1.65	12.50	76.46	25.00	2.67	12.50	0.36
Machinery (222)	4.05	0.29	8.11	13.03	15.32	2.88	2.70	11.68
BB only (14)	28.57	0.38	35.71	12.93	57.14	5.12	35.71	29.75
Defense Prod and Serv (19)	0.00	0.00	10.53	6.88	10.53	2.65	5.26	0.58
Autos (97)	7.22	1.19	6.19	27.38	18.56	13.99	2.06	7.46
BB only (12)	16.67	0.50	25.00	36.42	41.67	14.00	8.33	1.98
Aerospace (32)	18.75	0.80	25.00	13.49	34.38	10.58	15.63	2.22
BB only (9)	66.67	0.86	77.78	14.35	88.89	11.09	55.56	2.37
Pharma (587)	2.56	0.73	6.64	20.92	8.01	3.22	2.73	31.31
BB only (18)	27.78	0.54	61.11	27.64	55.56	4.32	22.22	5.14

(continued)

Table 4 (continued)

Industry (N)	Trump % of firms	Trump % of money	Bush % of firms	Bush % of money	Carson % of firms	Carson % of money	Christie % of firms	Christie % of money
Computers (41)	19.51	0.81	26.83	20.16	31.71	3.68	14.63	35.01
BB only (17)	23.53	0.58	47.06	20.87	29.41	3.21	17.65	37.98
Internet Mfg (17)	41.18	1.14	23.53	9.69	47.06	6.56	17.65	4.96
BB only (2)	100.00	0.62	100.00	5.26	100.00	5.79	50.00	4.55
Software (138)	15.94	0.21	18.84	5.84	23.19	0.60	8.70	2.41
BB only (30)	20.00	0.16	30.00	3.52	26.67	0.35	16.67	0.25
Telecom (1551)	2.13	0.25	4.06	11.38	4.96	1.01	1.61	1.61
BB only (49)	22.45	0.11	42.86	9.33	28.57	0.49	22.45	1.07
Beverages (37)	10.81	0.62	37.84	31.32	21.62	7.36	10.81	2.12
BB only (5)	40.00	0.10	80.00	26.59	40.00	7.29	20.00	0.05
Health (29952)	1.02	2.21	1.73	39.95	6.70	7.39	0.63	6.40
BB only (18)	27.78	0.64	33.33	51.22	55.56	5.12	22.22	1.06
Health Insur. (23)	30.43	0.48	47.83	48.46	52.17	4.75	26.09	4.96
BB only (13)	38.46	0.53	76.92	48.43	69.23	5.29	46.15	6.01
Credit Reporting (10)	10.00	0.04	60.00	75.08	60.00	0.50	10.00	0.00
BB only (2)	0.00	0.00	100.00	92.34	100.00	0.17	0.00	0.00
Auto Dealers (3188)	0.91	0.15	2.63	5.99	2.32	0.83	0.38	0.90
BB only (7)	0.00	0.00	42.86	0.29	28.57	0.01	0.00	0.00
Transp, Trk, RR (1660)	1.87	0.87	2.53	45.17	5.24	3.37	0.18	0.48
BB only (11)	36.36	0.17	36.36	74.88	45.45	1.59	0.00	0.00
Airlines (14)	42.86	2.34	35.71	11.49	50.00	15.82	28.57	1.38
BB only (4)	100.00	2.53	75.00	4.62	100.00	17.26	75.00	1.46
Utilities (2584)	1.35	0.72	1.74	51.45	4.72	2.59	0.74	11.93
BB only (19)	47.37	0.22	63.16	60.77	78.95	0.91	31.58	14.43
Commun (14)	7.14	0.06	28.57	4.72	14.29	0.14	14.29	36.61
BB only (5)	20.00	0.06	40.00	4.04	20.00	0.11	40.00	37.20
Mortg and Non-Bk Lending (136)	1.47	0.11	11.03	18.34	8.09	0.41	2.94	49.10

(continued)

Table 4 (continued)

Industry (N)	Trump % of firms	Trump % of money	Bush % of firms	Bush % of money	Carson % of firms	Carson % of money	Christie % of firms	Christie % of money
BB only (5)	0.00	0.00	60.00	0.53	40.00	0.02	20.00	63.59
Real Estate (12453)	1.31	2.73	3.45	37.61	3.50	3.03	1.06	7.28
BB only (36)	2.78	0.09	27.78	21.85	5.56	0.80	11.11	2.30
Insurance (4928)	1.30	0.19	2.88	81.59	3.49	1.48	0.91	0.91
BB only (35)	45.71	0.62	62.86	46.18	71.43	9.52	34.29	2.95
Comm Banking (3971)	1.16	1.38	4.31	41.34	4.56	1.57	0.81	1.08
BB only (18)	55.56	2.47	77.78	47.31	55.56	0.78	50.00	0.91
Invest and Hedge Funds (285)	2.81	0.02	20.70	11.42	3.86	0.33	4.56	8.59
BB only (48)	4.17	0.01	39.58	15.01	6.25	0.01	14.58	14.39
Priv Equity (14879)	1.06	0.35	7.08	33.25	2.82	0.96	1.49	7.69
BB only (38)	2.63	0.01	21.05	21.54	2.63	0.07	5.26	1.43
Brokers, Mut Fd (43)	20.93	0.15	27.91	52.85	32.56	2.06	11.63	3.55
BB only (6)	33.33	0.07	66.67	90.83	33.33	2.13	16.67	0.18
Retailing (194)	9.79	0.14	20.62	19.09	28.35	1.11	8.25	4.83
BB only (68)	20.59	0.14	39.71	17.14	50.00	0.97	10.29	4.89
Industry (N)	Cruz % of firms	Cruz % of money	Fiorina % of firms	Fiorina % of money	Gilmore % of firms	Gilmore % of money	Graham % of firms	Graham % of money
Mining (26)	34.62	8.53	0.00	0.00	0.00	0.00	0.00	0.00
BB only (2)	50.00	6.53	0.00	0.00	0.00	0.00	0.00	0.00
Coal Mining (147)	10.88	11.59	2.72	3.12	0.00	0.00	1.36	0.49
BB only (2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounting (275)	9.45	5.33	2.91	1.02	0.36	0.05	1.09	0.63
BB only (3)	100.00	3.86	100.00	1.06	0.00	0.00	100.00	0.75
Casinos (19)	36.84	13.73	5.26	13.17	0.00	0.00	10.53	7.11
BB only (9)	55.56	13.48	11.11	15.03	0.00	0.00	22.22	8.12

(continued)

Table 4 (continued)

Industry (N)	Cruz % of firms	Cruz % of money	Fiorina % of firms	Fiorina % of money	Gilmore % of firms	Gilmore % of money	Graham % of firms	Graham % of money
Service General (2346)	8.31	4.33	1.96	1.35	0.09	0.02	0.55	0.48
BB only (57)	26.32	3.09	15.79	0.25	0.00	0.00	12.28	0.73
Residential (16)	43.75	1.39	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Constr. (5488)	8.13	38.12	1.17	1.32	0.02	0.00	0.27	1.50
BB only (9)	55.56	76.32	33.33	0.79	0.00	0.00	22.22	2.59
Waste Mgt. (8)	62.50	41.43	12.50	15.94	0.00	0.00	0.00	0.00
BB only (2)	100.00	22.17	50.00	21.83	0.00	0.00	0.00	0.00
Food (1668)	8.27	5.74	0.96	1.04	0.00	0.00	0.72	2.54
BB only (34)	58.82	5.38	5.88	0.90	0.00	0.00	11.76	6.58
Tobacco (15)	20.00	4.76	0.00	0.00	0.00	0.00	6.67	18.33
BB only (3)	100.00	5.64	0.00	0.00	0.00	0.00	33.33	21.73
Textiles (13)	15.38	7.45	0.00	0.00	0.00	0.00	15.38	47.43
Apparel (23)	8.70	0.19	4.35	0.05	0.00	0.00	8.70	35.37
BB only (5)	20.00	0.21	0.00	0.00	0.00	0.00	20.00	40.19
Agribusiness (120)	2.50	4.04	1.67	1.19	0.00	0.00	1.67	15.14
Paper (300)	13.33	2.77	2.00	0.39	0.00	0.00	0.67	21.25
BB only (8)	50.00	0.63	25.00	0.23	0.00	0.00	12.50	30.10
Printing and Pub (14)	35.71	7.35	14.29	1.39	0.00	0.00	0.00	0.00
BB only (1)	100.00	5.45	0.00	0.00	0.00	0.00	0.00	0.00
Chemical (695)	14.53	11.11	2.16	0.93	0.00	0.00	0.72	4.06
BB only (16)	62.50	7.23	25.00	2.01	0.00	0.00	18.75	15.92
Oil (3987)	13.84	12.05	2.48	4.67	0.05	0.03	0.40	4.03
BB only (62)	62.90	8.63	27.42	5.43	0.00	0.00	9.68	5.38
Rubber (318)	13.52	26.52	3.46	10.70	0.00	0.00	0.31	1.00
BB only (1)	100.00	16.85	0.00	0.00	0.00	0.00	0.00	0.00
Glass (339)	10.91	7.02	2.36	1.47	0.00	0.00	0.59	1.08
BB only (2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Cruz % of firms	Cruz % of money	Fiorina % of firms	Fiorina % of money	Gilmore % of firms	Gilmore % of money	Graham % of firms	Graham % of money
Steel (1215)	11.93	22.38	1.81	1.75	0.00	0.00	0.58	1.39
BB only (8)	62.50	22.06	12.50	1.17	0.00	0.00	0.00	0.00
Cosmetics (16)	31.25	18.38	25.00	18.54	0.00	0.00	0.00	0.00
BB only (9)	55.56	21.05	33.33	20.79	0.00	0.00	0.00	0.00
Altern Energy (22)	9.09	18.04	0.00	0.00	0.00	0.00	4.55	31.10
Electronics (121)	53.72	26.36	13.22	5.71	0.00	0.00	4.13	10.16
BB only (13)	84.62	23.37	23.08	0.86	0.00	0.00	15.38	25.38
Guns, Ammo (8)	25.00	4.69	12.50	0.02	0.00	0.00	0.00	0.00
Machinery (222)	25.23	7.70	5.41	0.81	0.00	0.00	3.60	2.11
BB only (14)	85.71	13.57	50.00	1.79	0.00	0.00	28.57	3.14
Defense Prod and Serv (19)	15.79	26.36	0.00	0.00	0.00	0.00	10.53	33.83
Autos (97)	34.02	26.74	6.19	1.28	0.00	0.00	3.09	2.15
BB only (12)	58.33	25.83	16.67	0.99	0.00	0.00	16.67	2.90
Aerospace (32)	46.88	27.81	25.00	2.89	3.13	0.03	28.13	16.07
BB only (9)	88.89	27.34	66.67	2.97	11.11	0.04	66.67	16.42
Pharma (587)	11.07	6.19	2.73	1.66	0.00	0.00	0.85	0.88
BB only (18)	66.67	10.73	50.00	3.47	0.00	0.00	5.56	0.45
Computers (41)	34.15	12.82	17.07	4.53	0.00	0.00	2.44	0.15
BB only (17)	35.29	12.84	23.53	4.14	0.00	0.00	5.88	0.17
Internet Mfg (17)	70.59	18.05	23.53	2.43	0.00	0.00	5.88	13.45
BB only (2)	100.00	14.24	100.00	2.64	0.00	0.00	50.00	17.07
Software (138)	44.20	2.46	15.22	0.40	0.72	0.30	7.97	0.91
BB only (30)	40.00	1.81	26.67	0.33	0.00	0.00	23.33	0.85
Telecom (1551)	7.80	12.86	2.13	57.50	0.06	0.24	1.03	0.75
BB only (49)	32.65	2.42	18.37	76.92	0.00	0.00	16.33	0.53
Beverages (37)	32.43	9.69	18.92	0.73	0.00	0.00	10.81	1.28
BB only (5)	60.00	2.08	20.00	0.05	0.00	0.00	40.00	0.58

(continued)

Table 4 (continued)

Industry (N)	Cruz % of firms	Cruz % of money	Fiorina % of firms	Fiorina % of money	Gilmore % of firms	Gilmore % of money	Graham % of firms	Graham % of money
Health (29952)	7.15	22.25	1.02	1.19	0.01	0.02	0.19	0.71
BB only (18)	55.56	6.20	22.22	0.52	0.00	0.00	0.00	0.00
Health Insur. (23)	69.57	12.64	26.09	1.94	4.35	0.02	17.39	3.52
BB only (13)	76.92	10.59	30.77	2.29	7.69	0.03	30.77	4.27
Credit Reporting (10)	70.00	2.60	30.00	1.70	0.00	0.00	20.00	0.27
BB only (2)	100.00	0.89	100.00	2.48	0.00	0.00	50.00	0.20
Auto Dealers (3188)	4.89	2.83	0.75	0.43	0.03	0.06	0.22	0.25
BB only (7)	71.43	0.03	14.29	0.00	0.00	0.00	14.29	0.04
Transp, Trk, RR (1660)	13.01	30.96	0.84	0.46	0.00	0.00	0.42	1.76
BB only (11)	63.64	7.66	18.18	0.05	0.00	0.00	27.27	4.81
Airlines (14)	71.43	41.93	42.86	3.59	0.00	0.00	0.00	0.00
BB only (4)	100.00	44.79	100.00	3.92	0.00	0.00	0.00	0.00
Utilities (2584)	10.10	7.88	0.97	0.37	0.12	0.51	1.28	3.91
BB only (19)	94.74	2.11	42.11	0.13	10.53	0.55	36.84	2.38
Commun (14)	7.14	0.16	0.00	0.00	0.00	0.00	0.00	0.00
BB only (5)	20.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Mortg and Non-Bk Lending (136)	10.29	0.44	1.47	0.02	0.00	0.00	1.47	0.59
BB only (5)	40.00	0.05	40.00	0.03	0.00	0.00	0.00	0.00
Real Estate (12453)	5.60	11.40	1.25	3.15	0.02	0.29	0.47	1.31
BB only (36)	5.56	1.08	8.33	2.05	0.00	0.00	8.33	1.09
Insurance (4928)	7.22	4.83	1.44	0.53	0.02	0.00	0.41	0.29
BB only (35)	85.71	9.83	42.86	1.40	2.86	0.04	17.14	1.30
Comm Banking (3971)	6.95	16.56	1.91	1.12	0.08	0.11	0.48	0.57
BB only (18)	72.22	2.85	61.11	0.83	5.56	0.18	33.33	0.75
Invest and Hedge Funds (285)	8.77	35.54	4.21	0.24	0.35	0.00	1.75	0.10
BB only (48)	8.33	0.05	4.17	0.01	2.08	0.01	6.25	0.14

(continued)

Table 4 (continued)

Industry (N)	Cruz % of firms	Cruz % of money	Fiorina % of firms	Fiorina % of money	Gilmore % of firms	Gilmore % of money	Kasich % of firms	Kasich % of money	Pataki % of firms	Pataki % of money	Graham % of firms	Graham % of money
Priv Equity (14879)	5.28	8.33	1.92	4.65	0.05	0.05	0.05	0.05	0.83	2.12	0.83	2.12
BB only (38)	0.00	0.00	2.63	51.58	0.00	0.00	0.00	0.00	7.89	16.01	7.89	16.01
Brokers, Mut Fd (43)	23.26	5.43	25.58	0.64	0.00	0.00	0.00	0.00	9.30	1.92	9.30	1.92
BB only (6)	16.67	0.16	66.67	0.82	0.00	0.00	0.00	0.00	33.33	0.34	33.33	0.34
Retailing (194)	41.24	2.08	10.31	0.53	0.52	0.22	0.22	0.22	2.58	0.28	2.58	0.28
BB only (68)	52.94	1.79	16.18	0.42	0.00	0.00	0.00	0.00	4.41	0.18	4.41	0.18
Industry (N)	Huckabee % of firms	Huckabee % of money	Jindal % of firms	Jindal % of money	Gilmore % of firms	Gilmore % of money	Kasich % of firms	Kasich % of money	Pataki % of firms	Pataki % of money	Graham % of firms	Graham % of money
Mining (26)	0.00	0.00	3.85	1.98	7.69	0.41	7.69	0.41	0.00	0.00	0.00	0.00
BB only (2)	0.00	0.00	50.00	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coal Mining (147)	0.00	0.00	0.00	0.00	6.12	31.38	6.12	31.38	0.00	0.00	0.00	0.00
BB only (2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounting (275)	0.73	0.04	0.00	0.00	2.55	14.55	2.55	14.55	0.36	0.03	0.36	0.03
BB only (3)	33.33	0.03	0.00	0.00	100.00	5.20	100.00	5.20	33.33	0.03	33.33	0.03
Casinos (19)	0.00	0.00	0.00	0.00	5.26	0.13	5.26	0.13	5.26	0.13	5.26	0.13
BB only (9)	0.00	0.00	0.00	0.00	11.11	0.15	11.11	0.15	11.11	0.15	11.11	0.15
Service General (2346)	0.77	0.25	0.38	6.17	2.64	22.40	2.64	22.40	0.13	0.06	0.13	0.06
BB only (57)	12.28	0.22	3.51	3.76	17.54	0.77	17.54	0.77	1.75	0.08	1.75	0.08
Residential (16)	0.00	0.00	0.00	0.00	12.50	22.57	12.50	22.57	0.00	0.00	0.00	0.00
Heavy Constr. (5488)	0.47	0.46	0.15	0.38	1.48	15.10	1.48	15.10	0.09	0.55	0.09	0.55
BB only (9)	33.33	0.08	0.00	0.00	44.44	0.32	44.44	0.32	0.00	0.00	0.00	0.00
Waste Mgt. (8)	0.00	0.00	12.50	1.75	12.50	15.79	12.50	15.79	0.00	0.00	0.00	0.00
BB only (2)	0.00	0.00	0.00	0.00	50.00	21.63	50.00	21.63	0.00	0.00	0.00	0.00
Food (1668)	0.48	0.41	0.18	1.85	1.62	8.69	1.62	8.69	0.00	0.00	0.00	0.00
BB only (34)	0.00	0.00	0.00	0.00	20.59	2.00	20.59	2.00	0.00	0.00	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Huckabee % of firms	Huckabee % of money	Jindal % of firms	Jindal % of money	Kasich % of firms	Kasich % of money	Pataki % of firms	Pataki % of money
Tobacco (15)	0.00	0.00	0.00	0.00	13.33	10.52	0.00	0.00
BB only (3)	0.00	0.00	0.00	0.00	33.33	7.92	0.00	0.00
Textiles (13)	0.00	0.00	0.00	0.00	7.69	36.59	0.00	0.00
Apparel (23)	4.35	1.16	0.00	0.00	4.35	46.35	0.00	0.00
BB only (5)	0.00	0.00	0.00	0.00	20.00	53.59	0.00	0.00
Agribusiness (120)	0.83	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Paper (300)	0.67	0.02	0.00	0.00	4.00	1.65	0.00	0.00
BB only (8)	12.50	0.01	0.00	0.00	50.00	1.14	0.00	0.00
Printing and Pub (14)	7.14	5.01	0.00	0.00	7.14	2.32	0.00	0.00
BB only (1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemical (695)	0.43	0.05	0.72	4.55	5.47	20.66	0.00	0.00
BB only (16)	12.50	0.12	0.00	0.00	31.25	3.62	0.00	0.00
Oil (3987)	0.80	4.01	0.33	0.71	2.78	5.41	0.25	0.65
BB only (62)	8.06	5.12	3.23	0.11	29.03	2.25	1.61	0.03
Rubber (318)	1.26	1.72	0.31	1.35	4.09	14.66	0.00	0.00
BB only (1)	100.00	1.61	0.00	0.00	100.00	45.21	0.00	0.00
Glass (339)	0.29	0.14	0.00	0.00	0.59	1.75	0.00	0.00
BB only (2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steel (1215)	0.49	0.64	0.00	0.00	2.72	10.07	0.00	0.00
BB only (8)	0.00	0.00	0.00	0.00	25.00	1.76	0.00	0.00
Cosmetics (16)	0.00	0.00	6.25	0.19	25.00	0.99	6.25	7.10
BB only (9)	0.00	0.00	11.11	0.22	33.33	0.87	11.11	8.13
Altern Energy (22)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electronics (121)	2.48	1.66	2.48	0.95	14.88	4.91	0.00	0.00
BB only (13)	15.38	0.64	7.69	0.10	61.54	8.42	0.00	0.00
Guns, Ammo (8)	0.00	0.00	0.00	0.00	12.50	1.95	0.00	0.00
Machinery (222)	2.25	0.33	0.45	0.38	9.46	49.85	0.00	0.00
BB only (14)	28.57	0.33	7.14	0.97	50.00	19.19	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Huckabee % of firms	Huckabee % of money	Jindal % of firms	Jindal % of money	Kasich % of firms	Kasich % of money	Pataki % of firms	Pataki % of money
Defense Prod and Serv (19)	5.26	5.83	5.26	6.30	5.26	0.58	0.00	0.00
Autos (97)	2.06	2.74	0.00	0.00	5.15	5.27	1.03	1.31
BB only (12)	0.00	0.00	0.00	0.00	33.33	7.77	0.00	0.00
Aerospace (32)	18.75	0.96	6.25	0.17	31.25	7.22	0.00	0.00
BB only (9)	55.56	0.24	22.22	0.18	77.78	7.31	0.00	0.00
Pharma (587)	0.51	0.23	0.17	0.04	5.11	11.09	0.34	1.25
BB only (18)	11.11	0.11	0.00	0.00	66.67	28.45	0.00	0.00
Computers (41)	4.88	0.09	2.44	0.74	21.95	2.07	0.00	0.00
BB only (17)	11.76	0.10	5.88	0.83	17.65	1.40	0.00	0.00
Internet Mfgr (17)	5.88	0.20	0.00	0.00	35.29	28.66	0.00	0.00
BB only (2)	0.00	0.00	0.00	0.00	100.00	33.97	0.00	0.00
Software (138)	3.62	0.05	1.45	0.05	19.57	2.36	0.72	0.12
BB only (30)	13.33	0.03	3.33	0.00	26.67	0.47	0.00	0.00
Telecom (1551)	0.52	0.04	0.13	0.07	2.64	3.73	0.13	0.08
BB only (49)	6.12	0.03	2.04	0.04	28.57	2.53	4.08	0.11
Beverages (37)	2.70	0.36	2.70	0.36	10.81	1.51	0.00	0.00
BB only (5)	20.00	0.62	0.00	0.00	40.00	1.51	0.00	0.00
Health (29952)	0.33	0.40	0.19	2.23	1.49	4.40	0.11	0.78
BB only (18)	11.11	0.12	5.56	22.93	38.89	3.35	0.00	0.00
Health Insur. (23)	13.04	0.09	8.70	0.59	39.13	7.98	8.70	3.95
BB only (13)	23.08	0.11	15.38	0.72	61.54	5.01	15.38	4.79
Credit Reporting (10)	0.00	0.00	0.00	0.00	50.00	14.68	0.00	0.00
BB only (2)	0.00	0.00	0.00	0.00	100.00	0.95	0.00	0.00
Auto Dealers (3188)	0.28	0.32	0.16	0.75	1.47	1.75	0.03	0.01
BB only (7)	0.00	0.00	0.00	0.00	14.29	0.04	0.00	0.00
Transp, Trk, RR (1660)	0.66	0.87	0.12	0.45	1.33	1.98	0.00	0.00
BB only (11)	18.18	1.07	0.00	0.00	36.36	2.27	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Huckabee % of firms	Huckabee % of money	Jindal % of firms	Jindal % of money	Kasich % of firms	Kasich % of money	Pataki % of firms	Pataki % of money
Airlines (14)	21.43	1.84	0.00	0.00	35.71	3.78	0.00	0.00
BB only (4)	75.00	2.10	0.00	0.00	100.00	3.30	0.00	0.00
Utilities (2584)	0.39	0.29	0.19	0.49	1.43	7.23	0.15	0.40
BB only (19)	10.53	0.07	21.05	0.39	57.89	7.89	5.26	0.12
Commun (14)	0.00	0.00	0.00	0.00	28.57	57.08	7.14	0.04
BB only (5)	0.00	0.00	0.00	0.00	60.00	57.86	20.00	0.04
Mortg and Non-Bk Lending (136)	0.00	0.00	0.00	0.00	5.15	29.28	0.00	0.00
BB only (5)	0.00	0.00	0.00	0.00	40.00	35.56	0.00	0.00
Real Estate (12453)	0.51	1.30	0.23	0.85	1.72	10.45	0.10	1.15
BB only (36)	2.78	0.17	0.00	0.00	16.67	32.13	2.78	3.16
Insurance (4928)	0.57	0.24	0.22	1.08	2.44	4.35	0.08	0.04
BB only (35)	22.86	0.97	5.71	8.05	54.29	4.26	5.71	0.39
Comm Banking (3971)	0.63	0.41	0.18	0.17	2.77	6.44	0.20	0.19
BB only (18)	22.22	0.08	11.11	0.07	61.11	6.88	11.11	0.39
Invest and Hedge Funds (285)	0.70	0.01	1.05	0.67	9.82	14.69	0.35	0.03
BB only (48)	2.08	0.00	0.00	0.00	14.58	24.55	2.08	0.04
Priv Equity (14879)	0.38	0.13	0.17	0.69	3.41	17.54	0.14	0.15
BB only (38)	0.00	0.00	0.00	0.00	5.26	6.71	0.00	0.00
Brokers, Mut Fd (43)	2.33	0.02	2.33	0.01	20.93	13.31	2.33	0.80
BB only (6)	0.00	0.00	16.67	0.02	16.67	0.08	16.67	1.56
Retailing (194)	1.55	0.01	2.58	0.53	18.56	58.96	0.52	0.40
BB only (68)	4.41	0.01	7.35	0.58	35.29	62.34	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Paul % of firms	Paul % of money	Perry % of firms	Perry % of money	Rubio % of firms	Rubio % of money	Santorum % of firms	Santorum % of money	Walker % firms	Walker % money
Mining (26)	7.69	1.21	0.00	0.00	11.54	2.34	0.00	0.00	0.00	0.00
BB only (2)	50.00	0.27	0.00	0.00	50.00	1.06	0.00	0.00	0.00	0.00
Coal Mining (147)	4.76	0.46	0.68	0.82	7.48	45.53	0.68	0.12	1.36	4.20
BB only (2)	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00
Accounting (275)	1.45	0.45	0.36	0.05	3.64	9.92	0.36	0.20	1.82	2.67
BB only (3)	66.67	0.37	33.33	0.06	100.00	10.46	33.33	0.24	66.67	1.69
Casinos (19)	21.05	0.41	0.00	0.00	21.05	2.26	0.00	0.00	15.79	5.80
BB only (9)	22.22	0.19	0.00	0.00	33.33	1.19	0.00	0.00	11.11	3.01
Service General (2346)	2.13	1.58	0.30	0.37	5.50	4.26	0.21	0.03	1.49	26.34
BB only (57)	12.28	1.31	7.02	0.19	36.84	1.40	1.75	0.00	19.30	35.28
Residential (16)	25.00	0.40	6.25	0.56	50.00	2.73	0.00	0.00	6.25	1.21
Heavy Constr. (5488)	1.29	1.11	0.15	1.83	3.28	5.66	0.15	0.39	0.84	1.59
BB only (9)	55.56	0.67	11.11	0.06	55.56	2.05	11.11	0.11	22.22	0.07
Waste Mgt. (8)	12.50	1.58	0.00	0.00	12.50	2.46	0.00	0.00	0.00	0.00
BB only (2)	50.00	2.16	0.00	0.00	50.00	3.36	0.00	0.00	0.00	0.00
Food (1668)	1.08	0.52	0.06	0.15	4.98	12.19	0.24	0.47	1.20	5.14
BB only (34)	17.65	1.28	0.00	0.00	32.35	6.71	2.94	0.74	11.76	6.17
Tobacco (15)	0.00	0.00	0.00	0.00	26.67	20.29	0.00	0.00	6.67	10.94
BB only (3)	0.00	0.00	0.00	0.00	100.00	23.71	0.00	0.00	33.33	12.97
Textiles (13)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apparel (23)	8.70	0.44	0.00	0.00	26.09	4.64	0.00	0.00	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Paul % of firms	Paul % of money	Perry % of firms	Perry % of money	Rubio % of firms	Rubio % of money	Santorum % of firms	Santorum % of money	Walker % firms	Walker % money
BB only (5)	20.00	0.46	0.00	0.00	40.00	0.75	0.00	0.00	0.00	0.00
Agribusiness (120)	0.00	0.00	0.00	0.00	10.83	60.98	0.00	0.00	1.67	3.74
Paper (300)	3.67	0.39	0.00	0.00	5.67	43.22	0.00	0.00	2.67	0.97
BB only (8)	37.50	0.35	0.00	0.00	37.50	60.49	0.00	0.00	0.00	0.00
Printing and Pub (14)	7.14	0.19	0.00	0.00	28.57	12.18	7.14	0.38	7.14	0.46
BB only (1)	100.00	0.28	0.00	0.00	100.00	0.74	0.00	0.00	0.00	0.00
Chemical (695)	3.31	2.94	0.43	2.37	6.76	6.17	0.00	0.00	3.02	1.93
BB only (16)	6.25	0.23	0.00	0.00	56.25	11.23	0.00	0.00	25.00	1.76
Oil (3987)	1.91	0.60	0.70	11.72	5.69	7.17	0.23	0.09	1.73	2.83
BB only (62)	24.19	0.33	14.52	15.70	54.84	7.51	4.84	0.03	22.58	2.45
Rubber (318)	1.89	2.63	0.00	0.00	4.72	11.03	0.31	0.12	0.63	0.62
BB only (1)	100.00	2.69	0.00	0.00	100.00	10.76	0.00	0.00	100.00	10.76
Glass (339)	2.06	1.55	0.00	0.00	4.13	4.73	0.29	0.47	0.59	0.16
BB only (2)	50.00	0.01	0.00	0.00	50.00	0.34	0.00	0.00	0.00	0.00
Steel (1215)	1.81	3.45	0.16	0.77	4.03	11.26	0.00	0.00	1.23	3.79
BB only (8)	25.00	5.34	0.00	0.00	25.00	10.77	0.00	0.00	12.50	0.70
Cosmetics (16)	12.50	0.03	0.00	0.00	18.75	37.39	0.00	0.00	6.25	0.38
BB only (9)	22.22	0.03	0.00	0.00	22.22	29.62	0.00	0.00	11.11	0.44
Altern Energy (22)	9.09	31.10	0.00	0.00	4.55	16.64	0.00	0.00	4.55	1.56
Electronics (121)	14.05	3.47	1.65	0.09	21.49	20.21	1.65	0.46	4.13	4.70
BB only (13)	46.15	7.39	7.69	0.15	30.77	6.88	15.38	1.22	23.08	0.76

(continued)

Table 4 (continued)

Industry (N)	Paul % of firms	Paul % of money	Perry % of firms	Perry % of money	Rubio % of firms	Rubio % of money	Santorum % of firms	Santorum % of money	Walker % firms	Walker % money
Guns, Ammo (8)	12.50	0.12	12.50	0.72	37.50	7.77	0.00	0.00	25.00	3.58
Machinery (222)	8.11	1.72	0.90	0.39	11.26	3.38	0.45	0.01	5.86	5.43
BB only (14)	71.43	4.19	0.00	0.00	64.29	5.35	7.14	0.02	50.00	3.27
Defense Prod and Serv (19)	10.53	3.15	0.00	0.00	21.05	13.12	5.26	0.70	0.00	0.00
Autos (97)	9.28	3.74	0.00	0.00	9.28	4.69	1.03	1.21	3.09	0.85
BB only (12)	33.33	4.15	0.00	0.00	33.33	5.27	0.00	0.00	8.33	0.18
Aerospace (32)	34.38	3.78	0.00	0.00	37.50	10.29	6.25	0.39	18.75	3.29
BB only (9)	88.89	3.65	0.00	0.00	100.00	9.35	22.22	0.42	55.56	3.40
Pharma (587)	2.73	4.92	0.34	0.07	8.52	7.61	0.00	0.00	1.70	9.88
BB only (18)	38.89	6.09	11.11	0.23	61.11	9.17	0.00	0.00	27.78	3.67
Computers (41)	14.63	3.30	2.44	0.74	24.39	6.50	2.44	0.30	19.51	9.14
BB only (17)	23.53	1.85	5.88	0.83	35.29	5.54	5.88	0.33	29.41	9.36
Internet Mfgr (17)	47.06	5.02	5.88	3.32	41.18	4.66	0.00	0.00	17.65	1.86
BB only (2)	100.00	4.02	50.00	4.21	100.00	7.48	0.00	0.00	50.00	0.14
Software (138)	23.91	0.89	0.00	0.00	31.16	83.09	1.45	0.00	8.70	0.31
BB only (30)	36.67	0.62	0.00	0.00	43.33	91.32	3.33	0.00	23.33	0.28
Telecom (1551)	2.32	1.87	0.32	1.64	5.03	2.93	0.13	0.01	1.48	4.03
BB only (49)	22.45	0.68	0.00	0.00	34.69	2.38	2.04	0.01	18.37	3.35

(continued)

Table 4 (continued)

Industry (N)	Paul % of firms	Paul % of money	Perry % of firms	Perry % of money	Rubio % of firms	Rubio % of money	Santorum % of firms	Santorum % of money	Walker % firms	Walker % money
Beverages (37)	16.22	4.04	2.70	0.36	32.43	37.91	2.70	0.36	16.22	1.96
BB only (5)	40.00	0.68	0.00	0.00	60.00	59.38	0.00	0.00	20.00	1.09
Health (29952)	1.34	2.21	0.12	1.30	3.38	7.10	0.10	0.18	0.56	1.29
BB only (18)	11.11	0.83	0.00	0.00	50.00	8.01	0.00	0.00	0.00	0.00
Health Insur. (23)	39.13	1.46	8.70	0.12	56.52	7.06	8.70	1.24	21.74	0.73
BB only (13)	53.85	1.73	15.38	0.14	69.23	7.85	15.38	1.50	23.08	0.71
Credit Reporting (10)	40.00	0.73	0.00	0.00	50.00	3.86	0.00	0.00	20.00	0.55
BB only (2)	100.00	0.08	0.00	0.00	100.00	2.85	0.00	0.00	50.00	0.04
Auto Dealers (3188)	0.82	0.60	0.16	0.88	2.60	83.93	0.06	0.06	0.66	0.27
BB only (7)	14.29	0.00	14.29	0.95	42.86	98.64	0.00	0.00	0.00	0.00
Transp, Trk, RR (1660)	1.87	1.26	0.06	0.00	3.55	5.11	0.00	0.00	1.57	7.29
BB only (11)	27.27	1.39	0.00	0.00	45.45	6.80	0.00	0.00	36.36	-0.67
Airlines (14)	35.71	4.37	0.00	0.00	42.86	11.04	7.14	0.71	28.57	1.70
BB only (4)	100.00	4.84	0.00	0.00	100.00	12.44	25.00	0.80	100.00	1.94
Utilities (2584)	1.43	0.67	0.19	0.50	3.29	9.33	0.04	0.02	0.85	1.71
BB only (19)	31.58	0.18	5.26	0.13	78.95	8.98	0.00	0.00	26.32	0.75
Commun (14)	7.14	0.14	0.00	0.00	35.71	1.06	0.00	0.00	0.00	0.00
BB only (5)	0.00	0.00	0.00	0.00	60.00	0.53	0.00	0.00	0.00	0.00

(continued)

Table 4 (continued)

Industry (N)	Paul % of firms	Paul % of money	Perry % of firms	Perry % of money	Rubio % of firms	Rubio % of money	Santorum % of firms	Santorum % of money	Walker % firms	Walker % money
Mortg and Non-Bk Lending (136)	2.21	0.11	0.74	0.19	10.29	1.16	0.00	0.00	3.68	0.25
BB only (5)	0.00	0.00	0.00	0.00	60.00	0.19	0.00	0.00	20.00	0.01
Real Estate (12453)	0.72	0.98	0.26	0.82	4.26	14.53	0.15	1.07	0.87	2.03
BB only (36)	2.78	0.04	5.56	0.35	19.44	34.38	0.00	0.00	2.78	0.53
Insurance (4928)	1.06	0.51	0.22	0.15	4.34	2.85	0.26	0.10	0.89	0.84
BB only (35)	51.43	1.54	2.86	0.08	82.86	11.41	11.43	0.24	28.57	1.23
Comm Banking (3971)	1.61	3.04	0.35	0.60	5.04	14.93	0.28	0.10	1.51	10.38
BB only (18)	50.00	6.17	11.11	0.06	66.67	29.56	11.11	0.08	38.89	0.63
Invest and Hedge Funds (285)	1.75	0.02	0.70	0.14	15.44	27.64	0.70	0.01	4.56	0.55
BB only (48)	0.00	0.00	2.08	0.22	20.83	44.70	2.08	0.00	14.58	0.84
Priv Equity (14879)	1.00	11.62	0.28	0.66	6.32	8.93	0.19	0.64	1.31	2.27
BB only (38)	0.00	0.00	0.00	0.00	18.42	2.40	0.00	0.00	2.63	0.26
Brokers, Mut Fd (43)	9.30	0.17	4.65	0.02	23.26	17.37	0.00	0.00	6.98	1.71
BB only (6)	16.67	0.02	0.00	0.00	50.00	0.62	0.00	0.00	33.33	3.16
Retailing (194)	14.95	4.50	0.52	0.00	25.77	5.34	1.03	0.01	8.76	1.96
BB only (68)	27.94	4.79	0.00	0.00	38.24	5.25	1.47	0.01	20.59	1.47

BBBig Business Only

loss in the Indiana primary).⁵¹ The Bush bloc was anchored in multinational banking and finance, with strong representation—meaning hundreds of thousands of dollars raised—from all major banks, many private equity and hedge funds, insurance companies, and other financial houses.⁵² But the coalition also embraced many sectors with historical ties to the Bush family, including oil and chemical companies of all sizes, along with firms and investors in coal, mining, paper, and other sectors that have traditionally battled regulations designed to limit the dangers of climate change (Ferguson et al. 2013). Big firms in telecommunications, notably the descendants of the old Bell operating companies and major cable firms providing access to consumers that strongly oppose network neutrality (since they run the networks that the measure would crimp) were also heavily represented.⁵³ Transportation, Big Pharma, and the entire private health-care industry, including insurers, were also abundantly present. It looked like the Golden Horde was reincarnating, just like in the old days—almost.

⁵¹Thereafter, we count money coming in for Trump as part of the general election; we also use that date as the cutoff point for beginning to count money to the Republican National Committee as money for Trump, parallel to our treatment of Obama and other presidential nominees in earlier years. Note that other reports of money in the election count all donations to anti-Clinton Super Pacs as pro-Trump. We do not until after this May date.

The relations between the Trump campaign and the RNC were the subject of many news articles, but it is clear that they in fact worked together quite closely. We count all money given to the Democratic National Committee as a contribution to the Clinton campaign; it was obvious from leaked emails that the Clinton campaign controlled the DNC long before Donna Brazile revealed details of the secret agreements between the DNC and the Clinton campaign. Brazile, D. 2017. *Hacks*, New York, Hachette.

⁵²Note that when we speak of money coming from particular firms, unless otherwise indicated, we are using shorthand for an amalgamation of money from different sources: the executives of the firms who mostly donate in their own names, funds directly paid out by corporations (which do not go directly into candidate campaign committees, but to nominally independent committees promoting candidates), contributions from firm political action committees, etc. The usage does not normally imply that contributions came in the name of the firm. See the discussion in Ferguson, T., Jorgensen, P. & Chen, J. 2013. Party Competition and Industrial Structure in the 2012 Elections: *International Journal of Political Economy*, 42, 3–41; and Ferguson, T. 1995a. *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*, Chicago, University of Chicago Press.

Those two sources also outline our system for making industrial sector assignments, which we carry over in this paper. Identifying firms below our cutoffs for big business is inevitably tricky, because finding sectoral data becomes very difficult. When that is unavailable, some sectors, notably oil or steel, provide many clues in the names of many firms. But not all sectors do. It is inevitable that errors and omissions creep into the small firm statistics; for big firms, the problems are different. In those, the data are much easier to find, but sometimes can mislead.

⁵³For the differences within the telecom sector in regard to network neutrality, see the discussion and references in Ferguson, T., Jorgensen, P. & Chen, J. 2017. *Fifty Shades of Green: High Finance, Political Money, and the US Congress*. New York: Roosevelt Institute; available on the Internet at: http://rooseveltinstitute.org/wp-content/uploads/2017/05/FiftyShadesofGreen_0517.pdf.

A business base of such dimensions of course complicated all mass appeals. Many measures the coalition supported, such as the trade deals, were very unpopular. The Party also represented employers first and foremost; neither in its higher nor its lower circles was there any space whatever for unions or, typically, even minimum wages, a measure intensely disliked by most smaller firms in the low wage sector. The question of how the Republicans could appeal to blue- or gray-collar workers was thus highly fraught. The party had been grappling with this problem for more than a generation, especially since its discovery in the Goldwater campaign of 1964 that free markets roused little mass enthusiasm, but appeals on crime and moral decay did resonate (Phillips-Fein 2009; Ferguson 1995a; Ferguson and Rogers 1986).

By 2015, the laboriously erected scaffolding that connected the Republican establishment with the specialized segments of the wider public that the party had any chance of attracting on these grounds had grown thin indeed. As a former governor of Florida, married to the Mexican-American daughter of a migrant worker, Bush was adept at picking his way along that tricky path. He was opposed to abortion, though not aggressively promoting still more restrictive legislation. True believers suspected he would, like his father and brother, sell them out once in power. The former governor professed to consider hunting sacrosanct and opposed gun control. Where he stepped most tentatively and carefully was on immigration. He radiated confidence that immigration was a good thing and indicated that he might be open to some kind of grand bargain on immigrants and “Dreamers,” (the children of illegal immigrants born in the United States, who in many cases knew no other country) though this came steel-encased in rhetoric about border security.

The strategies of the other contenders for the nomination—all but one—are also easy to understand in light of Table 4. They faced the challenge of attracting enormous sums of money from a potential donor base that heavily overlapped Bush’s. As Table 2 showed, save for the candidates appealing directly to evangelicals—Carson, Huckabee, and (with some major qualifications) Cruz and Fiorina—and the special case of Rand Paul, all the candidates depended heavily on contributions of a thousand dollars or more. The plain fact, however, was that appealing only to small donors in a Republican primary was akin to trying to paddle a canoe in the face of an oncoming tidal wave. Many candidates, unsurprisingly, appear to have made virtually no appeal to small donors. They floated mainly on contributions above \$10,000, as Table 4 indicates. But no matter where candidates beat the bushes for money, this was a Republican primary. No one who hoped to

attract big business support could reasonably expect to succeed who did not walk in lockstep with most of the cardinal tenets of the Bush campaign: free trade, multilateralism, vast spending on defense, endless wars, etc.

In all likelihood, a substantial number of the minor candidates who threw their hats into the ring, including Huckabee, Gilmore, Pataki, and Jindal really aspired to cabinet positions or slots on the Fox Network. Christie, Fiorina, and Rubio were likely running for Vice President. They and any others who entertained hope that lightning would strike if Bush stumbled could be sure that their chances would not be enhanced by bolting from Republican orthodoxy, especially on the urgency of cutting taxes.

The likely also-rans thus pursued strategies that strikingly resembled canonical models of imperfect competition in microeconomics. They first hit up such patrons as they had developed and interests they knew from their days in power. Though we lack the space to detail individual cases, such contributions figure among the large donations to most of the various campaigns. It is tempting to describe these top-heavy patterns as industrial versions of the “friends and neighbors” voting much studied by electoral analysts. Fiorina’s case is particularly clear-cut, as she had headed up a major telecommunications company, but several of the governors also provided obvious examples. From their various bases, each candidate then experimented with offering slightly differentiated versions of essentially the same product as Bush, adding bells and whistles that might appeal to different audiences of investors and different segments of the likely Republican electorate. Then they hoped for the best.

All the contenders, for example, claimed they were pro-life, including several who had to clumsily walk back past positions that were less intransigent. Many candidates added wrinkles to the basic “no”: They staked out more extreme positions on modifying existing laws to make abortions even harder to obtain or to throw still more roadblocks in the way of Planned Parenthood. Carly Fiorina directly promoted overturning *Roe vs. Wade*; others pushed limiting abortions after 20 weeks, etc. Almost everyone professed to doubt that human activity affected climate change, though Fiorina at times made noises that humans might actually affect the climate but that governments could not do anything about it. No one apart from Bush made many friendly gestures to Muslims. Neither did anyone speak up for network neutrality, which would have been anathema to the telcos.

Marco Rubio and Carly Fiorina both aspired to the multinational mainstream on economics—Fiorina had run Hewlett Packard—but they competed to see who could be more convincingly bellicose toward Iran and Russia. The ranks of their donors reflected these moves, along with their

local economic bases. Rubio resembled a rightward tilting Bush and garnered wide support from various multinational banks and industrial firms. But his vehement pose on Iran drew proportionately heavier applause from outspoken critics of establishment foreign policy, such as the financier Paul Singer (who had for some years helped subsidize an alternative foreign policy forum), prominent defense contractors, some oil companies, Neoconservative critics of Obama's policies in eastern Europe and the Middle East, and American champions of the Likud Party's interpretation of Israeli interests. Fiorina, along with Scott Walker (the Governor of Wisconsin) proposed arming Ukrainians resisting the Russian-supported separatists with advanced weapons. She also cheered the idea of increasing the number of American troops in Europe.

Other candidates pursued different niches. Ted Cruz's main appeal was as defender of Libertarianism who detested government and taxes and strongly promoted free trade, but whose father had converted from Roman Catholicism to become an evangelical preacher. He experimented with some low key criticisms of China, which was just then emerging as a larger problem for US firms operating there and for Silicon Valley enterprises increasingly alarmed by what might be termed the "supply side mercantilism" that the Chinese government practices in favor of its indigenous industries in high tech and other advanced sectors. A graduate of Princeton and Harvard Law, whose wife worked for Goldman Sachs, Cruz also garnered some contributions from Wall Street and from oil companies in and around his own state of Texas.

Chris Christie, Governor of New Jersey, received over a quarter of a million dollars from executives of Public Service Electric and Gas, the giant utility that sells in much of his state. Then he struck off boldly ("courageously" as many newspaper accounts styled it) in a different direction. He promised to trim Social Security and cut "entitlements" as legions of tax-averse investors in both political parties have incessantly demanded. This brought him substantial contributions from Wall Street hedge fund managers and investors, accounting executives, and a fairly broad cross-section of mostly eastern-centered large firms, including some who were outspoken proponents of cutting entitlements. His was a campaign that relied especially heavily on truly large contributions.

So it was that in the very earliest days of the race, the script appeared to be holding up. Money rained down on Bush. The rest of the field gasped for air (money) and plugged away to differentiate themselves enough to reach the minimum poll levels they knew sponsors of the Republican debates would require.

On June 16, 2015, something took place that was not in the script. A member of the Forbes 400, whose reality TV show had made him a household name to millions of Americans, announced that he was joining the race. Unlike the other candidates, he did not have to think a long time to find a suitably impressive location to kick off his campaign. He simply walked down a staircase in the high tower in New York City that bore his name and met the press.

That Donald Trump might jump into the race had been rumored for a while; it was an open secret that he had toyed with the idea several times before. For more than four years, he had been fanning suspicions about where President Obama was really born and whether he was a closet Muslim. But the political establishment had always scorned Trump, and refused to take him seriously this time, either. The idea that he would run for president excited more laughter than anything else (Green 2017; Blair 2015; Kranish and Fisher 2016).

But the apparently off-the-cuff remarks that he made at that announcement resounded like thunder across the United States and in Mexico: “When Mexico sends its people, they’re not sending their best. They’re not sending you. They’re not sending you. They’re sending people that have lots of problems, and they’re bringing those problems with us. They’re bringing drugs. They’re bringing crime. They’re rapists. And some, I assume, are good people” (Staff 2016). On the heels of his announcement, Trump gave an exclusive interview to a Breitbart News reporter, so that the vast network built up by Steve Bannon and the Mercers could not miss the message.

His promise to build a wall along the border horrified Republican elites, who after the 2012 election had sought to repair the Party’s relations with Latinos. It also appalled millions of Americans who considered it out-and-out racism. But after Trump flew to Laredo, Texas, in July, ostensibly in response to an invitation from a local of the Border Patrol union and promised both a Wall and jobs as part of his program to “Make America Great Again,” he shot up in the polls.⁵⁴

Republican primary voters are anything but random samples of the American electorate. They are considerably older, richer, whiter, and far more conservative than the general electorate (Ferguson and Page 2017). Trump’s presence rather clearly spurred turnouts, but they remained very

⁵⁴The local rescinded the invitation at the last minute under pressure from the national union. Trump came anyway and was welcomed by the local members. See the discussion in Green, J. 2017. *Devil’s Bargain—Steve Bannon, Donald Trump, and the Storming of the Presidency*, New York, Penguin.

small in absolute size—about 17% of the total potential electorate in both parties (Desilver 2016). In a field with more than a dozen candidates, Trump's usual, but not invariable, pole position for much of the race was an enormous strategic advantage. It meant that Bush and the rest of the field had to battle each other to stay in the debates while trying to keep up with him.

Later, as the dazed Republican establishment licked its wounds and sought to come to terms with what was happening to it, the legend grew up that Trump's triumph really showed that money didn't really matter in politics. Trump won, the argument went, because of all the free publicity the mass media afforded him. We have more to say about that subject below, when we analyze the crises that threatened Trump's campaign in the late summer of 2016. But for now there is a simple response. Yes, Donald Trump was well known from his television show. But what gave him the freedom to jump into the race and trash-talk the other candidates into oblivion was the fact that he was a billionaire. He didn't need the money of the Bush Golden Horde or the many 1% fans of Marco Rubio, Scott Walker, and the rest. Or the Kochs. Or the defense and aerospace industry.

In a normal election year, anyone who talked like Trump in the GOP primaries might hope to shuttle around some early small states and make a brief splash, before being swamped by a wall of money in big multistate primaries on some Super Tuesday later in the campaign.

Not Trump—he was never going to run out of money in the primary as long as he was willing to open his own wallet, and everyone knew it. His money gave him both the means and the confidence to break the donors' cartel that until then had eliminated all GOP candidates who didn't begin by saluting the Bush family for starting the Iraq War, incessantly demanding cuts in Social Security and Medicare, and managing the economy into total collapse via financial deregulation. He could even mock the carried-interest tax loophole and sneer at Wall Street. He could say whatever he wanted as he flashed around in his own private jet with an almost presidential entourage of guards, schedulers, and advisers that other campaigns had to pay dearly for. He could make charitable contributions to veterans' organizations and other groups whose timely support could be helpful and which would not show up in any campaign finance tabulation. And anyone who did a favor for his campaign could be confident they were helping someone who would be around for a long time, no matter how the campaign turned out—indeed someone who seemed intent on setting up some kind of a network or mass movement if somehow he didn't win (Barajas 2016).

The effect of Trump's freedom to talk, along with the apparent credibility his membership on the Forbes list conferred on him when he talked about jobs and foreign trade, and his attacks on immigrants, highly publicized quarrels with women political commentators, and demands for "America First" in foreign policy was electrifying—like throwing open a tomb that had been sealed for ages. Next to the struggling wraiths who toiled in the Republican primary, he looked like Shakespeare's Julius Caesar, who "doth bestride the narrow world like a colossus." The political establishment couldn't comprehend what was happening, or why even people suspicious of him couldn't take their eyes off him. Trump just laughed at the other candidates' shibboleths and their stuttering incapacity to say anything to any real person or address the issues pressing so hard on Americans living in a dual economy.

In analyzing the Trump vote, the published exit polls conducted by media consortia are only modestly helpful. Their displays include only a few controls. The American National Election Survey data can be much more useful, if carefully done. Because of the importance of the spatial inequalities that the dual economy produces, for example, we suspect that normal controls for income are less useful than in the past. The key issue is likely long-term stagnation in places where respondents live, which year-to-year measures will not catch. One should be cautious, therefore, in pointing to voting data from the 2016 election. Still it is striking that in the Republican primaries, early analyses suggest that Trump ran especially well in counties with heavy concentrations of poor whites who had relatively low levels of education—exactly what one would expect from the earlier analysis of the dual economy (Guo 2016). The pull of the promise of "making America great again" was intense: Even in Iowa, where Trump narrowly lost, evangelicals, presumably one of the last groups one would expect to be attracted to a loose-talking and loose-living figure like Trump, deserted their pastors in substantial numbers. As the Republican campaign wore on, the flow turned into a torrent, leaving Ted Cruz, Ben Carson, and other candidates who courted the evangelicals out in right field.

12 The Democratic Earthquake

On the Democratic side, just like the Republicans,' a consensus script existed for the primaries. The Democratic counterpart to Jeb Bush was Hillary Clinton, who was supposed to cruise more or less effortlessly to the nomination. As a lawyer with a distinguished career in her own right, a very involved First Lady, US Senator, and then Secretary of State under President Obama,

she could hardly be faulted for lack of experience or credentials. The prospect of becoming the first woman President lent her candidacy an extra layer of dignity and importance, though, obviously, it also stimulated various attacks that in many cases were less than good-willed or even in good faith.

Not everyone, however, was entranced by all parts of her record. It was no secret that Hillary had played an active-behind-the-scenes role in her husband's presidency. Bill Clinton's enthusiasm for financial deregulation was well known; it was during his presidency that milestone deregulatory legislation had been enacted, such as the final abolition of the Glass-Steagall Act that used to separate investment banking from commercial banking. Many of the biggest battles in the long fight by the banks to keep derivatives from being regulated had also taken place during his administration, with Robert Rubin, Lawrence Summers, and other key Clinton appointees (together with some Republicans like Phil and Wendy Gramm) driving that policy as both Clintons looked on benignly.

Hillary Clinton's record as Senator from New York in regard to financial deregulation was consistent with this arc. Before the collapse in 2008, she lagged far behind many other Democrats in efforts to restrain Wall Street (Linskey 2016). After staunchly supporting the key free trade initiatives of her husband, including the landmark NAFTA, she hewed to the same line in the Senate. Records disclosed during the 2016 campaign showed that as Secretary of State Clinton enthusiastically supported the Trans-Pacific Partnership that the Obama administration hoped to push across. Only after leaving office did she finally come out against the TPP during the campaign (Allen and Parnes 2017).

As Secretary of State Clinton had worked closely with many big American firms, especially Google, which promoted a global vision of countries linked by worldwide telecommunication markets dominated by lightly regulated giants like themselves (Assange 2014). In Asia, this support for free trade came accompanied by a hawkish stance toward China. It was during her tenure as Secretary of State that one of her subordinates discovered that the US mutual defense treaty with Japan covered an island that the United States officially was not sure even belonged to Japan.

Like Bill Clinton in the nineties, Hillary Clinton also strongly promoted NATO expansion. In 2008, as a Senator, she had cosponsored a resolution to bring both Georgia and Ukraine into NATO, which was guaranteed to produce in Russia roughly the same sensation as a Russian pact with Canada would in the United States (Sachs 2016). She continued down this path as Secretary of State. Her Assistant Secretary of State for European and Eurasian Affairs, Victoria Nuland, played a key role in the US effort to

squeeze Ukraine into choosing between Europe and Russia (to paraphrase the rueful description by the then German Vice Chancellor, after the plan miscarried) (De Ploeg 2017; Behrakis 2014). Clinton also pushed to challenge the Russian backed regime in Syria and strongly promoted changes in Egypt and other Arab regimes, including, most fatefully, Libya. As discussed below, a Clinton tilt toward the Neoconservatives became more pronounced as she left the administration to prepare for her presidential campaign.

Years of fending off vitriolic conservative attacks had left the Clintons wary; they certainly appreciated the value of institutional resources, including money. But many observers, including (as an email disclosed by WikiLeaks revealed) Colin Powell, and some top officials of Hillary Clinton's own campaign, had qualms about the lengths the Clintons were prepared to go to build a war chest (Geller 2016). The Clinton Foundation's pursuit of donations from regimes in central Asia and the Persian Gulf that were anything but models of democracy attracted attention, especially when clumsy efforts to conceal them through screens were exposed. The Washington Post reported that between 2001 and 2013, the Clinton Foundation had raised almost \$2 billion dollars from "a vast global network that includes corporate titans, political donors, foreign governments and other wealthy interests" (Helderman et al. 2015). Eventually, the Foundation and its financing became the target of a book commissioned by Steven Bannon in advance of the 2016 election (Schweitzer 2015). The Foundation, however, hardly exhausted the Clinton's efforts to shake the money tree. CNN reported that between February 2001 and May 2015 (when Hillary Clinton declared for the presidency), the Clintons had received more than \$153 million in speaking fees. Almost eight million dollars of that came from just a handful of giant banks, including Goldman Sachs, UBS, Bank of America, Citigroup, and Deutsche Bank (Yoon 2016).

When queried about all this largesse, Clinton's answers were often less than reassuring. In the campaign, she flatly refused to make public the text of speeches she made for Goldman Sachs after leaving the Department of State, which was widely interpreted as a strong signal to the financial community. At times, she challenged questioners to name a vote she had switched for money, implicitly dodging questions about her long support for policies that 2008 had clearly shown to be disastrous. Asked after the campaign had ended why she kept chasing so much money, she dismissed the question by responding that the companies paid such fees to men all the time (Marcus 2017). In the meantime, money poured into her campaign not only from Wall Street but also from a broad cross-section of American big business, as Table 5 shows.

Table 5 Industrial structure of the democratic race (Source Computed by authors from FEC and IRS data)

Industry (N)	Clinton % of firms	Clinton % of money	Sanders % of firms	Sanders % of money	O'Malley % of firms	O'Malley % of money	Webb % of firms	Webb % of money
Mining (26)	38.46	79.51	26.92	19.84	0.00	0.00	3.85	0.64
BB only (2)	100.00	84.07	50.00	15.93	0.00	0.00	0.00	0.00
Coal Mining (147)	6.12	68.44	5.44	17.51	1.36	14.04	0.00	0.00
BB only (2)	0.00	0.00	0.00	0.00	50.00	100.00	0.00	0.00
Accounting (275)	24.36	95.58	11.64	4.21	1.09	0.21	0.00	0.00
BB only (3)	100.00	96.20	100.00	3.67	66.67	0.13	0.00	0.00
Casinos (19)	52.63	93.22	31.58	4.80	5.26	1.99	0.00	0.00
BB only (9)	44.44	94.41	22.22	3.17	11.11	2.42	0.00	0.00
Service General (2346)	32.74	92.87	21.57	6.83	0.68	0.30	0.04	0.00
BB only (57)	45.61	93.94	29.82	5.98	5.26	0.08	1.75	0.00
Residential (16)	75.00	98.82	37.50	1.18	0.00	0.00	0.00	0.00
Heavy Constr. (5488)	11.92	93.03	6.65	6.32	0.27	0.63	0.02	0.02
BB only (9)	66.67	95.29	66.67	4.71	0.00	0.00	0.00	0.00
Waste Mgt. (8)	75.00	67.61	62.50	32.39	0.00	0.00	0.00	0.00
BB only (2)	100.00	77.35	100.00	22.65	0.00	0.00	0.00	0.00
Food (1668)	25.12	92.89	16.55	6.88	0.30	0.23	0.00	0.00
BB only (34)	61.76	92.72	55.88	7.10	5.88	0.18	0.00	0.00
Tobacco (15)	40.00	98.48	26.67	1.52	0.00	0.00	0.00	0.00
BB only (3)	100.00	99.40	66.67	0.60	0.00	0.00	0.00	0.00
Textiles (13)	30.77	87.80	23.08	12.20	0.00	0.00	0.00	0.00
Apparel (23)	91.30	98.18	65.22	1.41	8.70	0.41	0.00	0.00
BB only (5)	100.00	97.32	40.00	2.00	20.00	0.67	0.00	0.00
Agribusiness (120)	10.83	92.04	3.33	7.96	0.00	0.00	0.00	0.00
BB only (1)	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Paper (300)	23.67	77.41	22.67	22.59	0.00	0.00	0.00	0.00
BB only (8)	62.50	78.10	62.50	21.90	0.00	0.00	0.00	0.00
Printing and Pub (14)	71.43	95.01	50.00	4.99	0.00	0.00	0.00	0.00

(continued)

Table 5 (continued)

Industry (N)	Clinton % of firms	Clinton % of money	Sanders % of firms	Sanders % of money	O'Malley % of firms	O'Malley % of money	Webb % of firms	Webb % of money
BB only (1)	100.00	83.10	100.00	16.90	0.00	0.00	0.00	0.00
Chemical (695)	18.99	93.30	13.53	6.41	0.43	0.30	0.00	0.00
BB only (16)	62.50	96.43	56.25	3.25	12.50	0.32	0.00	0.00
Oil (3987)	19.69	96.71	10.33	2.91	0.43	0.37	0.03	0.01
BB only (62)	59.68	94.54	54.84	5.25	1.61	0.20	0.00	0.00
Rubber (318)	11.64	71.69	8.18	18.48	0.31	9.83	0.00	0.00
BB only (1)	100.00	80.42	100.00	19.58	0.00	0.00	0.00	0.00
Glass (339)	17.70	94.13	18.58	5.82	0.00	0.00	0.29	0.04
BB only (2)	50.00	99.11	50.00	0.89	0.00	0.00	0.00	0.00
Steel (1215)	14.73	90.99	11.36	8.20	0.00	0.00	0.08	0.81
BB only (8)	50.00	86.43	75.00	13.57	0.00	0.00	0.00	0.00
Cosmetics (16)	56.25	95.48	37.50	4.25	6.25	0.27	0.00	0.00
BB only (9)	77.78	95.40	55.56	4.33	11.11	0.28	0.00	0.00
Altern Energy (22)	50.00	98.00	22.73	2.00	0.00	0.00	0.00	0.00
Electronics (121)	79.34	89.41	62.81	10.12	4.13	0.35	0.83	0.11
BB only (13)	92.31	86.56	84.62	13.00	15.38	0.44	0.00	0.00
Guns, Ammo (8)	50.00	88.97	50.00	11.03	0.00	0.00	0.00	0.00
Machinery (222)	42.34	84.59	35.14	13.80	1.80	1.42	2.25	0.19
BB only (14)	100.00	85.88	100.00	12.25	14.29	1.70	21.43	0.17
Defense Prod and Serv (19)	21.05	80.31	26.32	19.69	0.00	0.00	0.00	0.00
Autos (97)	54.64	88.96	44.33	10.61	3.09	0.34	1.03	0.09
BB only (12)	75.00	81.42	58.33	18.32	0.00	0.00	8.33	0.26
Aerospace (32)	59.38	79.87	50.00	19.52	15.63	0.48	9.38	0.14
BB only (9)	100.00	79.77	88.89	19.56	55.56	0.52	33.33	0.15
Pharma (587)	48.72	93.62	22.83	6.34	0.51	0.04	0.00	0.00
BB only (18)	83.33	94.14	72.22	5.84	5.56	0.03	0.00	0.00

(continued)

Table 5 (continued)

Industry (N)	Clinton % of firms	Clinton % of money	Sanders % of firms	Sanders % of money	O'Malley % of firms	O'Malley % of money	Webb % of firms	Webb % of money
Computers(41)	63.41	89.14	51.22	10.77	2.44	0.08	2.44	0.01
BB only (17)	58.82	89.56	41.18	10.35	5.88	0.08	5.88	0.01
Internet Mfgr (17)	94.12	88.02	94.12	11.68	17.65	0.22	5.88	0.09
BB only (2)	100.00	90.98	100.00	8.69	100.00	0.23	50.00	0.10
Software (138)	76.81	89.71	65.22	10.11	9.42	0.18	1.45	0.01
BB only (30)	63.33	90.03	40.00	9.80	23.33	0.16	6.67	0.01
Telecom (1551)	30.30	98.33	17.21	1.55	1.16	0.11	0.39	0.02
BB only (49)	63.27	98.71	36.73	1.21	14.29	0.06	8.16	0.01
Beverages (37)	54.05	98.13	40.54	1.68	2.70	0.19	0.00	0.00
BB only (5)	80.00	97.97	60.00	1.68	20.00	0.35	0.00	0.00
Health (29952)	31.60	90.65	15.79	8.76	0.41	0.56	0.04	0.02
BB only (18)	72.22	99.21	61.11	0.73	11.11	0.05	5.56	0.01
Health Insur. (23)	82.61	97.13	78.26	2.74	17.39	0.13	0.00	0.00
BB only (13)	84.62	97.18	76.92	2.69	30.77	0.14	0.00	0.00
Credit Reporting (10)	80.00	93.30	70.00	6.70	0.00	0.00	0.00	0.00
BB only (2)	100.00	94.76	100.00	5.24	0.00	0.00	0.00	0.00
BB only (1)	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Auto Dealers (3188)	9.22	91.91	6.74	7.47	0.13	0.52	0.03	0.10
BB only (7)	71.43	84.45	42.86	14.51	14.29	1.04	0.00	0.00
Transp, Trk, RR (1660)	12.83	94.04	8.61	5.80	0.18	0.10	0.06	0.05
BB only (11)	63.64	80.96	63.64	18.88	9.09	0.16	0.00	0.00
Airlines (14)	78.57	84.65	71.43	13.60	28.57	1.69	7.14	0.07
BB only (4)	100.00	85.62	100.00	13.01	75.00	1.29	25.00	0.07
Utilities (2584)	12.00	89.95	12.27	9.24	0.12	0.73	0.08	0.09
BB only (19)	94.74	93.83	89.47	5.97	5.26	0.06	10.53	0.14
Commun (14)	57.14	94.14	57.14	4.50	21.43	1.32	7.14	0.04
BB only (5)	60.00	93.31	60.00	5.09	40.00	1.55	20.00	0.05

(continued)

Table 5 (continued)

Industry (N)	Clinton % of firms	Clinton % of money	Sanders % of firms	Sanders % of money	O'Malley % of firms	O'Malley % of money	Webb % of firms	Webb % of money
Mortg and Non-Bk Lending (136)	33.09	89.85	17.65	9.31	0.74	0.69	0.74	0.14
BB only (5)	80.00	89.92	60.00	8.83	20.00	1.04	20.00	0.21
Real Estate (12453)	20.84	98.49	7.29	1.14	0.56	0.34	0.06	0.03
BB only (36)	38.89	99.95	2.78	0.04	2.78	0.01	0.00	0.00
Insurance (4928)	15.04	93.11	6.64	6.43	0.39	0.39	0.02	0.07
BB only (35)	91.43	92.95	88.57	6.97	11.43	0.09	0.00	0.00
Comm Banking (3971)	19.97	92.42	9.37	3.03	0.58	4.52	0.05	0.03
BB only (18)	72.22	97.73	66.67	2.22	22.22	0.05	0.00	0.00
Invest and Hedge Funds (285)	36.14	99.90	6.67	0.08	2.11	0.02	0.00	0.00
BB only (48)	45.83	99.95	8.33	0.03	6.25	0.01	0.00	0.00
Priv Equity (14879)	28.67	99.02	7.39	0.73	0.70	0.22	0.11	0.02
BB only (38)	42.11	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Brokers, Mut Fd (43)	62.79	95.24	48.84	4.36	6.98	0.32	2.33	0.08
BB only (6)	50.00	96.81	33.33	2.57	16.67	0.61	0.00	0.00
Retailing (194)	69.59	92.55	58.25	7.28	3.09	0.17	0.00	0.00
BB only (68)	75.00	91.87	63.24	7.98	5.88	0.15	0.00	0.00

BB Big Business Only

Neither Martin O'Malley nor James Webb, two hopefuls who also entered the race, posed any challenge to Clinton in regard to fundraising or anything else. Like the Republican also-rans, each started from a small base of big donors that they then could not expand, though Webb—a vaguely populist defense hawk—also attracted some small donations. Both quickly dropped out.

In the face of Bernie Sanders' onslaught, however, Clinton's responses to questions about her relations to Wall Street looked lame in indeed. Written off as quixotic when he announced, Sanders's meteoric rise stunned everyone. The avowed Socialist from Vermont did not rely on the usual coterie of Democratic insiders on corporate and foundation retainers for advice on policy and the economy. In sharp contrast to the Clintons, Sanders had long supported labor unions, not simply by talking with (some of) their leaders, but actually showing up on picket lines to support campaigns to organize workers. Unlike Clinton, who claimed that she went to Iowa to "listen" to voters and excelled in spelling out the wonkish details of particular programs, Sanders forthrightly addressed the central problems that the dual economy creates for ordinary Americans. Unionization was part of his answer to low pay. Increasing aggregate demand by taking aggressive action to guarantee full employment and fund major public projects was another. In front of millions of people who probably had never heard anyone press such issues before, Sanders argued for implementing single-payer health care and getting big money out of politics. He also tackled the college debt problem head on, saying that the first two years of college should be free and proposed a plan to forgive student debt.

The response was overwhelming. A genuine mass movement, the Sanders campaign followed a wild grassroots logic of its own that the central staff had no hope of fully controlling. The surge unnerved not only the Clinton camp but also the entire American establishment. Major media outlets that happily afforded Trump waves of free coverage were far more grudging toward Sanders. Many stories in the *Washington Post* and other media did not even attempt to be even-handed, though in the latter stages of the campaign his press coverage improved.⁵⁵ But it didn't seem to matter. When Sanders responded to Clinton in a debate that no one on Wall Street ever offered him six-figure fees

⁵⁵Patterson, T. 2016b. Pre-primary News Coverage of the 2016 Race: Trump's Rise, Sanders' Emergence, Clinton's Struggle. *Shorenstein Center on Media, Politics, and Public Policy*, June 13, 2016, dismisses complaints about the media's coverage of Sanders, though conceding he was initially ignored. We think this is a mistake and that the study should have directly compared the treatment of Trump by the media with Sanders and looked more closely at the tone than the study did. Compare the many quantitative assessments of coverage on the website of Fairness and Accuracy in Reporting; for example, Johnson, A. 2016. Washington Post Ran 16 Negative Stories on Bernie Sanders in 16 Hours. *FAIR.org*, March 8, 2016.

for speeches, one could almost hear the TV audience collectively suck in its breath. Likewise when he reminded Clinton of her husband's role in the financial deregulation that destroyed the world economy and reproached Clinton, who claimed to be the experienced foreign policy hand, for simply swimming with the tide in the run-up to the invasion of Iraq. While Clinton claimed Henry Kissinger as a mentor and praised his foreign policy acumen, Sanders bluntly declared that he was proud to say that Kissinger was not his friend and that he would not take advice from him (Harris 2016).

Sanders clearly connected with the concerns of many listeners, especially with young people. To many in the generations who had grown to maturity after the Cold War, Sanders' proposals sounded like common sense, not pie in the sky. They and millions of their elders appreciated his proposals on student debt and his forthright discussion of economic inequality, health care, Wall Street, and labor markets. And he waged his campaign on a broadly inclusive basis, stigmatizing bankers, not racial, religious, or sexual minorities. Most astonishing of all, though, was how Sanders financed his effort. This was the real secret of his "revolution": Money just kept pouring in from small contributors. We have checked carefully to see if Sanders, like Obama in both 2008 and 2012, perhaps received large sums delivered in small doses from big donors (Ferguson et al. 2013). He did not. The entries for big business in Table 5 come from scattered small contributions from firms where large numbers of individuals contributed. There were essentially *no* big ticket contributions from top executives and, a fortiori, no Super PACs. (Younger workers, who in some cases were quite vocal about the absurdly skewed pay levels in their industry, show up especially heavily in Silicon Valley and other high tech locales for small sums.) The handful of relatively large contributions arose from summed donations of a few unions (most unions, if much less clearly union members, supported Clinton).⁵⁶

The Clinton campaign had always believed that her long time ties to the Black community would tide her through any rough patches (Allen and Parnes 2017). Although by the end of the race, young African-Americans were coming over to Sanders in substantial numbers, that calculation was basically right. Sanders kicked off his campaign for the presidency in the aftermath of the protests in Baltimore over the death of a young black male in police custody. Had he gone there to make the announcement, as some younger

⁵⁶Total union contributions to Clinton before August 1, 2016 amounted to just under \$34 million dollars; total union contributions to Sanders totaled just over \$5.4 million. The number of individual union members we can identify contributing to each campaign is almost the same, running close to 450,000 for each. But there are many more organizational and political action contributions to the Clinton campaign from labor sources.

members of the campaign staff favored, perhaps things might have been different. But he took the advice of his more experienced advisers and did not. In the end, Sanders won millions of votes, including a shocking upset in the Michigan primary, and swept through many western state caucuses like a prairie fire. But the Clinton campaign's care and feeding of the Democratic Party Super-delegates, her control of the Democratic Party machinery, and the enormous advantages she started with proved just enough to secure her victory.

13 Big Money and the Triumph of Trump

On May 3, Trump won the Indiana primary. Senator Ted Cruz, one of his last two remaining opponents, dropped out of the race. The next day Ohio Governor John Kasich, whose campaign had won some support from portions of Wall Street (including some investors who had also supported Chris Christie) suspended his campaign. Trump's nomination now appeared inevitable. Nevertheless, speculation and rumors about schemes to prevent his nomination by members of the Republican establishment ran rife in the media.

Well before then Trump had started enlarging his campaign entourage. In March, he had brought in Paul Manafort to bring order to the campaign's pursuit of convention delegates (Sherman 2016). A veteran Republican operative who had helped coordinate Ronald Reagan's 1980 southern campaign strategy before becoming a lobbyist and adviser to a string of authoritarian leaders in the Philippines, Zaire, Angola, Somalia, and (as all the world now knows) Ukraine, Manafort began by trying to tone down some of Trump's campaign rhetoric (Sturgis 2017). As pressure intensified to conciliate as many Republicans as possible in order to rivet down the nomination and secure support in the general election, Manafort's role widened. By mid-June, amid brutal infighting, he took over leadership of the campaign (Green 2017).

As our Table 4 showed, Trump had largely financed his primary campaign with small contributions and loans from himself. As late as mid-May, he remained convinced that his success in using free media and his practice of going over the head of the establishment press directly to voters via Twitter would make it unnecessary for him to raise the "\$1 billion to \$2 billion that modern presidential campaigns were thought to require" (Green 2017).

As the convention approached, however, the reality of the crucial role of major investments in political parties started to sink in. Some of the pressure came from the Republican National Committee and related party committees. Their leaders intuitively grasped the point we demonstrated in a recent paper: That outcomes of most congressional election races in

every year for which we have the requisite data are direct (“linear”) functions of money (Ferguson et al. 2016). The officials could safely project that the pattern would hold once again in the 2016 Congressional elections (as it did—see Fig. 3).⁵⁷ But the Trump campaign, too, began to hold out the tin cup on its own behalf with increasing vehemence. As we noted earlier, small donations had been flowing steadily into its coffers. Unlike most previous Republican efforts, these added up to some serious money. But in the summer, it became plain that the sums arriving were not nearly enough. In many senses, Trump was no Bernie Sanders.

We have combined federal records from different sources to create a day-by-day picture of the Trump campaign’s incoming cash flow (including “outside money” supposedly uncoordinated with the campaign—see Fig. 4). We are able to source the revenues to individual big businesses and investors and aggregate them by sector (Table 6) and also by specific time intervals. Our data reveal aspects of the campaign’s trajectory that have received almost no attention. It is apparent that Trump’s and Manafort’s efforts to conciliate the Republican establishment initially met with some real success. The run-up to the Convention brought in substantial new money, including, for the first time, significant contributions from big business. Mining, especially coal mining; Big Pharma (which was certainly worried by tough talk from the Democrats, including Hillary Clinton, about regulating drug prices); tobacco, chemical companies, and oil (including substantial sums from executives at Chevron, Exxon, and many medium sized firms); and telecommunications (notably AT&T, which had a major merger pending) all weighed in.⁵⁸

Money from executives at the big banks also began streaming in, including Bank of America, J. P. Morgan Chase, Morgan Stanley, and Wells Fargo. Parts of Silicon Valley also started coming in from the cold. Contrary to many postelection press accounts, in the end contributions from major Silicon Valley firms or their executives would rank among Trump’s bigger sources of funds, though as a group in the aggregate Silicon Valley tilted

⁵⁷Note that as we have stressed many times, two way causality between money and votes happens. But as we argued in detail in Ferguson, T., Jorgensen, P. & Chen, J. 2016. How Money Drives US Congressional Elections. Institute for New Economic Thinking, Working Paper #48, on the web at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2817705, money typically is the more important factor. The 2016 Senate results are an especially striking case in point, since the wave of Republican money that preserved the Senate came when their polls were strikingly unpromising. More of this in another paper.

⁵⁸We repeat our caution above that mentioning firms is usually a shorthand for summarizing a wide variety of contributions, including from individual executives, not firms per se. The big Facebook contribution is something of a surprise, given the wave of publicity that insists that the firm was lopsidedly partial to Democrats. But we cannot explore this question here. It came in the name of the firm.

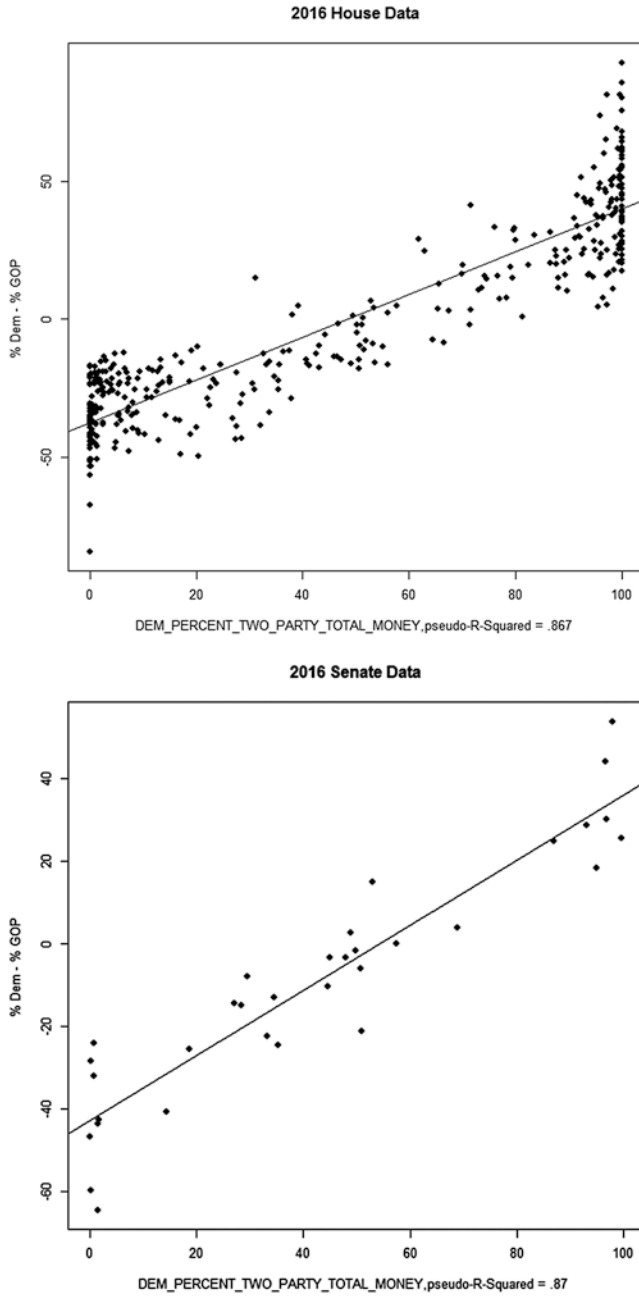


Fig. 3 Money and votes in 2016 congressional elections (Regression, spatial latent instrumental variable model) (Source Data from FEC and IRS, Authors calculations)

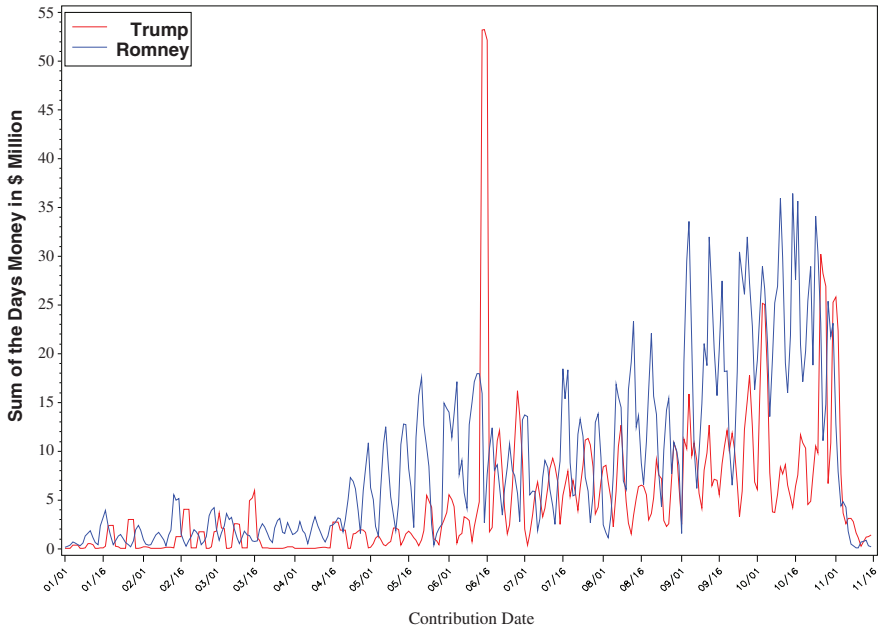


Fig. 4 Total money flow into Trump campaign; Romney 2012 used for comparison (Source Computed by Authors from FEC and IRS data)

heavily in favor of Clinton. Just ahead of the Republican convention, for example, at a moment when such donations were hotly debated, Facebook contributed \$900,000 to the Cleveland Host Committee. In a harbinger of things to come, additional money came from firms and industries that appear to have been attracted by Trump's talk of tariffs, including steel and companies making machinery of various types (Table 6).⁵⁹ The Trump

⁵⁹We have several times received queries about whether foreign money could be mixed into these numbers. Various unconfirmed reports swirling around also raise this question in a pointed fashion. See, e.g., Leopold, J., Cormier, A. & Garrison, J. 2017. Secret Finding: 60 Russian Payments "To Finance Election Campaign of 2016." *BuzzFeed*, November 14, 2017. We have run the obvious checks for eastern European names of people and companies, with no interesting results. Essentially all the very large transactions are relatively easy to trace and do not raise questions. An organized effort to channel many small contributions is possible, but there is no real way to rule something like that out. But our view is that to add appreciably to the fantastic sums clearly raised domestically, any such effort would have to be so large it probably would surface. The sums bandied around speculatively in various news reports simply wouldn't make a real difference. The US political system is money-driven and needs no foreign intervention to reach that status. There is, we would caution, no way we can examine what, for example, the Deutsche Bank or any other lender of Trump's might have done in years past.

One caution on Fig. 4; one giant contribution in mid-June distorts it, even though we use a three-day moving average. See the discussion in Trudo, H. & Vogel, K., 2016. Convicted Ponzi Schemer: I'll Conduct \$50 Million Marketing Campaign for Trump. *Politico*, June 16, 2016; this appears to have been carried out.

Table 6 Three stages of the Trump campaign (Source Computed by authors from FEC and IRS data)

Industry (N)	Trump % of firms	Trump money	Trump % of firms before		Trump % of money before		% of firms May		% of money May		% of firms after Aug 13.	Trump % of money after Aug 13
			May 04	May 04	May 04	May 04	04-Aug12	04-Aug12	04-Aug 12	04-Aug 12		
Mining (26)	30.77	274,487	7.69	0.07	30.77	97.49	19.23	2.44				
BB only (2)	50.00	268,133	50.00	0.03	50.00	98.19	50.00	1.78				
Coal Mining (147)	37.41	2,418,344	3.40	0.09	25.17	46.47	21.77	53.44				
BB only (2)	100.00	401,000	0.00	0.00	0.00	0.00	100.00	100.00				
Accounting (275)	21.09	477,900	3.27	1.45	15.27	53.22	13.82	45.34				
BB only (3)	100.00	358,993	66.67	0.29	100.00	48.81	100.00	50.89				
Casinos (19)	63.16	23,412,393	15.79	0.00	26.32	1.94	57.89	98.06				
BB only (9)	88.89	23,376,052	22.22	0.00	33.33	1.93	88.89	98.07				
Service General (2346)	16.03	11,483,373	1.41	0.22	9.68	48.13	11.76	51.64				
BB only (57)	45.61	10,023,904	10.53	0.07	38.60	48.22	33.33	51.71				
Residential (16)	56.25	64,767	0.00	0.00	43.75	85.93	56.25	14.07				
Heavy Constr. (5488)	23.85	3,288,610	1.46	2.40	12.30	37.87	17.31	59.73				
BB only (9)	66.67	62,057	22.22	5.39	66.67	35.37	55.56	59.24				
Waste Mgt. (8)	50.00	8,034	12.50	6.22	50.00	54.02	50.00	39.76				
BB only (2)	100.00	6,360	50.00	7.86	100.00	49.97	100.00	42.17				
Food (1668)	20.44	1,319,443	1.38	0.99	10.31	32.82	15.89	66.19				
BB only (34)	55.88	174,473	11.76	2.26	38.24	69.21	47.06	28.52				
Tobacco (15)	26.67	138,215	0.00	0.00	20.00	74.67	26.67	25.33				
BB only (3)	100.00	135,305	0.00	0.00	100.00	76.28	100.00	23.72				
Textiles (13)	23.08	1,705	7.69	0.29	23.08	43.99	15.38	55.72				
Apparel (23)	34.78	499,819	4.35	1.00	26.09	12.30	26.09	86.70				
BB only (5)	60.00	402,830	0.00	0.00	40.00	0.25	60.00	99.75				
Agribusiness (120)	11.67	61,907	0.83	0.40	5.83	22.40	9.17	77.19				
Paper (300)	27.00	213,962	2.00	1.00	16.67	37.08	19.00	61.92				
BB only (8)	62.50	38,975	25.00	2.57	62.50	28.25	62.50	69.18				

(continued)

Table 6 (continued)

Industry (N)	Trump % of firms	Trump money	Trump % of firms before		Trump % of money before		% of firms May		% of money May		Trump % of money after Aug 13.	Trump % of money after Aug 13
			May 04	May 04	May 04	May 04-Aug12	04-Aug12	04-Aug12				
Printing and Pub (14)	42.86	67,631	21.43	1.65	28.57	10.59	28.57	10.59	28.57	87.76	87.76	
BB only (1)	100.00	53,586	100.00	1.32	100.00	1.42	100.00	1.42	100.00	97.26	97.26	
Chemical (695)	30.22	1,078,508	3.02	2.23	16.69	77.39	16.69	77.39	23.60	20.38	20.38	
BB only (16)	68.75	191,478	18.75	0.52	56.25	84.86	56.25	84.86	56.25	14.62	14.62	
Oil (3987)	26.06	6,588,955	1.66	0.83	14.47	49.21	14.47	49.21	19.44	49.96	49.96	
BB only (62)	70.97	2,630,326	22.58	0.37	61.29	61.54	61.29	61.54	62.90	38.08	38.08	
Rubber (318)	34.59	338,783	2.52	0.80	21.38	65.86	21.38	65.86	26.73	33.34	33.34	
BB only (1)	100.00	152,581	0.00	0.00	100.00	98.77	100.00	98.77	100.00	1.23	1.23	
Glass (339)	25.37	68,442	2.06	1.96	15.63	38.82	15.63	38.82	16.81	59.21	59.21	
BB only (2)	50.00	1,703	0.00	0.00	50.00	32.88	50.00	32.88	50.00	67.12	67.12	
Steel (1215)	33.09	1,079,908	2.14	1.66	20.25	35.10	20.25	35.10	23.95	63.25	63.25	
BB only (8)	62.50	57,920	12.50	2.73	62.50	27.90	62.50	27.90	50.00	69.37	69.37	
Cosmetics (16)	43.75	1,149,938	0.00	0.00	31.25	45.46	31.25	45.46	43.75	54.54	54.54	
BB only (9)	55.56	255,428	0.00	0.00	44.44	29.72	44.44	29.72	55.56	70.28	70.28	
Altern Energy (22)	13.64	12,000	4.55	2.08	4.55	0.83	4.55	0.83	13.64	97.08	97.08	
Electronics (121)	70.25	798,540	12.40	1.02	43.80	14.94	43.80	14.94	58.68	84.00	84.00	
BB only (13)	84.62	478,649	23.08	0.51	76.92	8.69	76.92	8.69	84.62	90.80	90.80	
Guns, Ammo (8)	50.00	86,486	12.50	2.64	25.00	80.37	25.00	80.37	37.50	16.99	16.99	
Machinery (222)	38.29	655,390	4.05	0.58	25.68	65.93	25.68	65.93	33.33	33.49	33.49	
BB only (14)	92.86	375,286	28.57	0.52	71.43	58.76	71.43	58.76	92.86	40.73	40.73	
Defense Prod and Serv (19)	21.05	6,270	0.00	0.00	15.79	24.88	15.79	24.88	21.05	75.12	75.12	
Autos (97)	43.30	910,267	7.22	0.27	27.84	17.27	27.84	17.27	37.11	82.45	82.45	
BB only (12)	66.67	765,175	16.67	0.09	50.00	4.61	50.00	4.61	66.67	95.30	95.30	
Aerospace (32)	59.38	505,256	18.75	1.20	53.13	57.68	53.13	57.68	53.13	41.12	41.12	
BB only (9)	88.89	483,567	66.67	1.25	88.89	59.03	88.89	59.03	88.89	39.71	39.71	

(continued)

Table 6 (continued)

Industry (N)	Trump % of firms	Trump money	Trump % of firms before May 04	Trump % of money before May 04	% of firms May 04-Aug12	% of money May 04-Aug12	% of firms after Aug 13.	Trump % of money after Aug 13.
Pharma (587)	21.29	1,017,776	2.56	1.00	14.14	71.93	17.04	27.07
BB only (18)	83.33	190,391	27.78	1.25	72.22	35.99	83.33	62.76
Computers (41)	46.34	289,992	19.51	1.90	39.02	51.39	36.59	46.71
BB only (17)	41.18	233,962	23.53	1.50	35.29	57.91	29.41	40.59
Internet Mfg (17)	76.47	2,322,353	41.18	0.11	76.47	11.90	64.71	87.99
BB only (2)	100.00	2,290,913	100.00	0.05	100.00	11.70	100.00	88.25
Software (138)	57.25	2,539,769	15.94	0.50	44.20	7.82	48.55	91.68
BB only (30)	50.00	2,109,436	20.00	0.42	43.33	4.35	46.67	95.23
Telecom (1551)	16.25	5,347,208	2.13	0.39	9.41	32.49	12.19	67.12
BB only (49)	38.78	4,343,087	22.45	0.16	38.78	31.59	36.73	68.25
Beverages (37)	43.24	262,604	10.81	1.76	37.84	53.32	32.43	44.92
BB only (5)	60.00	138,853	40.00	0.31	60.00	48.79	40.00	50.90
Health (29952)	15.36	7,734,406	1.02	5.41	8.30	42.33	11.68	52.26
BB only (18)	61.11	524,195	27.78	0.55	55.56	93.78	55.56	5.67
Health Insur. (23)	78.26	588,826	30.43	0.88	60.87	69.29	78.26	29.83
BB only (13)	76.92	547,361	38.46	0.86	76.92	71.85	76.92	27.29
Credit Reporting (10)	70.00	340,963	10.00	0.08	60.00	4.76	60.00	95.16
BB only (2)	100.00	122,656	0.00	0.00	100.00	0.70	100.00	99.30
Auto Dealers (3188)	18.07	1,852,141	0.91	0.68	9.97	22.26	13.02	77.06
BB only (7)	57.14	3,050	0.00	0.00	42.86	49.18	42.86	50.82
Transp, Trk, RR (1660)	24.58	1,369,305	1.87	1.41	13.43	40.31	17.41	58.28
BB only (11)	63.64	96,296	36.36	0.93	54.55	68.79	63.64	30.28
Airlines (14)	71.43	503,561	42.86	1.78	57.14	40.81	71.43	57.41
BB only (4)	100.00	476,349	100.00	1.78	100.00	41.59	100.00	56.63
Utilities (2584)	23.57	833,559	1.35	2.39	12.93	48.75	17.11	48.86
BB only (19)	94.74	148,162	47.37	3.07	84.21	53.49	94.74	43.44

(continued)

Table 6 (continued)

Industry (N)	Trump % of firms	Trump money	Trump % of firms before May 04	Trump % of money before May 04	% of firms May 04-Aug12	% of money May 04-Aug 12	% of firms after Aug 13.	Trump % of money after Aug 13
Commun (14)	21.43	109,406	7.14	0.36	21.43	6.18	21.43	93.46
BB only (5)	40.00	108,436	20.00	0.37	40.00	5.89	40.00	93.74
Mortg and Non-Bk Lending (136)	27.21	260,460	1.47	1.05	17.65	74.73	19.12	24.22
BB only (5)	100.00	127,274	0.00	0.00	60.00	63.43	60.00	36.57
Real Estate (12453)	18.96	10,306,316	1.31	3.14	10.38	40.13	13.43	56.73
BB only (36)	22.22	1,020,990	2.78	0.14	11.11	29.22	19.44	70.64
Insurance (4928)	17.51	2,647,203	1.30	1.01	10.19	51.28	12.13	47.71
BB only (35)	91.43	483,695	45.71	1.71	85.71	48.26	85.71	50.04
Comm Banking (3971)	15.24	9,407,483	1.16	1.66	9.57	30.38	10.68	67.97
BB only (18)	77.78	2,350,688	55.56	4.82	77.78	78.89	72.22	16.29
Invest and Hedge Funds (285)	15.79	3,230,626	2.81	0.23	10.88	92.81	10.88	6.96
BB only (48)	14.58	428,956	4.17	0.73	12.50	93.59	8.33	5.68
Priv Equity (14879)	14.69	28,292,700	1.06	0.77	7.92	46.42	10.44	52.81
BB only (38)	21.05	2,067,175	2.63	0.01	18.42	21.71	10.53	78.28
Brokers, Mut Fd (43)	44.19	322,976	20.93	1.43	32.56	81.85	34.88	16.73
BB only (6)	33.33	224,476	33.33	0.51	33.33	96.58	16.67	2.90
Retailing (194)	51.03	1,483,468	9.79	0.66	39.69	34.92	40.72	64.42
BB only (68)	60.29	793,407	20.59	1.11	55.88	50.29	48.53	48.60

BB Big Business Only

campaign also appears to have struck some kind of arrangement with the Sinclair Broadcast Group, which owns more local TV stations than any other media concern in the country, for special access “in exchange for broadcasting Trump interviews without commentary (Anne 2017).”

But our data and various press accounts also indicate that some important developments widely reported in the media took some time to mature. Many campaign accounts suggest that when Ted Cruz folded, the Mercers, Steve Bannon, and Kellyanne Conway went over to Trump, with whom Bannon had been intermittently working for a long time. This is just close enough to the truth to be potentially misleading. At the time, the Mercers were running an anti-Hillary Clinton Super Pac that had extended support to Ted Cruz, and Rebekah was having friendly discussions with the campaign and especially with the Trump family (Kushner and Ivanka Trump) (Gold 2016). Robert Mercer made a large contribution to the anti-Hillary Super Pac, but few others did (Green 2017).

In 2015, the Trump campaign had rejected an overture from Cambridge Analytica, reportedly because it believed the firm charged too much (Vogel and Samuelsohn 2016). In May, however, with Cruz out, negotiations to bring Cambridge Analytica into the campaign began again. After Steve Bannon introduced Alexander Nix, the head of the firm, to the Trump campaign people, Nix made another approach (Ballhaus and Bykowicz 2017). The evidence suggests that Cambridge was enthusiastic, but the Trump camp was divided. In early June, before any agreement had been reached, Cambridge sent a “small team” to work with the campaign’s Texas-based digital operation (Ballhaus and Bykowicz 2017). Brad Parscale, a principal in the latter, served as Trump’s digital director. Parscale reportedly favored striking an arrangement with Cambridge, but Paul Manafort did not (Vogel and Samuelsohn 2016).

Nevertheless, as *Politico* reported “in GOP finance circles, hiring Cambridge Analytica is widely seen as a way to increase the likelihood of winning support from the Mercers” (Vogel and Samuelsohn 2016). On June 13, Cambridge reportedly dispatched a contract to the campaign, which Nix and someone representing Cambridge signed on June 23 (Ballhaus and Bykowicz 2017). At the end of June, with the gender makeup of Trump’s mostly male entourage clearly emerging as an issue, Conway came aboard as a campaign operative working under Manafort (Sullivan 2016).

In the meantime, the process of reconciling with the rest of the party bogged down. By late July, the campaign’s cash inflows were plainly lagging behind the levels of Romney in 2012, Obama in 2008, or Hillary Clinton in 2016. Sheldon Adelson and many other donors who were reported in the

press to be close to Trump or considering supporting him were not actually contributing or had contributed only modest amounts (e.g., Carl Icahn). The Kochs were not enlisting, and never would. Contributions from defense and aerospace firms lagged well behind levels typical of past Republican presidential efforts. Describing the campaign's financing as collapsing would be excessive; but it was not on track to deliver what was the campaign plainly would need. Some of the slow progress almost certainly traced to doubts among traditional Republican-inclined industries and investors put off by Trump's continuing outbursts and friendly comments about Russia.

The campaign eventually responded by launching another highly publicized push for funds from small donors, with promises of a match from Trump (Kaye 2016). That brought in some money, but nothing like what was needed. (In the final weeks of the campaign, small contributions actually tailed off.)

In mid-August, as Trump sank lower in the polls, the crisis came to a head. Rebekah Mercer had her fateful conversation with Trump at a fundraiser. Manafort, already under pressure from a string of reports about his ties with the Ukraine and Russia, was first demoted and then fired. Steve Bannon took over direction of the campaign and Kellyanne Conway was promoted to campaign manager (Green 2017).

Bannon's confidence that "If the left is focused on race and identity, and we go with economic nationalism, we can crush the Democrats" became famous only after the election (Kuttner 2017). But within hours after Bannon and Conway took over, press accounts reported that "Bannon and Conway have decided to target five states and want to devote the campaign's time and resources to those contests: Florida, North Carolina, Virginia, Ohio, and Pennsylvania. It is in those states where they believe Trump's appeal to working-class and economically frustrated voters has the best chance to resonate" (Costa et al. 2016). Their strategy clearly evolved to embrace a few other states, but this retargeting had a vital counterpart on the financial side.

The focus on the old industrial states attracted more money from firms in steel, rubber, machinery, and other industries whose impulses to protection figured to benefit from this focus. But the bigger story over the next few weeks was the vast wave of new money that flowed into the campaign from some of America's biggest businesses and most famous investors. Sheldon Adelson and many others in the casino industry delivered in grand style for its old colleague. Adelson now delivered more than \$11 million in his own name, while his wife and other employees of his Las Vegas Sands casino gave another \$20 million. Peter Thiel contributed more than a million dollars,

while large sums also rolled in from other parts of Silicon Valley, including almost two million dollars from executives at Microsoft and just over two million from executives at Cisco Systems.

A wave of new money swept in from large private equity firms, the part of Wall Street which had long championed hostile takeovers as a way of disciplining what they mocked as bloated and inefficient “big business.” Virtual pariahs to mainline firms in the Business Roundtable and the rest of Wall Street, some of these figures had actually gotten their start working with Drexel Burnham Lambert and that firm’s dominant partner, Michael Milkin. Among those were Nelson Peltz and Carl Icahn (who had both contributed to Trump before, but now made much bigger new contributions). In the end, along with oil, chemicals, mining, and a handful of other industries, large private equity firms would become one of the few segments of American business—and the only part of Wall Street—where support for Trump was truly heavy.⁶⁰

In the final weeks of the campaign, a giant wave of dark money flowed into the campaign. Because it was dark the identity of the donors is shrouded. But our scrutiny of past cases where court litigation brought to light the true contributors suggests that most of this money probably came from the same types of firms that show up in the published listings. In our data, the sudden influx of money from private equity and hedge funds clearly began with the Convention but turned into a torrent only after Bannon and Conway took over. We are interested to see that after the election, some famous private equity managers who do not appear in the visible roster of campaign donors showed up prominently around the President. An educated guess on the sources of some of that mighty wave is thus not difficult to make, though the timing of the inflow from the big private equity firms by itself is suggestive. Contrary to some widely publicized claims, Trump himself also contributed substantially to the campaign, especially toward the end.⁶¹ In the end, total spending on behalf of Trump from all sources totaled slightly more than \$861 million—within reasonable hailing distance of the Clinton campaign’s \$1.4 billion (including Super Pacs, etc.), especially considering how late serious fundraising started.

⁶⁰See the discussion above on the relative reliability of the data on private equity; the point is that the big business data is likely quite good.

⁶¹Our data indicate Trump contributed more than \$66 million dollars in loans and contributions, with the largest coming very late. See the figure in Ferguson, T., Jorgensen, P., & Chen, J. 2018. *How Money Won Trump the White House*. Institute for New Economic Thinking, available on the web at: <https://www.ineteconomics.org/perspectives/blog/how-money-won-trump-the-white-house>. The total was much greater than, for example, Mitt Romney’s contributions to his 2012 campaign.

14 The Failure of Clinton “Centrism”: American *Trasformismo*

Most accounts treat the Clinton campaign after the Democratic Convention as a study in confusion and infighting. We do not doubt there was plenty of both (Allen and Parnes 2017; Brazile 2017). But our data suggest other lines of analysis, too. In particular, if one looks at the Clinton campaign’s fundraising, it is immediately apparent that it was trying to run an American version of the famous “*Trasformismo*” system pioneered by a succession of center-right Italian politicians in the decades before World War I. The basic idea of that system was simple: Put measured representatives of the left and right centers together against extremes, especially from the left.

We have already observed that the reconciliation between establishment Republicans and Trump around Convention time was only partial. Holdouts and skeptics were abundant. They were especially prominent among Neoconservatives and traditional internationalists who were appalled by Trump’s talk of America First and his friendliness toward Russia. Many signed public letters and manifestos denouncing Trump, in some cases indicating they might be receptive to Clinton.

The Clinton campaign had been setting up an opening to the Neoconservatives and disenchanted Republicans for a long time (Karni 2016). Throughout the campaign and in her postelection memoir, Clinton liked to portray herself to voters as continuing the legacy of President Obama. In foreign policy, this was something of a stretch. In fact, she deliberately moved to the President’s right on major security and foreign policy issues. As the situation in Syria became more and more intense, the campaign let it be known that their candidate differed from Obama’s very careful stance against intervention. The possibility that substantial portions of the public might be tired of endless wars does not seem to have crossed anyone’s mind (Kriner and Shen 2017).

When Trump opened up on the Bush and Obama policies toward Iraq, Syria, Ukraine, Russia, and Afghanistan, Clinton’s move to the right in these areas persuaded many so-called “Neoconservatives” that they should seriously consider supporting her. Her stalwart defense of Wall Street, and doubts that Trump could be trusted with command of nuclear weapons, along with the universal conviction she was the likely winner, enhanced her attractiveness to these groups and to many other business interests that normally leaned Republican. As our Table 7 shows, Trump trailed well behind

Table 7 Clinton vs. Trump industry differences in major party candidate support 2016: Firm contributions and distribution of money (in %—subtract Clinton % from 100% for Trump %) (Source Computed by authors from FEC and IRS data)

Industry (N)	Clinton % of firms	Clinton % of money	Trump % of firms
Mining (26)	38.46	8.28	30.77
BB only (2)	100.00	4.16	50.00
Coal Mining (147)	6.12	0.74	37.41**
BB only (2)	0.00	0.00	100.0
Accounting (275)	24.36	80.91	21.09
BB only (3)	100.00	84.07	100.0
Casinos (19)	52.63	0.54	63.16
BB only (9)	44.44	0.45	88.89
Service General (2346)	32.74	40.37	16.03**
BB only (57)	45.61	21.68	45.61
Residential (16)	75.00	73.83	56.25
Heavy Constr. (5488)	11.92	46.86	23.85**
BB only (9)	66.67	92.46	66.67
Waste Mgt. (8)	75.00	68.72	50.00
BB only (2)	100.00	68.51	100.0
Food (1668)	25.12	56.64	20.44**
BB only (34)	61.76	69.17	55.88
Tobacco (15)	40.00	52.58	26.67
BB only (3)	100.00	52.97	100.0
Textiles (13)	30.77	83.70	23.08
Apparel (23)	91.30	69.16	34.78
BB only (5)	100.00	49.16	60.00
Agribusiness (120)	10.83	33.79	11.67
BB only (1)	100.00	100.00	0.000
Paper (300)	23.67	42.63	27.00
BB only (8)	62.50	52.18	62.50
Printing and Pub (14)	71.43	81.55	42.86
BB only (1)	100.00	30.88	100.0
Chemical (695)	18.99	52.39	30.22**
BB only (16)	62.50	81.68	68.75
Oil (3987)	19.69	55.79	26.06**
BB only (62)	59.68	32.14	70.97 (0.070)
Rubber (318)	11.64	14.22	34.59**
BB only (1)	100.00	5.13	100.0
Glass (339)	17.70	88.79	25.37*
BB only (2)	50.00	99.58	50.00
Steel (1215)	14.73	36.05	33.09**
BB only (8)	50.00	43.80	62.50
Cosmetics (16)	56.25	24.53	43.75
BB only (9)	77.78	58.62	55.56
Altern Energy (22)	50.00	88.17	13.64
Electronics (121)	79.34	71.85	70.25*
BB only (13)	92.31	56.29	84.62
Guns, Ammo (8)	50.00	24.41	50.00

(continued)

Table 7 (continued)

Industry (N)	Clinton % of firms	Clinton % of money	Trump % of firms
Machinery (222)	42.34	54.00	38.29
BB only (14)	100.00	56.58	92.86
Defense Prod and Serv (19)	21.05	84.82	21.05
Autos (97)	54.64	53.29	43.30*
BB only (12)	75.00	30.84	66.67
Aerospace (32)	59.38	70.23	59.38
BB only (9)	100.00	69.40	88.89
Pharma (587)	48.72	75.42	21.29**
BB only (18)	83.33	90.20	83.33
Computers (41)	63.41	91.05	46.34 (0.070)
BB only (17)	58.82	92.49	41.18
Internet Mfgr (17)	94.12	30.59	76.47 (0.179)
BB only (2)	100.00	28.04	100.0
Software (138)	76.81	80.92	57.25**
BB only (30)	63.33	79.64	50.00 (0.157)
Telecom (1551)	30.30	88.63	16.25**
BB only (49)	63.27	88.67	38.78**
Beverages (37)	54.05	84.32	43.24
BB only (5)	80.00	84.50	60.00
Health (29952)	31.60	81.43	15.36**
BB only (18)	72.22	93.49	61.11
Health Insur. (23)	82.61	91.49	78.26
BB only (13)	84.62	91.77	76.92
Credit Reporting (10)	80.00	50.51	70.00
BB only (2)	100.00	63.99	100.0
BB only (1)	100.00	100.00	0.000
Auto Dealers (3188)	9.22	32.56	18.07**
BB only (7)	71.43	86.96	57.14
Transp, Trk, RR (1660)	12.83	57.60	24.58**
BB only (11)	63.64	61.03	63.64
Airlines (14)	78.57	67.25	71.43
BB only (4)	100.00	67.20	100.0
Utilities (2584)	12.00	71.97	23.57**
BB only (19)	94.74	90.70	94.74
Commun (14)	57.14	86.00	21.43
BB only (5)	60.00	82.30	40.00
Mortg and Non-Bk Lending (136)	33.09	55.39	27.21
BB only (5)	80.00	62.92	100.0
Real Estate (12453)	20.84	79.27	18.96**
BB only (36)	38.89	95.67	22.22 (0.179)
Insurance (4928)	15.04	65.32	17.51**
BB only (35)	91.43	84.14	91.43
Comm Banking (3971)	19.97	53.77	15.24**
BB only (18)	72.22	72.82	77.78
Invest and Hedge Funds (285)	36.14	92.49	15.79**
BB only (48)	45.83	98.72	14.58**

(continued)

Table 7 (continued)

Industry (N)	Clinton % of firms	Clinton % of money	Trump % of firms
Priv Equity (14879)	28.67	74.22	14.69**
BB only (38)	42.11	53.70	21.05 (0.073)
Brokers, Mut Fd (43)	62.79	78.48	44.19*
BB only (6)	50.00	65.52	33.33
Retailing (194)	69.59	81.56	51.03**
BB only (68)	75.00	86.64	60.29**

BB Big Business only

** and * differences between percentages of support from firms for Trump and Clinton are significant at the .01 and .05 level, respectively, using the McNemar test and repeated logistic model. Other significance levels are reported in parentheses; if nothing is reported, the differences are statistically insignificant

Clinton in contributions from defense and aerospace—a lack of support that we consider extraordinary for a Republican presidential hopeful this late in the race (compare with the corresponding table for Romney in (Ferguson et al. 2013)).

For Clinton's campaign, the temptation was irresistible: Over time, it slipped into a variant of the strategy Lyndon Johnson pursued in 1964 in the face of another candidate who seemed too far out of the mainstream to win: Go for a grand coalition with most of big business. Just as in 1964, this supercharged the campaign's finances—a temptation that the Clintons could rarely resist. But in contrast to 1964, when Johnson ran as the candidate of peace and prosperity, the gambit carried with it unrecognized electoral risks that the Trump campaign ultimately exploited, not only in regard to economics, but in foreign policy as well (Kriner and Shen 2017). And, as will become clearer below, one fateful consequence of trying to appeal to so many conservative business interests was strategic silence about most important matters of public policy. Given the candidate's steady lead in the polls, there seemed to be no point to rocking the boat with any more policy pronouncements than necessary. When in the final days, the campaign woke up to the fact that it was in the Twilight Zone, it was too late.

The campaign also quietly maintained relatively hard lines on economic policy, which advisers signaled by their choice of models that suggested the United States would soon return to full employment, and by the economists who were given major access. (Indeed, after arguing strenuously throughout the campaign that the Fed should not raise interest rates,

many Democratic economists switched gears within days after the election and started beating drums in favor of rate rises.) Misgivings of major contributors who worried that the Clinton campaign message lacked real attractions for ordinary Americans were rebuffed. The campaign sought to capitalize on the angst within business by vigorously courting the doubtful and undecided there, not in the electorate. The result is evident in our Table 7, in which—with the possible exception of 1964—the Clinton campaign looks like no other Democratic campaign since the New Deal. The Clinton campaign reached far into sectors and firms that have rarely supported any Democrat. The strong resemblance to the profile of the Romney campaign in 2012 in many (though not all) particulars is striking (see, again, Table 3 and the industrial breakdowns presented in Ferguson et al. 2013).

This monetary breadth came at a cost: The effort to reach out to big business had no hope of success if the candidate vigorously promoted policies along the lines Sanders had proposed. The evidence suggests that the campaign realized this: Though it constantly complained that the media ignored its policy proposals, it also talked less about policy than any other campaign for which we have measurements. Instead, it stressed candidate qualifications (Fowler et al. 2016). Even in the final days, it deliberately deemphasized issues in favor of concentrating on what the campaign regarded as Trump's obvious personal weaknesses as a candidate (Clinton 2017).

It was a miscalculation of historic proportions. The evidence suggests that Bannon and Conway were right. On election night, as Democratic hopes for control of the Senate collapsed, the Clinton campaign fell victim to the American electoral counterpart of the Curse of Midas. In the electorate as a whole, the Trump campaign's racism and misogyny appears to have cost it some votes. But just enough voters were turned off by years of economic stagnation and painful wars to allow Donald Trump—despite finishing behind Clinton in the popular vote—to slip into the White House (Ferguson and Page 2017; Monnat and Brown 2017).

15 Conclusion: The Political Economy of a Collapsing Party System

Business contributions to Donald Trump's inaugural celebration broke all records. In contrast to his campaign which, as we have seen, stimulated truly substantial amounts of small contributions, the inaugural donations were on

Table 8 Size of contributions to Trump inaugural celebration (*Source* See Text)

Amount	Percent of total
Unitemized	0.6
≤\$250	0.02
251–499	0.05
500–999	0.03
1,000–9,999	0.36
10,000–99,999	5.76
≥100,000	93.17

The average of those gifts totaling \$100,000 or more is \$405,841

average gigantic. As Table 8 shows, 93% of them exceeded \$100,000, with an average value of almost \$406,000.⁶²

It is too clever by half to dismiss these sums worthy of the Gilded Age as misplaced investments simply because of the slow pace of Congressional legislation. Even before the tax bill passed, Trump and his allies did not need Congressional action to send rivers of cash flowing to many supporters. A wide range of executive actions and deliberate shifts of institutional priorities were already benefiting enormous numbers of them.

But our analysis of the political economy of the 2016 campaign points to sharp limits on what Trump or any other political force now operating can hope to achieve in the longer run. The emergence of a full-blown dual economy means that the system no longer works for many Americans. Spatial imbalances in economic growth, the declining welfare state, and insistent pressures to cut public expenditures so as to lower taxes on the rich throw enormous stresses on average Americans. Many realize that their wages and working conditions are deteriorating, and that the challenges facing their children are intense.

⁶²The sources for this table are more complex than they should be. The Federal Election Commission, as this paper went to press, had a Committee ID number for a “58th Presidential Inaugural Committee.” That ID is C00629584, but that takes you to a notice that there is as yet no data. There was at one time a pdf of the donors available, though not the electronic file that would be normal. We are not sure that the pdf is still available, but earlier we did acquire a copy and have used it for our tabulations along with the list compiled (presumably from that pdf) at Open Secrets: <https://docs.google.com/spreadsheets/d/1MgxCjiw0niZxuSlfUEqbHpiLhrSL97XYOisgTzYbmVc/edit#gid=899971993>.

We also consulted the crowd sourced compilation that Huffington Post organized; see Farenthold, D. A. 2017. After Crowdsourced Investigation, Trump Inaugural Committee Admits There Were Errors in Its Donor List. *Washington Post*, April 25, 2017. This pointed to a series of names that were rather plainly fake.

The vast mobilizations against the establishments of both major parties that dominated the 2016 presidential struggle were a consequence of these stresses. Trump's triumph came over the bitter opposition of older Republican elites; while the Clinton campaign had to pull out all the stops to contain the wave of protests from millions of ordinary Americans who actively supported an insurgent candidate running openly as a democratic socialist. In both parties, the new energy coming into the system from ordinary Americans is obvious. It now fills many in power in both parties with dread.

We are extremely skeptical that there is any way to put these genies back in the bottle. Very early in Trump's tenure, he essentially lost control of most policy on national security and was forced to make appointments that represented quite different points of view on policy toward Russia and, with some qualifications, China. Tensions between Trump and Republican Congressional leaders clearly run deep; their donor universes are strikingly different, as we will show on another occasion.

Trump's own coalition is extremely unstable. Our analysis of how it developed over time reveals that it is made up of several layers of investor blocs with little in common other than their intense dislike of existing forms of American government. The world of private equity, intent on gaining access to the gigantic, rapidly growing securities markets of China and the rest of Asia or casinos dependent on licenses for their lucrative businesses in Macau are likely to coexist only fitfully with American industries struggling to cope with world overcapacity in steel and other products or facing twenty-first century mercantilist state targeting.⁶³ Substituting Mike Pence for Donald Trump would not change any of this nor would it end the all-out war on the GOP establishment that Bannon and his allies are waging, though Bannon himself appears to have been sidelined.

Within the Democratic Party, the desires of party leaders who to continue to depend on big money from Wall Street, Silicon Valley, health insurers, and other power centers collides head-on with the needs of average Americans the leaders claim to defend. On medical care, minimum wages, unionization, and many other issues, there is no consensus; only intense wrangling behind a cloud of opaque rhetoric and increasingly hollow "resist" slogans.

⁶³Which the American state also pursues heavily in various sectors; see the earlier discussion of state investment in electronics, pharmaceuticals, and others, above.

Meanwhile, big finance and the telecom giants intensify their pushes to be free of deregulation, while traditional patterns of alliances dissolve as the relative position of the United States in the global system alters. Trump's triumph, with its powerful overtones of bait and switch, is in all likelihood a moment in the disintegration of a money-driven political system that is now appears trapped in a fatal circle of corruption and cynicism. 2016 showed that mass citizen involvement can dramatically reshape politics, but it also highlighted the essential point of the investment approach to politics, which is the enormous advantages elites normally retain in political action.

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12

Economic Policy

Bruno Amable

1 Introduction

Economic policy, and in particular macroeconomic policy, is often considered from the point of view of ‘society’ or ‘the economy’, or, in formal modelling, from the point of view of a representative agent.¹ This simplification explains why the discourse on economic policy often boils down to finding a ‘good’ or even the ‘optimal’ policy, leaving aside the question for whom the policy in question is supposed to be good or optimal. The optimality criterion used to judge the quality of a policy is defined in reference to aggregate ‘welfare’ or taken to be the same for all agents.² Even in situations where these might have conflicting objectives, like consumers and producers in an imperfect competition setting for instance, the economic policy recommendations, in this case competition policy, are mostly based on the maximisation of seemingly unproblematic criterions,³ consumer or total welfare. In this case, the objectives of the producers, profit maximisation, are deemed

¹Bénassy-Quéré et al. (2010).

²*No One Can Quarrel with the Requirement That the Budget Plan Should be Designed to Maximize Welfare* Musgrave and Peacock (1958, p. xi).

³Motta (2004).

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illegitimate, contrary to the perfect competition case. Also, the more or less implicit assumption is that what matters is the size of the surplus, and that this is what every economic agent would agree on; the question of the distribution of this surplus is considered of secondary importance.

But the assumption of homogeneity that underlies the use of representative agent-based models is deceptive. As Atkinson and Stiglitz (1980, p. 298) wrote it, ‘if everyone had identical tastes and endowments, then many public finance questions would lose their significance, and this is particularly true of the behavior of the state. If the interests of the members of society could be treated as those of a ‘representative’ individual, then the role of the state would be reduced to that of efficiently carrying out agreed decisions’.

Social and economic differentiation breeds conflict among interests and the divergence on what a ‘good’ policy is. Most economic policy decisions, be it decisions concerning monetary or fiscal policy or more ‘structural’ policy decisions such as financial regulation, product market competition and public ownership, or employment protection legislation, have distributional consequences: distribution of income, wealth or power, or the allocation of risks and protection. Therefore, economic policy involves by necessity a conflict of interests.⁴ It is, by nature, political.

This political nature of economic policy is not always fully taken into account by what is commonly called ‘political economics’.⁵ In some models, the government is supposed to have an objective function with macroeconomic variables such as the inflation and unemployment rates as arguments. The rationale is that these arguments matter for all voters, and that the task of the government is to find a suitable policy choice in order to maximise the universal objective function. This supposes that there exists a specific definition of collective well-being in terms of macroeconomic variables. In other models, the problem that voters face is a lack of information on the competence of the government. The conflict between voters and politicians is limited to a problem of selecting who should be in charge of implementing a policy on which all voters would agree.

The macroeconomic policy literature follows mostly a ‘Keynesian’ tradition that defines economic policy as an answer by the government to the pursuit of collective well-being. Following a tradition best exemplified by the public choice literature,⁶ in most political economics contribution, the

⁴Drazen (2000).

⁵Persson and Tabellini (2000).

⁶Buchanan and Tollison (2009).

politicians in charge of making policy choices are held to be selfish and pre-occupied by their own well-being. In this perspective, the political nature of economic policy is in essence problematic. The objective of the incumbent government is then to be re-elected in order to keep the fringe benefits of the office, which implies that the policy choices made should satisfy a sufficiently high number of voters, depending on the specific constitution of the country.

Most formal models use the simple median voter model, which states that when some restrictive conditions are satisfied, a majority vote will select the policy preferred by the median voter. This model has been applied many times to investigate conflictual issues such as that of the size of the public sector, the welfare state or income redistribution. In the literature dealing with these problems, the conflict of interest is mediated by a policy that satisfies a majority of voters, even if this does not correspond to their preferred policy. A weakness of the median voter model is that it is of little use when one wants to investigate multidimensional issues.

One may suspect that the most important economic policy decisions, be it 'short-term' macroeconomic policy or more structural policy decisions, are fundamentally multidimensional. This raises the question of the type of social coalitions that can emerge and what type of compromises can be made to support a political strategy regarding economic policy and institutions.

The present contribution will deal with these issues, abandoning all pretensions to be exhaustive. The first section will address the most classic problem of political economy, namely the political business cycle. The next section will present the issue of taxation and redistribution. The last section will be concerned with structural economic policy decisions and the political economy of institutional change.

2 The Political Business Cycle

2.1 Kalecki's 1943 Contribution

The original contribution to what was to become an extensive literature on the 'political business cycle' was based on a conflict of interests between social classes. Michal Kalecki (1943)'s *Political aspects of full employment* focused on the political and social obstacles to the long-term achievement of full employment. Considering that the opinion of a majority of economists of that time considered it possible to achieve full employment by an increase

in government spending, Kalecki asked the question why one would observe an opposition to such policies, and in particular an opposition coming from business. Kalecki mentioned three categories of reasons for such an opposition. The first one was a dislike of government interference in the problem of employment as such; the second was a dislike of the direction of government spending (public investment and subsidising consumption) and the third reason was a dislike of the social and political changes resulting from the maintenance of full employment.

The argument of Kalecki is the following. Under a *laissez-faire* system, where the government holds the 'night watchman' position and abstains from intervening in the economic affairs even in times of recession, the level of employment depends to a great extent on the 'state of confidence'. If this state deteriorates, private investment declines, which results in a fall of output and employment: both directly and through the secondary effect of the fall in incomes upon consumption and investment. This dependence of output and employment on the capitalists' mood gives that social group a powerful indirect control over government policy. Any negative influence on the state of confidence (of business) must be avoided because it would lead to economic difficulties and even a crisis.

But economic policy may loosen the dependence of output and employment on the good will of the capitalists. Once the government realises that its own purchases may substitute for the failing expenditure of private business, the power and influence of the latter diminish considerably. This leads the capitalist class to regard government intervention as a hazard to their social position and power of influence. In this respect, economic doctrines such as that of 'sound finance', which prohibit government deficit, are instrumental in keeping the macroeconomic situation dependent on the state of confidence of business.

Capitalists pay attention to the type of public expenditure too. Public investment in areas that do not compete with private business is tolerated, but the fear is that this would not suffice to support demand management by the government, and that public intervention would extend to activities where private business operate, thereby impairing the latter's profitability.

Another reason for opposing demand management is based on the disciplinary effect of the 'sack'. Kalecki explains in details how the social position of management would be undermined by the increased self-confidence that full employment and income security would bring to the working class. This would lead to a surge of demands for wage increases that would reduce profits, and, above all, would fuel inflation, which would harm the interests of the rentier class.

Kalecki also tackles the specificity of a fascist regime in this context. Fascist governments do not meet the same type of opposition from business or rentiers because their massive investment programmes are first and foremost directed towards armament and do not represent that much a competitive threat to private business. Also, the problems of discipline in the factory and political stability that arise under full employment are treated in an authoritarian way by fascist regimes.

These considerations define the situations where business agrees with a policy of aggregate demand management by the government: when private investment is boosted by public policy (through a low-interest rate policy for instance) in a situation of slump. The interests of business also represent a key element in explaining the changes of social alliances supporting government intervention. According to the economic situation, boom or slump, diverse alliances may emerge, and political pressure on the government will change accordingly. The economic and political power of the working class would be strengthened by prolonged full employment, and this would lead capitalists to pressure for policies that put an end to such a situation and facilitate the return of the social and political domination of the business class because of rising unemployment. In booms, the business class and rentiers have a common interest to pressure the government for austerity. On the other hand, the pressures that the working class would exert for expansionary policies in times of slump would be supplemented by the pressures of the capitalist class wishing to boost business and improve a profitability that would end up decreasing when the depression endures.

The political business cycle would then result from the change in attitude and political choices of the capitalist class according to the economic situation: they have a common interest with the working class in pressuring the government for an expansionary policy in the slump. In the boom, on the other hand, they are allied with the rentier class to pressure for austerity. From this, follows a sequence of successive periods of expansionary and recessionary policies that define the political business cycle.

Kalecki interprets the sequence of events around 1937/38 in the USA as the manifestation of such a political business cycle. The boom following the Great Depression, which resulted from the New Deal, was cut short due to the reduction of the budget deficit. The slump that followed this reversal of policy was interrupted by a return to a budget deficit policy.

Kalecki's theory may also be used to analyse the post-war period, characterised by a prolonged period of stable and high growth with low unemployment in most developed countries until the late 1960s/early 1970s. The domination of the 'Keynesian' paradigm, at least as far as the management

of aggregate demand is concerned, reflected a relatively stable alliance between business and the wage-earning classes, and the marginal position that the rentier class held in the political realm. By contrast, the reversal of perspective in the definition of economic policy, from a Keynesian demand management to a supply-side orthodox policy, reflected a reversal of social alliance and the emergence of a dominant capitalist-rentier coalition.⁷

2.2 Opportunistic and Partisan Business Cycles

If one witnessed in the late 1960s/early 1970s a reversal of social alliances in developed countries such as the one described by Kalecki (1943), it is somewhat of a paradox that the political business cycle literature developed at that time lost most of the interesting elements that were originally present in Kalecki's contribution. Gone were the class interest differentiation and the reversal of social alliances according to the economic situation. The literature that followed Nordhaus' (1972, 1975) early contributions focused on the will of an opportunistic government to be re-elected and on the capacity of economic policy, and more precisely monetary policy, to influence voters for that purpose.

In opportunistic business cycles, voters evaluate politician candidates on the recent experience regarding the economic performance. Incumbents seeking re-election have incentives to improve voters' economic situation, or to signal or feign such ability. If voters weigh the recent past more heavily than distant periods, the incentives to manipulate economic policy to improve the likelihood of re-election sharpen as elections approach. This was the basis of Nordhaus' (1972, 1975) contribution, in which agents have adaptive expectations and where the macroeconomic equilibrium is determined via an expectation-augmented Phillips curve. The model is based on the existence of a stable vote function, common to all agents, with two arguments: inflation and unemployment.

The government makes use of monetary policy to lower employment, at the cost of an increased inflation that will manifest itself after the election. A lower unemployment rate increases the satisfaction of voters, and thus the chances of the incumbent government of being re-elected. The inflation resulting from the expansion will lead to the implementation of a restrictive monetary policy after the election. The resulting lower economic activity

⁷A similar idea is expressed in Pagano and Volpin (2005), who consider the change in corporate governance and employment protection legislation.

will keep expected inflation low until the period immediately before the next election. Therefore, economic expansion can be induced by a monetary surprise before the next election at a lower expected inflation rate. The political business cycle consists thus of a boom before each election followed by a recession afterwards. What is significant in such a setting is that there would be no business cycle if there were no elections.

The possibility that different segments of the electorate may have different opinions on what the 'right' economic policy is has given another category of political business cycle models. The basic assumption of the so-called partisan business cycle models (Hibbs 1977, 1994) is that different political parties cater for the demands of different segments of society. Most models consider a cruder class differentiation than the one analysed by Kalecki. In its basic expression, the partisan political business cycle model considers that rich and poor have different views on the relative benefits of fighting inflation versus fighting unemployment. The poor tend to prefer a low unemployment even at the cost of high inflation because their material situation is far more dependent on the state of employment than on the inflation rate. The rich, being better-off and possibly higher-skilled, bear fewer risks to be unemployed and would suffer less from it. They are averse to inflation because this would lower their real wealth and decrease the profitability of their businesses.

The asymmetry of preferences with respect to the unemployment/inflation trade-off across social groups is reflected in the policy that each party representing a group will implement once in power. The left-wing party, representing the interests of the poor, will pursue a more expansionary monetary policy throughout its term. The right-wing party, representing the rich, will implement an inflation-fighting restrictive policy. The political business cycle stems thus from the succession of governments of different hues. The basic economic mechanism underlying the basic partisan model is roughly the same as in Nordhaus' model, based on the expectation-augmented Phillips curve. An expansion of GDP is engineered by an inflation surprise. How long the effect lasts depends on the specification of expectations. In an adaptive expectations framework, the slower the inflation expectations adjust to actual inflation, the longer will be the partisan effect.

Both Nordhaus' and Hibbs' models have been criticised because of the specification of expectations. A certain degree of 'irrationality' underlies these models because of the myopia of agents. Following the rise of the 'rational expectation' hypothesis, 'rational' voters have been incorporated in political business cycle models. Alesina (1987, 1988) proposed a partisan model with rational expectations. As in other models, only surprise inflation

affects output, but of course, 'rational' voters are more difficult to surprise than 'naïve' voters.

The crux of the argument of Alesina is based on uncertainty surrounding an election's result. Inflation expectations depend on the expectation of who will win the upcoming election: high inflation (and low unemployment) if the left party wins; low inflation (and high unemployment) if the right party wins. If the election outcome was known with certainty, there would be no room for surprise inflation and hence no possibility for a political business cycle. The winning party's policy would be perfectly anticipated and would have no effect on the level of activity. But if the election outcome cannot be anticipated with certainty, even rational voters can have a surprise. The surprise inflation, either too low or too high, will have an effect until voters rationally adjust their expectations.

The magnitude of the cycle depends on the degree of electoral uncertainty, as well as on the difference in parties' desired policies (more or less inflationary). The higher the uncertainty, the more scope there is for initiating a political business cycle.

The 'modern' political business cycle models have been criticised on many grounds. A long series of works have tried to test the existence of a political business cycle.⁸ The bottom line is that the existence of a political business cycle is more convincing when one looks at the instruments, i.e. the variables manipulated by the politicians in order to be re-elected, than when one looks at the outcomes in terms of the macroeconomic variables held to be decisive in the voting decision of individuals (real activity, inflation).

Another critique considered that monetary policy was not the proper instrument that opportunistic governments would necessarily want to use. Both the relative effectiveness of monetary policy and the possibility of the government to use it are questionable. Even if monetary policy may under certain conditions be instrumental in initiating an increase in economic activity that voters may potentially appreciate and reward accordingly, there may exist other policies that could be more efficient to this end. Fiscal policy (tax cuts, delayed hikes, public expenditure, public service employment...) could be more effective and less difficult to implement. In a general political competition setting, there is no need to implement a policy that will affect the whole economy and thus the whole voting population. If one considers that the outcome of the election is depending on the choice of a particular

⁸In particular Alesina et al. (1997).

segment of the electorate, a targeted fiscal policy can be less difficult to implement and more efficient.

Also, the control of monetary policy by the government has been drastically limited by the movement, common to a majority of developed countries, towards the independence of the central bank. This means that the definition of monetary policy is in the hands of an authority composed of unelected officials operating under restrictions specified in their mandate. The point of central bank independence is precisely to insulate monetary policy from the influence of politics and, more specifically, from the pressure towards the implementation of a policy boosting output at the cost of higher inflation for electoral reasons. The conclusion of a large literature that followed Rogoff's (1985) exposition of the time-inconsistency problem⁹ was that the central bank should be independent and in the hands of a conservative banker, i.e. more inflation averse than the government.

But even independent central banks can be influenced, formally or informally, by the government, and the problem of coordination between monetary policy, in the hands of a supposedly conservative central banker, and fiscal policy, which is the responsibility of a democratically elected government, arises. More recent political business cycle models have considered a more complex interaction between the instruments of economic policy. In an environment where the monetary policy is implemented by an independent central bank, and where the fiscal policy is in the hands of an opportunistic government, there is a possibility of conflict at the origin of the business cycle, which results from the interaction of the two policies.¹⁰

3 Income Distribution and Inequalities

The role of political conflict in the determination of the size of public expenditure has been analysed in a series of contributions that use the median voter model.¹¹ These models do not explain short-term macroeconomic

⁹The time-inconsistency problem of monetary policy making is that policymakers are not credible when they promise to keep the inflation low because they have an incentive to renege in the future on their promise.

¹⁰Drazen (2000).

¹¹The median voter model (Black 1948; Downs 1957) is of little use outside the framework of one-dimensional political spaces. Its main advantage is its simplicity. Other approaches exist in the literature. One may mention the probabilistic spatial voting model, which introduces uncertainty in the voting decision of individuals, the citizen-candidate model (Besley and Coates) and the party-coalition model (Roemer 2001).

policy and its influence on the business cycle, but a more structural characteristic of modern economies, which could be regarded as the magnitude of income redistribution, the degree of development of the welfare state, or more simply the size of the public sector.

The median voter theorem states that, if the policy space is unidimensional and voters' utility functions are single-peaked over the policy dimension, the policy choice favoured by a majority will correspond to the choice of the voter(s) located at the median of the policy preference distribution. When two political parties are in competition for office, their policy platform will converge on the median voter's policy preference, and this will then represent the policy implemented by the elected government. In the redistribution/public expenditure models considered in what follows, the policy preference distribution will be perfectly aligned with income distribution, making the link between income inequality and policy choices particularly clear and direct.

The Romer-Roberts-Meltzer-Richard¹² type of model can be roughly described as follows: a population of voters derive their satisfaction from the consumption of a private good, which they must purchase with their own resources, and, in the public sector specification, from the use of a public good. In the redistribution/welfare state setting, the satisfaction of individuals is limited to private consumption. Income redistribution, social benefits or the public good, are financed through a flat rate taxation of private income. Each individual receives an identical lump sum (redistribution) or enjoys to the same extent the service provided by the public good. Voting on the tax rate is equivalent to voting on the size of the policy financed by tax revenue.

The median voter theorem delivers the result that majority voting will select the policy preferred by the individual(s) in the median of the income distribution. In the most basic setting, the choice of tax rate is between 100% and 0%. The first option corresponds to a full taxation of primary income and an egalitarian redistribution; it is chosen for all those who are net beneficiaries of the taxation/redistribution scheme, i.e., by all individuals whose primary income is below the mean. The second option is favoured by voters with an above average primary income. The simple choice is modified when one takes into account the cost of taxation and redistribution, for instance because of the 'distortions' and 'disincentives' induced by taxation when income is endogenously determined, through labour supply or capital

¹²Romer (1975), Roberts (1977), and Meltzer and Richard (1981).

movements to a foreign country, for instance. In these models, a higher taxation leads to a lower aggregate income. Therefore, voters that incorporate the macroeconomic cost of taxation express less extreme preferences regarding economic policy.

The general result is nevertheless that the poorer an individual is, the higher the preferred tax rate (and consequently the larger the size of the public sector/redistribution). A prediction of these models that is often emphasised is that the size of the public sector/redistribution should grow with income inequality because it depends on the distance between the median voters' income and the mean income. In most countries, the income of the individual(s) in the median of the income distribution is below the mean. The median voter will, therefore, be a net benefactor of the redistribution scheme and vote for a positive tax rate. The magnitude of income inequality can be assessed with the distance between median and mean incomes. The larger this distance, i.e., the poorer the median voter, the higher the degree of income inequality and hence the larger the tax rate and the size of redistribution/public sector.

If most empirical studies confirm that poorer individuals are in general more favourable to income redistribution, a large public sector or a developed welfare state, than better-off individuals,¹³ the conclusion of the theoretical models regarding the degree of inequality and the size of public expenditure has been found to clash with the most commonly observed empirical reality. Following the Romer-Roberts-Melzer-Richard model, one should expect countries with higher income inequality to exhibit a larger welfare state. This is blatantly false if one looks at OECD countries; the more unequal countries (for instance the Anglo-Saxon countries) are certainly not the ones where the level of redistribution or social protection is high, and neither are countries where social protection is the most developed those that exhibit the higher degree of primary income inequality. More generally, total public expenditure (as a percentage of GDP) across countries can be shown to be negatively correlated with the usual measures of income inequality such as the Gini coefficient.¹⁴

Several explanations have been put forward in order to explain this contradiction. An argument proposed by Moene and Wallerstein (2001) is based on two distinct functions of the welfare state: redistribution and insurance. Demand for the latter, usually explained in reference to risk aversion,

¹³Amable (2009), Guillaud (2013).

¹⁴Kenworthy and Pontusson (2005).

would be expressed by individuals with high income because their income (and status) loss would be high should they lose their employment. This is a classic result of the economics of insurance under certain conditions regarding the magnitude of risk aversion. Demand for redistribution, on the other hand, would come for individuals with low income, just as modelled in the aforementioned literature. The majority decision on the size of the public sector/welfare state would, therefore, be a compromise not simply between the 'rich' and the 'poor' on the extent of redistributive mechanisms, but also on insurance. The redistribution motive would explain the support of low-income individuals and the hostility of high-income individuals for social protection, but risk aversion and the demand for insurance would operate in a symmetric way. As a result, relatively well-off voters may support a generous welfare state in spite of being net contributors to that system, because the system provides them an insurance that they value. One could, therefore, envisage a broad social base for a well-developed welfare state, which would be all the more stable that the actual amount of redistributed would be limited by a relatively equal primary income distribution. The latter would be obtained thanks to a relatively homogeneous and skilled workforce.¹⁵

A related issue concerns the targeting of social or public expenditures, and the way these expenditures are financed. Social expenditures can be more or less targeted on certain segments of the population or be 'universal', i.e. open to all citizens, in principle at least. If selfish motives dominate, targeted social expenditures are likely to meet the hostility of the population not benefiting from them. This is the core of the basic conflict in the redistribution problem mentioned previously, except that there, the beneficiaries of redistribution were the majority. When the targeted population is narrow, a majority voting is unlikely to lead to generous benefits. Some recent research has investigated this question.

Brady and Bostic (2015) show that individual preference for redistribution decreases with the targeting of benefits on low-income households. Lupu and Pontusson (2011) argue that the structure of inequality matters more than their level. Their argument is based on 'social affinity', that is the proximity between social identities defined by self-categorisation into groups, taking into account that there are multiple groups with which any given individual might identify. For operational purposes, they consider that income differentials are a reasonably good proxy for social distance, at least

¹⁵Iversen and Soskice (2001).

in the absence of cross-cutting ethnic or racial cleavages. The expectation is that middle-income voters are more inclined to empathise with the poor—and to support parties that advocate pro-poor redistributive policies—when the income distance to the poor is small relative to the income distance to the affluent, a distance they define as the skew. Testing on an OECD countries sample, they find a positive correlation between the ‘skew’ measured by the 90–50 ratio (i.e. the ratio of earnings in the 90th percentile to earnings in the 50th percentile) divided by the 50–10 ratio, and redistribution measured by the percentage change in Gini coefficients observed when moving from household income before taxes and transfers (gross market income) to household income after taxes and transfers (disposable income).

The financing question is related to that of targeting. The Romer-Roberts-Melzer-Richard model is based on a linear taxation at a flat rate. However, income taxation is progressive in many countries: the tax rate increases with the income base. The justification for such a progressivity is that the better-off household can contribute proportionately more to the financing of public expenditure, which has also an inequality-reduction effect. A direct consequence of progressivity of taxation is to exacerbate the conflict between the rich and the poor regarding redistribution. A less progressive tax system would make the acceptance of a high level of public/social expenditures less difficult to accept for the upper income deciles. This would broaden the social base for the welfare state. A progressive system would increase the opposition of higher income voters. The social base of the welfare state would be concentrated on the lower income classes, and thus would be more fragile. Already net contributors with a flat rate taxation, the better-off individuals would be likely to oppose redistribution even more if they contribute to its financing proportionately more than others. By contrast, one would expect the opposition to redistribution to be milder when public expenditure is financed by less progressive taxation, through social contributions or even consumption taxes, for instance.

Prasad and Deng (2009) showed that the most generous social protection systems were found in countries where the tax system was less progressive.¹⁶ This finding is considered to be a paradox because the two elements of a redistribution policy, the progressive tax system on the one hand, and the generosity of the social protection system on the other hand, should be in principle complementary to each other because they both tend to diminish secondary income inequalities.

¹⁶Also on this topic: Cusack and Beramendi (2006).

The explanation proposed is that the political support to the welfare state is broader when the social protection system is financed by contributions rather than by taxes according to the arguments previously exposed.¹⁷ Also, those benefitting from the social protection system are those who contribute to its financing. Those who do not contribute have no particular reason to oppose such a system. This argument had already been mentioned by Esping-Andersen (1996) in relation with the sustainability of universalist social protection systems. By contrast, countries where taxation is more progressive, for instance because it relies relatively more on income rather than on consumption taxes, are characterised by less generous or developed welfare states.

Another dimension is that of the institutional environment, and particularly the electoral rules. Iversen and Soskice (2006) revisited the taxation/redistribution debate taking into account a three-class model: the poor, the middle class and the rich. No single class represents a political majority, making the coalition of at least two classes a necessity for obtaining a political equilibrium; and the middle class is always part of the winning coalition. Two social alliances are thus possible. Iversen and Soskice contrast two systems of voter representation: proportional representation (PR) and the majoritarian (M) systems. They emphasise the importance of electoral rules (the ability of parties to make credible commitments) for the determination of a political equilibrium, and consequently for the development of the income redistribution system and the level of income inequality. Under the PR system, each class is represented by a party. Under the M representation system, according to the so-called Duverger law, there is an incentive for parties to regroup, and two parties, one centre-left and the other centre-right, compete for office.

The main difference between the M and PR systems is where the class coalition takes place: within a party in the M system, between bargaining parties in the PR system. This has consequences for the type of alliance that will be struck. Iversen and Soskice show that in the PR system, the winning coalition comprises an alliance between the poor and the middle class, choosing to tax the rich and redistribute the tax revenue to both classes. Under an M system, however, the winning coalition is formed between the middle class and the rich within a centre-right party. The middle class are

¹⁷Zemmour (2015) found a correlation between an increase in progressivity of the social protection system's taxation in France and the polarisation of opinions with respect to the financing of social protection.

reluctant to join the poor in a single party for fear that this party would drift too much to the left under the domination of the working class and lead to a very high tax rate that would be detrimental to the interests of the middle class. The fear that, in the case of an alliance with the rich, the party representing this coalition would drift too much to the right is, by comparison, smaller, since a party under the domination of the rich could not set a tax rate under nil percent and pursue regressive taxation policy, at least under the assumptions of the model.

Therefore, the electoral rules may explain a different type of relationship between the level of primary income inequality and the extent of the social protection/redistribution system than what the simple median voter setting of the Romer-Roberts-Melzer-Richard type comes to.

4 Institutions and Structural Economic Policy

Economic policy is not limited to monetary or fiscal policy, but includes also an action on the type of institutions that structure economic exchange. The issue of ‘structural reforms’ has been at the centre of the economic policy debate not only in developed countries, with the (in)famous ‘Washington consensus’,¹⁸ but in OECD and European Union countries too.¹⁹ A large part of the current economic debate in developed countries is focused on the ‘structural’ policies that could be implemented in order to foster growth and competitiveness, and on the political obstacles to their implementation. The mainstream view on these matters is well summed up by Boeri (2006). Macro- and microeconomic performance is alleged to be hampered by ‘rigidities’, in particular in product and labour markets,²⁰ and the list of problems includes the presence of state-owned firms in certain industries, lack of competition, ‘overregulation’, etc. The ‘reforms’ envisaged are in most cases based on privatisation, flexibility, and more generally, liberalisation of markets.

If one puts aside the issue of the effectiveness of such reforms,²¹ one may wonder why there would be an opposition to them. One may turn to the

¹⁸Williamson (1990, 2008). See critiques in Rodrik (2006) and Stiglitz (2008).

¹⁹Kok (2004), Sapir (2004), OECD (2007).

²⁰Before the 2008 financial crisis, the ‘structural reforms’ literature was also commonly pleading for a removal of ‘excessive regulation’ in financial markets (e.g. Kok 2004).

²¹The effectiveness of various liberalisation reforms to boost growth, employment or competitiveness is controversial. See Amable et al. (2011) on labour market reforms and Amable et al. (2016) on product market reforms.

simple taxonomy proposed by Acemoglu (2003),²² where three types of approaches to the political economy of institutions are distinguished. The first approach is defined in reference to the so-called Coase theorem and designated by Acemoglu as the as 'the political Coase theorem' (PCT). The Coase 'theorem' states that, in an environment with well-defined property rights and in the absence of transaction costs, economic agents will contract to achieve an efficient outcome, irrespective of the original property rights on particular assets.²³ The extension of this reasoning to the political sphere would imply that there would be a tendency to opt for the most efficient policies and institutions, irrespective of the original distribution of political power. Economic and political agents would agree to the policies and institutions that maximise aggregate outcome, and find a way to distribute this outcome that would be 'efficient'.

A toned-down version of this argument is called the modified PCT by Acemoglu. According to this version, there would be some disagreement about what the best policies and institutions would be. Economic and political actors would have no intention to choose inefficient policies, but may do so because of the uncertainty surrounding institutional choices. Only ex post could the 'right' policies and institutions be discerned.

The third category is based on social conflict. As mentioned previously, all economic policies have distributional consequences and are, therefore, prone to political conflict. A consequence is that some policies with negative consequences for a sizeable portion of the population may be chosen because it is supported by political power. In this perspective, social groups are pursuing their own (group) interests, not some more or less abstract concept of 'social welfare'. Social conflict may result in policy choices that are detrimental to many in the long run.

For Acemoglu (2003) and Acemoglu and Robinson (2006), what prevents societies from adopting 'efficient' institutions and policies in a context of social conflict is the impossibility of those that would benefit from the implementation of policies that would expand aggregate outcome or improve economic efficiency to credibly commit to redistribute part of their gains to those who would have lost from the change. The condition for the existence of the Coase 'theorem', i.e. the possibility to write enforceable contracts, is not in general satisfied when it comes to most policy decisions. Social groups that have gained sufficient political power to orient policy

²²Also: Acemoglu and Robinson (2006).

²³Coase (1960).

choices in the direction of their group interests, have no specific incentives to compensate losers *ex post*, and cannot credibly commit to compensating them anyway.

A different version of the second and third categories of argument can be found in the current discourse on the difficulty to implement alleged ‘indispensable (structural) reforms’. Resistance to the reforms would in part be the action of powerful and well-organised interest groups, and in part the consequence of a limited rationality of many agents. The former type would rationally oppose reforms that would harm their interests, while the latter would fail to understand the benefits they could gain from the reforms.

Some explanations mobilise the functioning of democracy to explain the absence of reforms. Although economic expertise would have identified the ‘good’ reforms to be implemented, those that are mentioned in Boeri (2006) for instance, the general public would fail to grasp the potential benefits of these changes and, in combination with the resistance of some interest groups, this would lead to the reform movement stalling. This type of explanation is sometimes combined with a consideration of the time schedule of the reforms: they would be beneficial in the medium/long run but have costs in the short run. Again, the general public would fail to see beyond the short run because of a limited rationality.

Coupled with the imperatives of democracy and electoral constraints, the lack of courage of politicians, reluctant to impose reforms to the electorate, would seal the fate of a potentially beneficial institutional change. This opinion is summed up in a sentence usually attributed to the President of the European Commission Jean-Claude Juncker: ‘everybody knows what has to be done but nobody knows how to get re-elected thereafter’, or in a declaration of former European Commissioner Oli Rehn: ‘politicians have been unwilling to do the necessary reforms because they are dominated by short term interests and obsessed by the many elections’.²⁴

A political economy analysis of institutions and institutional change is proposed in Amable and Palombarini (2009) and Amable (2017). Institutions are defined as socio-political compromises. Social groups have differentiated interests because of their different positions in the social structure.²⁵ As a consequence, they have differentiated demands in terms of

²⁴*La Tribune*, 4 June 2014.

²⁵Interests as agents perceive them; interests are socially constructed and not “objectively” given.

economic policy and institutional design. These demands will be satisfied or neglected by political actors according to the political support that the different groups can provide. The task of the political actors is, therefore, to find a mediation between the diverse demands expressed by a sufficient number of social groups that could be aggregated in a social bloc supporting a given political strategy.

A social bloc is, therefore, an aggregation of social groups whose most important policy demands are satisfied by a political strategy. This social bloc is dominant when the political strategy is implemented by the government. The stability of the political strategy is influenced by but cannot be reduced to an aggregate measure of economic performance such as growth, GDP per capita or employment. Economic growth for instance may favour the establishment of political compromises by increasing the amount of resources available to redistribute. But growth also implies economic structural change, which is likely to alter the demands expressed by the different social groups, whether they belong to the dominant social bloc or not, and modify the relative bargaining power of the different social groups. This may weaken the stability of a given dominant bloc and open a period of political crisis characterised by the vanishing of the social base of the government.

These concepts can be applied to analyse the stability and change of the different 'varieties' of capitalism,²⁶ and the political economy of institutional change in France.²⁷ The last four decades have seen a general movement towards a liberalisation of the institutions inherited from the post-World War II period. This movement has been facilitated by the economic crisis of the 1970s and 1980s, which had made the socio-political compromises of the Fordist period more fragile. The economic crisis, the failure of 'traditional' macroeconomic policy to solve the problem of low growth and high unemployment and the structural change that altered the balance of power of social groups in developed economies favoured the emergence of an alternative paradigm for economic policy, based on orthodox monetary and budget policy, and on liberalisation.

These changes implied a transformation of nonliberal varieties of capitalism. But institutions representing socio-political compromises, institutional change implies a reopening of previously neutralised socio-political conflict. In some developed economies, the structural reforms concerned are so wide-ranging that their implementation leads to a break-up of the dominant

²⁶Amable (2003).

²⁷Amable (2017).

social bloc and calls for the reconstitution of a new socio-political alliance supporting the new institutional architecture. As shown in Amable (2017), the search for the tryptic of a reform strategy leading to a new ‘variety’ of capitalism in France, a political coalition implementing this reform strategy, and a social bloc supporting this coalition, has been unsuccessful for four decades.

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13

The Political Economy of Industry

Patrizio Bianchi and Sandrine Labory

1 Introduction

The political economy of industry is here intended as the long series of studies of the relationship between production organisation and the power structure it generates.

The roots of this analysis lie in the First Industrial Revolution. The control of productive organisations determines not only economic, but also political power in societies, through their effects on the division of labour, both within the firm and within societies, and through the learning and status acquisition opportunities they afford to different individuals and social groups. At the same time, changes in the division of labour may also be associated with processes of deskilling and status loss. The social division of labour had existed in ancient civilisations (Liverani 2006) and had been examined in detail in Classical Antiquity. Plato and Xenophon highlighted the division of labour between individuals or groups specialising in the production/delivery of specific goods or services that are then traded between

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the members of society according to their respective needs.¹ In contrast to that, this chapter focuses on the ‘technical’ division of labour within productive units working in a competitive capitalist environment. In other words, we examine the organisation of production within specific workshops and factories delivering manufacturing products that are aimed at markets in a conflict-ridden, competitive context where relationships between rivals determine the relative power of different stakeholders (such as firms, industries, and national systems). This type of division of labour has developed since the First Industrial Revolution and is associated with the development of capitalism (Noble 1984; Poni 1997, 1999).

The political economy approach to the analysis of industry is characterised by an attention to production organisation and its effects on both productivity and the structural development of the whole economic system. More specifically, production organisation determines division of labour and its effects on the specialisation of workers’ activities, creating opportunities for them to apply ‘skill, dexterity and judgement’ (Smith 1776) to their working activities and to learn through their working life, with impact on their role in societies, their political power, and their civic development.

In a competitive capitalist framework, production involves the creation of organisational processes aimed at transforming some (tangible and intangible) inputs into (tangible and intangible) goods that can be sold on markets. These processes are carried out using knowledge, capabilities, and intelligence, which in turn generate added value. This capacity to generate value by combining knowledge, skills, and competencies and transforming them into artefacts is where the essence of the manufacturing firm lies and is, according to Smith (1776), what determines the ‘wealth of nations’.

In other words, the determinants of economic development are not only the raw materials or the land available to an economic system, but also the individual and collective capabilities to transform inputs into outputs; the capability to learn and apply new knowledge to production processes; the competence in accumulating, transferring, and organising knowledge by incorporating it into goods that are tradable in markets subject to conditions of competition between rival producers.

This chapter examines this relationship in the works of Classical Economists and applies it to the characteristics of the contemporary industry. The chapter argues that the conceptual framework of the Classical Economists provides the analytical tools needed to explain the current

¹The analytical implications of this view of division of labour are investigated in Luigi Pasinetti’s model of a ‘pure labour economy’ (1993).

developments in industrial production. Particular attention is given to the contribution of Adam Smith, who provided an important and pioneering insight into the political economy of industry.

The chapter develops a line of investigation started in Bianchi (1984, 1991), where the structural changes in the manufacturing industries of the 1970s and 1980s (and particularly the Third Industrial Revolution switch from Fordism to flexible manufacturing systems) were explained in terms a classical (Smithian) analytical framework. Here, we argue that a Classical framework can also illuminate current structural changes in manufacturing, which we can describe as the Fourth Industrial Revolution.²

The chapter highlights the importance of production organisation (*manufacturing regime*) to understand structural changes in manufacturing and the evolution of industries driven by firms' search for dynamic efficiency. Section 2 examines contributions prior to Smith's *Wealth of Nations*. Section 3 deals with Smith's contribution, highlighting not only Smith's focus on the division of labour and its effects on the economy and society, but also his view of division of labour as a dynamic process based on learning and innovation. Section 4 highlights the relationship between division of labour and power in the work of the Classical Economists. Section 5 provides a historical reconstruction of the economists' views of the relationship between production and competition in the period following the Marginalist Revolution of the 1870s and characterised by the progressively vanishing focus on production organisation. Section 6 reconstructs manufacturing history since the age of the mass production system, highlighting the variety of forms of production organisation that has appeared in that period (from industrial districts and clusters to modular production networks and global value chains). Sections 7 and 8 provide an explanation of those developments in terms of the classical framework, and outline a political economy of the Fourth Industrial Revolution based on that framework. Section 8 brings the chapter to close.

2 The Pre-Smithian Division of Labour

The relationship between production organisation, the extent of the market and power has been central to the work of Adam Smith, whose book *The Wealth of Nations* (1776) is one of the fundamental pillar for the development of Political Economy as a specific discipline of moral sciences.

²Bianchi and Labory (2018) provide the analytical reconstruction of the sequencing of industrial revolutions in terms of a succession between different forms of manufacturing organisation (*manufacturing regime*).

The study of production organisation, namely of the labour division between individuals operating a common activity but belonging to a single social structure, starts, however, earlier than this.

The Scottish philosophers, among whom Hutcheson who was a teacher of Smith, had already studied the division of labour as a model of social organisation, and French encyclopaedists had described the types of instruments, tasks, and basic knowledge which characterised the various activities of the societies of the time (for instance Diderot).

Different metaphors were used to delineate the organic character of the productive organisation, from the mechanics of a clock (Petty 1671) to bees in a hive (Mandeville 1714). The example of the pin factory was already present in the Chamber Cyclopaedia and the Encyclopedie of Diderot and D'Alembert, where the different phases of the production process of pins is described.

These studies analysed the division of labour and highlighted its advantages. Thus Harris (1757) and Tucker (1755) examined the productivity implications of the division of labour. Petty (1671) seems to be the first scholar who analysed the details and effects of the division of labour in specific production workshops. He noted that the specialisation of workers' activities allowed by the division of labour contributed to skilful cloth-making. He also examined the benefits of labour division in the Dutch shipyards. David Hume (1739), a contemporary and friend of Smith, referred to the division of labour as the 'partition of employments'.

These studies recognised that the advantages of the division of labour in improving the skills of individual workers and reducing the time and effort involved in switching from one operation to the next, and in facilitating innovations.

Smith realised the convergence and synthesis of this long series of studies, and asked about the possibility to define a descriptive system of social dynamics that would be as strong and predictive as the Newtonian synthesis of the movement of the universe. Smith analysed the Newtonian mechanics in his graduation thesis and highlighted its relevance for moral sciences.

Later, he devoted himself to the study of the aggregation modes of human societies, leading to the publication of the *Theory of Moral Sentiments*, as well as a first draft of the *Wealth of Nations*, in which he introduced the analytical scheme relating the increase in the extent of the market, division of labour and market power.

After studying the forces driving the composition of social bodies, and after a trip in France, where he met some of the major intellectuals of the

time, he completed his most important work, where for the first time the implications of the division of labour on economic development and prosperity, in connection to the dynamics of market forces, were highlighted, while previous studies only highlighted the advantages of the division of labour in terms of productivity and learning effects.

3 Division of Labour and Production Organisation in Adam Smith

Smith views the economic system as a set of production cycles that run vertically, and roughly independently from one another, from raw materials to final products. His argument is that the wealth of nations is determined by the division of labour that is induced by the organisation of production in relation to the extent of the market. The division of labour has a technical dimension, related to the division of tasks necessary to produce the good, as well as the materials and components necessary for its production; it also has a social dimension, in that all individuals in society will specialise in a particular activity, according to their knowledge and competencies, which will determine their role and status in the society.

Smith lived during an extraordinary phase of European life. The birth of manufacturing capitalism took place during an intense phase of scientific research on the dynamism of the universe, while philosophical studies were simultaneously underway concerning the organisation of the society and with it, the role of the state. He turned to examine, through various experiments, the fundamental rules of a social system, and discovered its modes of aggregation and competition, identifying the dynamic factors permitting its movement across time.

His book describes the advantages of the modern organisation of production very precisely through the famous example of the pin factory, which is related to the capacity to learn and therefore to accumulate knowledge with respect to a specific activity. Repetition permits task optimisation and enhanced knowledge of materials, hence learning and improvement in the performance of the task(s). Knowledge and competencies could also be improved by innovation, namely the invention and introduction of new machines or new production organisations.

Organisational choices are related to market demand and competition, as stressed in the third chapter of his book:

As it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of that power, or, in other words, by the extent of the market. (1776, I, III, p. 15)

The organisation of production, namely how the production process is divided into phases performed by different workers, is limited by the market power of the firm (the power of exchanging) and the extent of the market (how much 'effectual demand' the producer must supply). In case of changes in market demand, such as in the example of a public mourning that alters the demand for cloth, rising the demand for black cloth, the firm must adapt its production system, using its technical knowledge and the competencies of its employees.

In addition, the importance of what would today be competencies and knowledge were also stressed, and seen in connection to a market and the capacity to create value through organising production specifically designed for the characteristics of that market.

The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity and judgement with which it is anywhere directed, or applied, seem to have been the effects of the division of labour. (1776, I, I, p. 4)

In such a model, the capacity to create value is clearly related to the capacity to focus human competencies on the production of goods within an organisational model that accumulates and transfers technical, organisational, and market knowledge into the productive cycle.

Labour division is a dimension of social conflict. The 'power of exchanging' is not only the power of the firm relative to its rivals. It is also the political power that the firm may gain by becoming big and dominant in some market. This market power also provides the entrepreneur with a power over its employees, who must perform specific tasks to get wages, so that the entrepreneur has a political power over them, conditioning their compensations on their efforts that must be done in adequate ways for the firm. Economic, social and political aspects are therefore closely related. This important feature of the political economy of the industry will be further discussed at the end of Sect. 6.

This analysis is essentially dynamic. The book starts with a discussion of the division of labour and its effects, which argues that efficiency effects are both static (specialisation allows to save time and improve quality thanks to a more focused job) and dynamic, in that specialisation allows learning and therefore innovation. Innovations are improvements in existing machines

and invention of new ones. This technical progress induces price reductions, not because of increasing returns to scale with a stable production technology, but because of the adaptation of the process to changing demand and to technical progress.

Specialisation and complementarity within a dynamic context are key to efficiency. The capacity to design new methods of organisation, to introduce new machines, to identify new needs and to open new markets, constitutes the essential component through which a competitive advantage is created. These innovations are called 'secrets', and although they generate higher profits, they also attract new competitors. While trade secrets are difficult to maintain, 'secrets in manufacturing are capable of being longer kept than secrets in trade. A dyer who has found the means of producing a particular colour with materials which cost only half of the price of those commonly made use of, may, with good management, enjoy the advantage of his discovery as long as he lives, and even leave it as a legacy to his posterity' (*WN*, I, VII, p. 53).

However, as already stressed, the sources of innovation do not only lie within the firm, but also outside it, thanks to the work of scientists, namely 'philosophers or men of speculation' in the words of Smith. He argued that scientists specialise in research in specific 'branch' and can contribute to economic progress thanks to their discoveries and inventions (*WN*, I, I, p. 10).

Knowledge, learning, and innovation both within the workshop and outside it are therefore sources of what is called today competitive advantages that combine to represent the engine of social development. An economy becomes more dynamic as its knowledge base spreads, and as its organisation of production is increasingly based on learning.

Fundamental to this process is the interdependence between the units resulting from labour division: between the workers specialised in different tasks, between the firm and its outside suppliers, between the firm and the scientists. The workshop is coordinated by the 'manufacture master' (the entrepreneur). This interdependence implies that industries are systems. We will come back to the importance of this systemic view and the networks underlying production processes in the next sections.

4 Production, Competition, and Innovation

Marx also described the advantages of labour division and its effect on the society. Marx made an interesting distinction between heterogeneous and organic manufacturing. Heterogeneous manufacturing represents the case

where different independent partial products combine to form the final product (assembly), while organic manufacturing concerns a production process where the same material receives subsequent transformations to obtain the final product.

The analysis by Marx referred to several scholars from the end-eighteenth and beginning of the nineteenth century. Charles Babbage was one of them, who formulated a principle of proportionality in the allocation of resources and in the manufacturing times that the production manager must maintain between phases to guarantee the continuity of productive flows and therefore increase productive efficiency (The 'Babbage Principle', Babbage 1832). Marx refers to this proportionality principle: 'when once the most fitting proportion has been experimentally established for the numbers of the detailed labourers in the various groups when producing on a given scale, that scale can be extended only by employing a multiple of each particular group' (Marx 1867). Babbage was a mechanical engineer who focused his analysis on the factory, while Marx was also interested in the effects of the division of labour on the wider economic system. Marx also pointed out the limits of the division of labour, in that the division of labour produces positive effects up to a point where division would be so extreme that too few skills would be required to perform the tasks and the work would become repetitive, leading to alienation. The worker becomes 'depressed spiritually and physically to the condition of a machine' (Marx 1844, Economic and Philosophical manuscripts). Thus, Marx seems to suggest that the dynamic efficiency effects of the division of labour, namely learning and innovation, would not occur if the division of labour in the factory would be pushed too far.

The topic of labour division remains in the works of authors from Senior (1836) to Mill, with a particular attention to the social impact of labour organisation characterised by the increasing use of machines in industrial activities. From the famous chapter of the book by Ricardo on machines, to the Marxist analysis and the subsequent literature, all stress the growing submission of labour to an organisation which basic element is the machine and the productive line, stylised by Taylor in his scientific organisation of labour, where individual specialisations were cancelled in a repetitive sequence of elementary tasks, thereby eliminating dynamic learning economies, which Smith considered as an essential part of the manufacturing process.

These issues were examined by Sraffa (1926, 1930) and Pasinetti (1999, 2005) and subsequent theoretical papers, which have analysed value creation in production processes that comprise capital and labour. These studies subsequently also have considered the link with organisational and technological innovation and the importance of the quality of the human capital involved in the production process and therefore the role of education

systems on the definition of appropriate capabilities to produce added value. Pasinetti (2005) stressed that economic systems must be analysed in a framework of historical time: ‘Theory should start from facts, hence from history. If the course of history shows dramatic and radical change, theory should follow suit’ (2005, p. 844).

The analysis of the proportionality of phases necessary for the continuity of flows and for the minimisation of lead time has been developed by Georgescu-Roegen in his ‘fund-flow’ approach to production analysis (Georgescu-Roegen 1970). His studies provide the basis for different structural approaches to production (Landesmann 1986; Scazzieri 1981, 1993; Landesmann and Scazzieri 1996). In the structural approach to production, productive activities are considered as a major source of uneven change in the dynamics of economies. Different patterns of structural change emerge from the interaction of three fundamental components of production processes: tasks, agents, and materials. The interactions between the three elements depend on how they are structured and coordinated. Structural changes involve transformations in the way these three elements are structured and coordinated; some elements may persist or may create bottlenecks in the capacity of the system to change. New elements may be introduced, implying the need for new skills for agents, as well as new coordination arrangements. According to Landesmann and Scazzieri (1996, p. 3), ‘structural economic dynamics may be defined as the analysis of economic transformations that explicitly account for the relative persistence of certain elements or relationships of economic structure while other elements or relationships are subject to change. Structural change may arise in single industries or in the whole economy’.

Developments in the analysis of increasing returns have also been proposed. Thus Scazzieri (2014) provides a deeper analysis of whether a general causal principle may be identified behind Smith’s advantages, and of whether those advantages may be realised independently of specific conditions of the behavioural or institutional type. Scazzieri, therefore, outlines the fundamentals of a structural theory of increasing returns.

5 The Progressively Vanishing Focus on Production Organisation

Economics will subsequently develop focusing on the ability of consumers to buy the goods rather than on productive conditions. Senior, already in 1836, puts exchange at the centre of economic analysis, together with the problem of factor remuneration, regardless of productive processes.

The literature that will subsequently develop, following the Marginalist line of investigation, builds an analytical framework where the analysis of production is less and less important while the individual as consumer becomes key: a theory of prices based on individual needs is elaborated in the nineteenth century, abandoning at the same time the theory of efficient organisation of production.

Smith claimed that: 'When the quantity of any commodity which is brought to market falls short of the effectual demand, all those who are willing to pay the whole value of the rent, wages, and profit, which must be paid in order to bring it thither, cannot be supplied with the quantity which they want. Rather than want it altogether, some of them will be willing to give more. A competition will immediately begin among them, and the market price will rise more or less above the natural price, accordingly as either the greatness of the deficiency, or the wealth and wanton luxury of the competitors, happen to animate more or less the eagerness of the competition' (*WN*, 1, VII, p. 9).

Consumer theory, whereby prices are determined by the subjective needs of individuals and not really by production, is developed in the following years, from Mill to Marshall. Marshall provides a producer theory coherent with that consumer theory, which will substitute the analysis of production made by classical economists. Marshall recognised the importance of the classical insights on the division of labour and labour specialisation in his book 'Principles of Economics' (1920). However, following the success of the mathematical framework he develops to account for resource allocation, which will become the mainstream neoclassical economics, these insights on the division of labour will be left aside.

Marshall first postulates the pursuit of production efficiency: the producer looks for an optimal allocation of resources to maximise his profit, just like the consumer maximises his utility. The law of decreasing marginal utility is the basis of the demand for a good, like the law of decreasing marginal returns regulates production. This leads to a universal law that regulates the whole economy: the equilibrium price is determined by the intersection of demand and supply, when competition runs freely and perfectly. If the price is high, demand will fall and supply rise, and if the price is low, demand will rise and supply reduce. This free and perfect competition necessarily drives the price towards equilibrium.

In the tranquil view which the modern theory of value presents us there is one dark spot which disturbs the harmony of the whole. This is represented by the supply curve, based upon the law of increasing and diminishing returns. (Sraffa 1926, p. 536)

Sraffa showed that the weak point of Marshall analysis was the hypothesis of increasing returns, in that a firm able to reduce costs without any limits by raising production would reduce prices up to the point where it would conquer all the market, but then there will be a monopoly and not perfect competition.

The Marshallian theory had to change the consideration of diminishing and increasing returns in the Classical theory: the latter considered that diminishing returns were linked to the determination of rents of land, while increasing returns were related to the division of labour. In Marshall, the tendencies towards increasing and diminishing returns always act in opposite direction, so that it is possible to define a law of non-proportional productivity which makes supply and demand perfectly symmetric.

The great crisis of 1929 induced economists to extend and rethink the Marshallian theory. While Keynes proposed a new analysis of the macroeconomic equilibrium, many economists, in the UK and in the USA, reflected on the contradictory elements of the Marshallian analysis. Thus J. Robinson and E.H. Chamberlin proposed the consideration of product differentiation and imperfect competition. However, Sraffa's point that the hypotheses of increasing returns and perfect competition were not compatible was not taken. For instance, Chamberlin (1933) raised the problem of competition between a restricted group of producers with different dimensions and different products. As stressed by Stigler (1957), Chamberlin had to introduce questionable assumptions of 'uniformity' ("that both demand and cost curves are uniform throughout the group") and symmetry ("that any adjustment of price or of 'product' by a single producer, spreads its influence over so many of his competitors that the impact felt by one is negligible") (Chamberlin 1948, pp. 82–83) in order to make the whole reasoning coherent.

Mason and then Bain emphasised the need to examine the productive structure of industries, considering parameters such as concentration, scale economies, and product differentiation, which contradicted the Marshallian model. From these works the field of industrial organisation and industrial economics was created and developed (Bianchi 2013), but never reconsidered Sraffa's critique. The result is that the concept of labour division and its dynamic adjustments following changes in competitive conditions has remained unexplored.

With the introduction of utility concepts in the late nineteenth century, the focus of analysis shifted to problems of market values and equilibrium, so that the social and political aspects of surplus and distribution became secondary or implicitly resolved.

The problems of the adjustment of productive processes within the firm to changes in competitive conditions are again highly on the agenda today

as globalisation and the financial crisis have induced firms to restructure. Hence, the reference to classical economists once again does not appear as an archaeological effort but is the expression of a need for new analytical tools today.

6 From Mass Production to Industrial Districts and Flexible Production Systems

The long cycle between the 1930s crisis and the 1970s crisis can be identified as the era of mass production. The economic revival of Western countries and Japan after the end of the Second World War has been determined by a strong consumption growth, particularly of durable goods such as automobiles. Demand for cars was easy to forecast and largely based on the domestic demand. A national leader or a limited oligopoly could consolidate at the national level. Production was characterised by the Taylorist system, defined by Ford at the beginning of the twentieth century, as a continuous sequence of simple tasks constrained by the movement on a specific assembly line where the product is progressively assembled in a standardised good, sold on a market where price competition prevailed.

In this system, static economies of scale guaranteed low production costs, and the incumbents could maintain market power by setting a price which kept potential entrants out of the market, according to pre-emption strategy studied by Sylos Labini, Bain, and Modigliani in the 1950s.³

This was the era of the 'modern corporation' as defined by Chandler (1977). Mass production had evolved since the beginning of the twentieth century to produce more differentiated products. The Fordist firm was extremely rigid and could produce a homogenous good. Already in the 1920s the need for more variety was felt and General Motors (GM) introduced a new production system and new organisational form that Chandler defined as the multidivisional or M-form, in contrast to the unitary form where only one variety of the product could be manufactured, such as the Ford-T. GM created different divisions, each specialised variety of the product and, later on, particular markets. In the automobile industry, there could be different car models with different colours, but differentiation was limited.

³Modigliani (1958), Bain (1959), Sylos Labini (1962).

This era ended up when demand for mass products reduced on domestic markets because consumers started to look for more differentiated goods. In the car industry example, this meant that consumers asked for higher variety of models, of colours, of engines, of power, and so on. The M-form has limits in producing such a high variety since it still used rather rigid assembly lines.

In the 1970s, the political context also completely changed following the dramatic rise in the price of raw materials and of labour costs (following the Philips curve, as the economy moves closer to full employment inflation rises). Demand became uncertain as a result and highlighted the rigidity of production systems based on static economies of scale where even small changes in the assembly line were costly and time-consuming.

There was, therefore, a need for production systems that could produce higher variety at limited cost, able to combine economies of scale, and economies of scope.

In the car industry, Japanese producers had such flexible production systems and began to expand in Western markets, first in the USA and then in Europe. Given the characteristics of the Japanese market, they had developed production systems able to produce a variety of products at low volume and low cost. The main features of this system were management practices, such as just-in-time, continuous improvement (*kanzen*), worker empowerment to learn, and make suggestions for improvements. The main source of Japanese firms' competitive advantage was their production organisation (Labory 2002).

Western firms, therefore, saw their market positions threatened and had to react.

This reaction took two directions in the end of the 1970s. On the one hand, some firms pushed automation as much as possible to create the co-called unmanned factory. This process also pushed vertical integration to the extreme. On the other hand, some firms operated vertical disintegration, by creating subcontracting networks while maintaining the quality and continuity of production flows.

Extreme automation soon proved to be inefficient, and the dominant trend in the 1990s was outsourcing (Sturgeon 2002). Outsourcing strategies were first adopted to reduce costs, since the shift of production phases to outside suppliers directly impact on this variable. However, outsourcing became a strategy of firms allowing them to focus on their core competencies and more value-adding activities.

A third 'phase' in outsourcing is off-shoring, whereby production phases are not only outsourced but also delocalised to even distant countries,

thereby creating 'global value chains' (Gereffi 1994; Sturgeon 2008) or 'global production networks' (Coe et al. 2008). This trend is due to globalisation, namely a large increase in the extent of the market following the transformation of formerly planned economies into market economies in the 1990s, as well as the emergence of big players and big markets such as those of the BRIC countries (Bianchi and Labory 2011).

In recent years, however, several scholars have highlighted that the trend of off-shoring may be ended and many firms in the world prefer reshoring (Bailey and De Propris 2014). The main reason for reshoring is that the high geographical fragmentation of the production process impedes static (cost) and dynamic (learning) external economies to be exploited, such as the 'industrial commons' or 'industrial atmosphere' of places where a single integrated firm or different firms from the same industry are in proximity.

This topic of proximity has been widely studied in the 1980s and especially 1990s with reference to industrial districts. After the crisis of the very large, integrated firm in Western countries some new models of industrial organisation emerged such as industrial districts. Such aggregations of SMEs had existed for years, but they turned out to be very competitive from the 1980s onward, thanks to their capacity to produce variety and quality at reasonable costs.

In these new aggregation models, the territory and its community of people become the common and unifying element of the different phases of the production process managed by different firms.

Beccattini (1979) used the analysis made by Marshall (1890) to analyse and identify these industrial districts. These systems of SMEs were characterised by the division of labour across firms, in that each firm in the district realised a different phase of the production process. Their collaboration and embeddedness in a local community allowed the SMEs to exploit external economies while the simultaneous competition arising between them provided the incentives for quality and (incremental) innovation.

Subsequently, various authors have developed this model of local cooperation, highlighting the importance of the infrastructure sustaining innovation processes. Porter (1990) developed a more general approach to production clusters, while more recently the conditions for the cohesion of multiple firm systems have been outlined, mainly centred on the theory of industrial commons, namely of shared knowledge (Pinch et al. 2003; Lessig 2004).

Various models of the complexity of organisations have been developed since then, beyond the various theories of the firm. The global value chain literature refocuses the analysis on production cycles, showing their articulation in different countries.

Sturgeon calls them 'modular production networks' (2002, p. 1), whereby the production process is organised in different modules that are realised by different firms, the lead firm focusing on core competencies such as product innovation and design, as well as marketing and commercialisation. Suppliers take growing importance and power in this process, since they produce complete modules for different clients.

However, the evidence regarding the diffusion of this organisational form is based on specific case studies (for instance Sturgeon 2002, analyses it in the electronics industry) and no systematic evidence exists. Reality appears to be variety since even in the electronics industry some large, vertically integrated firms coexist with firms organised as modular production networks (respectively, Samsung and Apple).

Some attempts at systematically analysing firm organisation have been made, based on survey data of manufacturing firms asking them about various aspects of their organisation: production organisation, hierarchical levels, responsibility of workers and managers at the various levels of the hierarchy, the extent of teamwork, remuneration schemes, and so on.

These various aspects are so-called human resource management practices, or new work practices. The effects of their adoption on productivity and performance have been stressed (Black and Lynch 2001; Osterman 1994). However, they also have drawbacks and some studies have pointed to the stress and higher incidence of working diseases and accidents they occasion (Askenazy 2001).

Overall, therefore, there is a need for more empirical and theoretical studies on these new forms of production and overall firm organisation and their effects on productivity and performance.

In this phase, the industrial economics literature has focused on the role of innovation, intended mainly as production technology first and then extended to organisational innovations, especially those related to ICTs.

In this context the rediscovery of Schumpeterian theses has allowed to define competition processes centred on innovation, with three major theoretical directions: first, the development of national or local innovation systems (Freeman 1995; Lundvall 1992); second, competition games based on hypotheses on the innovation capacity of players (Dasgupta and Stiglitz 1980; Gilbert and Newbery 1982); and third, the relationship between knowledge creation, innovation and the internal and external organisation of the firm (Nelson and Winter 1982), including local systems and clusters (Porter 1990; Audretsch and Feldman 1996).

The topic of industrial organisation has recently been taking growing importance in the phase in which globalisation determines a substantial

increase in the extent of the market, namely not only a physical extension of trade but also and mainly the entry of new competitors with a simultaneous reorganisation of productive processes to adjust to the new scale of the market.

The increase in the extent of the market clearly originates from institutional choices related to the removal of barriers to trade. After the period between the two World Wars characterised by an increasing closing of frontiers and trade, after World War II the Bretton Woods Agreement was the start of a liberalisation process. After a long series of negotiation rounds, the Doha Agreements were signed in 2001, which have led to the creation of the WTO and to the entry of countries such as China into the world market.

In this context, the GVC approach must be integrated with a more rigorous analysis of the capacity to create value by producing products using various capabilities used by human resources with different levels of education.

7 Dynamic Efficiency and Industrial Systems

The study of industry in Economics has been guided by the notion of efficiency. This is what Adam Smith examined in his book *The Wealth of Nations*, arguing that the capacity to organise production determined the generation of value. Efficiency is both static and dynamic.

Static efficiency is optimisation given resources and given a specific environment. Dynamic efficiency is the capacity to adapt to changing competitive conditions and social and institutional environment, which may bring an increase in the extent of the market or opportunities for the development of new markets. While the neoclassical school has developed focusing on static efficiencies from Walras onwards, taking demand and technology as given, as well as implicitly the social and political institutional framework, the need for a consideration of dynamic efficiency has again and again been highlighted, from Schumpeter (1934) and Penrose (1959), to the evolutionary approach of Nelson and Winter (1982) and followers who have stressed that to analyse structural changes it is essential to consider the dynamics of industrial development, which inevitably implies the consideration of dynamic efficiency, technical progress, as well as the institutional context which is not given but adapts and changes through time too.

This is a key issue nowadays where the sociopolitical context has deeply changed in the last 20–30 years, with the end of the bipolar world order created after WWII, the large increase in the extent of the market with the complex phenomenon of globalisation and the new technological

opportunities offered by technical progress (ICTs, biotechnologies, nanotechnologies), as well as the pressing question of environmental preservation and the need for a new model of economic development based on renewable and clean energy.

Static efficiency is making the most out of existing resources, in each sociopolitical context. It is growth following a given path, where resources may increase and feed increases in the growth rate. It is an adaptation, if a shock occurs that induces a departure from the growth path, adaptation meaning the capacity to return to the given path.

Dynamic efficiency is the capacity to develop new growth paths, to alter institutions so that the old power relations can be changed and new social relations created to favour learning, knowledge creation and innovation.

Taking the single individual or firm as the unit of analysis which behaviour must be studied is appropriate when the study focuses on static efficiency. When dynamic efficiency is the focus, however, it is the system of which the individual or the firm is part that must be considered, because different parts of the system may be changing and the opportunities and choices, as well as performance, depends on the way the whole system is changing.

Starting from the division of labour, and the increase in productivity and innovation (through learning processes allowed by specialisation) it induces, we can examine its effects on the whole economy. The division of labour allows to produce better, to raise the wages of the labourers, who can access to better education and culture, so that their demand change. Changing demand is met by innovation and the production of new goods, feeding a development process by which the wealth of nations increases.

Marshall, despite his theory of resource allocation and representative firm, also has a broad and systemic view of industry: he views industry as an organism, as a system made of different parts that specialise (differentiate in his words) and work in a coordinated manner.

This central unity is set forth in the general rule, to which there are not very many exception, that the development of the organism, whether social or physical, involves an increasing subdivision of functions between its separate parts on the one hand, and on the other a more intimate connection between them (Marshall 1890, IV, VIII, 1, pp. 200–201).

The subdivision of functions is the division of labour and induced development of specialised skills, knowledge, and machinery. The different parts, however, must be well coordinated or ‘integrated’ in the words of Marshall, where integration means ‘the firmness of the connections between the separate parts of the organism’ (Marshall 1890, IV, VIII, 1, p. 201).

This leads to another important point. The firm is also a system embedded in a specific institutional framework, which has effects on its strategies and performance but is also impacted by it. In the Classical economists' approach the institutional framework in which the relationship between labour division, extent of the market and power of exchanging is realised has effects on this relationship. The political context in which the competitive action is realised is not independent of the economic system, but is itself an engine of economic progress. The wealth of nations is based on the division of labour, which can only take certain forms if specific institutional constraints that may limit the natural rights of individuals may be overcome.

Classical Economists highlight that economic growth and development imply structural changes in which the internal structure and relationships of the economic system are changed, so that the process is both economic and political. It is not possible to analyse the expansion of the economic system without considering the transformations in the civil society. In other words, using the words of Dahrendorf (1988), in the classical thinking the development of provisions, namely resources, is based on the development of entitlements, namely of the right to access to production and to the use of resources. Economic growth can only arise if the institutional context can provide individuals with the rights to access resources and their use, freed from the constraints that had structured the previous society.

The elements of this structural dynamics based on efficiency are the market and the firm, which contrast with the feudal system where the social hierarchy and family organisation determined the institutional framework that defined the economic and political situation of individuals. The transition from feudalism to capitalism is therefore first and foremost an institutional transformation, which is legitimised because it frees individuals from pre-existing constraints and therefore activates their capacity, thereby inducing a collective development.

The entrepreneur organises production in relation to the extent of the market and manages an organisation as an instrument of the specific conflict that is measured in terms of 'power of exchanging'. In this conflict, the entrepreneur can also obtain 'secrets of manufacturing' and 'secrets of trade', namely production and market innovations, which constitute temporary advantages because they are likely to be copied by rivals (Smith 1776, pp. 77–78).

This role of the entrepreneur, as an organiser of the division of labour and a market agent, can only be realised in an institutional context, which allows the free exercise of 'natural' rights: a situation where perpetual institutional

monopolies, such as exclusive rights to exploit commercial routes like the India Companies, are removed, and the temporary monopolies such as the opening of certain trade routes or some large investments are regulated with patents, licences, and copyrights specified for a certain duration.

The role of the State is to guarantee the rights of access, generation, and appropriability of resources. This public function translates into the defence of individual and collective rights, but also the realisation of public work and institutions that individuals could not activate by themselves, but that are essential to the development of their activities. Efficiency but also rights of access are essential to economic development that must be based on social stability guaranteed by institutions.

Robbins thus argues that political economy fundamentally is the study of the relationships between growth of the provisions and development of entitlements, namely between the types of growth of economic resources (and types of production organisations in relation to the economic conflict that is the engine of growth) and the modes of institutional development, which guarantee to individuals the right to participate in the economic conflict and therefore in the nation's growth process (Robbins 1978, pp. 37–38). If provisions grow without appropriate entitlements, inequalities are generated, and if entitlements grow without growth in provisions, instability is generated.

This perspective is lost in the Marginalist analysis, which becomes the science of the maximisation of provisions, without considering the necessary entitlements. This assumes that the study of the growth processes is possible without considering the institutional forms that historically determine these processes. The result is that the entrepreneur's choices are determined by the criteria of maximisation of individual interests, in a socially neutral context, so that social conflict no longer is the engine of change and development. The elements inducing structural changes, such as technological progress, are even assumed to be exogenous to economic dynamics. It follows that the expansion of the dimension of the economic system occurs without any changes in its internal structural relationships. This general theory of human action, whereby a collective equilibrium can be reached by maximising individuals' preferences, replaces the ethical and historic theory that considers the links between competition and development. This theory explains the homeostasis of the system and derives optimal paths, but explains neither deviation from the optimal path, namely crises, except as pathologies, or jumps to new paths, namely accelerations in development (Bianchi 1991).

8 The Fourth Industrial Revolution

As stressed in previous sections, industries have experienced substantial structural changes over the last decades: the shift from Fordism to flexible production, Toyotism as in the Japanese model, modularity and global value chains, as well as systems of SMEs like industrial districts, are all examples in a long list of deep structural changes affecting all industries, although to different degrees and extent.

Currently production organisation seems to be experiencing a new industrial revolution: after the introduction of steam engines allowing the first industrial revolution, electricity-powered machines in the second revolution, electronics, and computers in the third one, the fourth industrial revolution is characterised by the convergence between industrial production technology and science, and even their integration, characterising the era of 'techno-science'. The main feature of the current industrial revolution is indeed the capacity to induce the convergence of all the technologies that science can develop today to provide a customised answer to large numbers of consumers that constitute a new demand extending to the global market.

There are different examples of this integration of science and technology. The sequencing of human genome has opened new opportunities not only in the health sector. These 'omics' technologies allow deeper understanding of the mechanisms with which genes, proteins, and enzymes function and therefore more targeted treatments of diseases. Synthetic biology is surpassing the capacity to synthesise artificial cells. Metabolic engineering controls the networks of cell reactions of some bacteria, allowing a new approach to chemical synthesis, including biofuels.

Similarly, nanotechnology is used in various fields of science such as organic chemistry, molecular biology, energy, environment science, semiconductor physics, food safety, etc. Industrial applications are numerous, ranging from developing new materials to direct control of matter on the atomic scale, from improvements in electrical conductors to nanostructured solar cells for energy generation, and so on.

Concerning production processes, the convergence between the real world of industrial plants and the virtual world of internet (the Internet of Things) leads to what has been denominated in various terms, including 'smart manufacturing', 'advanced manufacturing', the 'internet factory', which is the factory transforming into a mixed cyber-physical system, with a complex network of machines, physical goods, virtual objects, computing, and memorisation structures, communication devices which interact together and with economic operators.

Using sensors and other technological devices the product, which goes through the production process, is not only progressively assembled, it can communicate with machine and indicate them what to do. Because of this technological evolution, the connection and interdependency not only between workers and the network, but also between machines, namely between all means of production, increase in the digital factory. The ‘firmness of connections’, outlined by Marshall as an important factor for the efficiency of production, is perfectly established.

Product differentiation can increase at low cost, and moves towards the possibility of the personalisation of products, with high flexibility in the factory. In addition, a real-time dialogue between the market, product development teams, suppliers, and production is feasible, with important consequences on the characteristics of plants, of product volumes and product ranges, and the division of labour.

It seems that smart manufacturing will increase the heterogeneity of both products and firms’ organisation in markets. A high differentiation of products will be possible, up to personalisation. Regarding firms’ organisation, decentralisation and outsourcing may be observed together with vertical integration. Smart manufacturing lowers the costs of organisation as networks, since it is characterised by hyperconnection: products, people, and machines can be related via the web and interact; it also lowers the cost of organisation as integrated firms, since hierarchies are able to better control all the operations at all levels.

Some firms organise global value chains where not only production but also pre-manufacturing phases are organised as worldwide webs. Numerous subsidiaries are located in different countries in the world, some of them carry out complete production processes for the local markets, others realise some phases of the production process which output is then transported to other subsidiaries in the rest of the world; regarding research and development, centres are often located in different regions in the world, generally one in each of the main continents, and carry out research with local networks (with other partner firms, with universities, public and private research centres, and so on) (OECD 2014).

The importance of the integration between science and technology is illustrated the recent creation of Manufacturing Innovation Institutes in the USA, since these institutes aim at putting together business, academia and the government to favour the development of these new technologies and their commercialisation. The National Additive Manufacturing Innovation Institute, the Digital Manufacturing and Design Innovation Institute, Lightweight Innovation for Tomorrow, Power America, The Institute for Advanced

Composites Manufacturing Innovation Institute, American Institute for Manufacturing Integrated Photonics (AIM Photonics), NextFlex, the Flexible Hybrid Electronics Manufacturing Innovation Institute, and the Advanced Functional Fabrics of America (AFFOA) are coordinate in the national network in order to develop new technologies and products in the fields of 3D printing, digital technologies, new metals and new materials, semiconductors, advanced composites, photonic integrated circuits, and flexible hybrid electronics. These institutes are like the model of Fraunhofer Institutes in Germany which establish a close collaboration between the research and business communities, leading to the development of techno-sciences.

A clear consequence in terms of production organisation will be a continued increase in the knowledge content of products, reinforcing the importance of intangible assets in production. Bianchi and Labory (2011) argued that the increase in the extent of the market induced by globalisation led firms to increase the knowledge content of products, including more innovations, in order to renew them more frequently and take a competitive advantage. They showed that in terms of production organisation this lead to a growing importance of pre-and post-manufacturing phases in production processes, hence the growing importance of intangible assets, such as knowledge, innovation, and human capital. Technological developments described above make the pre-manufacturing phase essential, because they make product development and prototyping key to get competitive advantages. The capacity to master and combine the new technologies into new products is key for performance, and the integration of production and science is a way a gaining advantage in this aspect. The trends in reduction of employees in manufacturing are likely to continue since machines will replace workers, and the workers remaining will have to have high skills to be able to handle the new technologies.

The division of labour changes in relation to the extent of the market, hence structural dynamics by which the internal structure and relationships of the economic system are progressively transformed.

9 Conclusion

All the structural changes discussed in this chapter point not only to the need for further industry studies, to better understand the diffusion of organisation forms and organisational innovations, but also to the relevance of the work of classical economists. Two aspects of the classical approach to the analysis of industry appear to be especially relevant nowadays. First, the need for a structural dynamics

approach: industrial development is a process of structural change. Second, industries must be seen as integrated systems: division of labour creates systems of firms, individuals, and territories. This implies that the *interplay* between economic, social, and political processes must be considered to understand any particular aspect of it. In other words, changes in manufacturing division of labour have implications for the whole structure of the socio-economic system.

These transformations point to the need for multidimensional industrial policies. Connections are everywhere, between suppliers and lead firms; between firms, research centres, and education institutions; between consumers, product designers and manufacturers; between all energy flows within the network. The integration of innovation, territorial, social, and structural policies in the design of new industrial policy, as highlighted in Bianchi and Labory (2011), is thus more necessary than ever before.

Competencies and skills must adapt to new structures. Human capital policies, education, and training have an important role in smoothing the adjustment process. At the same time, one should not forget that risks of monopolisation are also high. Networks of firms may induce knowledge monopolisation processes, which would have a negative impact on social welfare and growth. The large amount of data available to individuals and social groups offers important new opportunities, particularly for product customisation to consumers' needs, but it also raises critical issues for citizens' privacy and security, and the distribution of power in society.

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14

Political Economy of Liquidity: The European Economic and Monetary Union

Rainer Masera

1 Introduction and Methodological Premises

Two schools of logic and philosophy stand in contrast since Ancient Greece and continue to permeate scientific thinking. According to Heraclitus, the only constant is change: «*panta rhei* - everything flows». At the other extreme, according to Parmenides: “that which truly is, has always been, and was never becoming”. Following the first approach, the only certainty is that nothing is always and forever certain. The opposite is true in terms of the second paradigm: that which does exist and is true is “the One, timeless, uniform and unchanging”.

As will become shortly evident, I have more sympathy for the first school of thought and its application to economics.¹ Accordingly, current economic policies in the Euroarea will be critically assessed by making reference to six paradoxes, examined in the light of a brief review of *conventional economic wisdom* (CW). The logical and economic concepts of *fallacies of composition/division* and the differing dimensions of *micro- and macro-prudential policies* will be analysed.

¹The implications of the Heisenberg indeterminacy principle for the methodology of research in economics are examined in Masera (2010).

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The concept of CW in economics is well-known and was explored by great authors, e.g. Keynes and Friedman. A recognised reference is Galbraith (1958), who defined CW as ideas which are esteemed for their acceptability and predictability. CW is neither necessarily true, nor wrong: however, a key characteristic is information inertia, which contradicts the tenets of efficient information and rational behaviour. Contrary beliefs emerging from newly acquired information are instead discounted away. Economic dogmas go undisputed.

The fallacy of composition is the logical (and economic) fallacy of inferring that something is true of the whole from the fact that it is true for every part of the whole; the converse of the former is the fallacy of division; something true for the whole must be true of all of its parts. Both logical fallacies were first confuted by Aristotle in his *Sophistical Refutations* and are well-known in modern philosophy and logics. An example of fallacy of composition outside economics is the following: hydrogen is not wet, oxygen is not wet, and therefore, water (H_2O) is not wet.

In economics, the fundamental fallacy of composition is epitomised by the *representative agent approach*: rational information-efficient economic behaviour at individual level has certain properties; therefore, the same outcome applies in the aggregate. The fallacy of composition contradicts this affirmation and shows that rational behaviour undertaken at individual level can lead to unintended, perverse consequences at the macro-level. The New Classical Macroeconomics (NCM) School led to the belief that the representative price-taker economic agent paradigm and the Dynamic Stochastic General Equilibrium (DSGE) macro-models had become the reference point in economics and that a “General-Golden Age” macroeconomic model was identifiable and applicable (Prescott 2006). As indicated, this approach (which often comprises the Ricardian equivalence proposition) proved however questionable and has been cogently criticised (for instance, Stiglitz 2013). Economic theories and models are often fundamentally topical (Hicks 1967) and should therefore be subject to monitoring and open to critical review.

2 The Six Paradoxes and Common Economic Wisdom in the Euroarea

The following paradoxes are closely intertwined, but also separately identifiable for purposes of analytical exposition: a common thread is the fallacy of composition. All paradoxes defy corresponding economic policies pursued

in the Euro zone, which should accordingly be subject to a holistic critical revision, by making reference to Europe's Economic and Monetary Union (EMU) as a network paradigm.

2.1 The Paradox of Inflation

The CW on which the ECB itself was created is the existence of a close—generally verifiable across time and space—relationship between the monetary base, money supply and prices: “one of the most certain facts in economics” (Issing 2008, p. 105). However, this fact appears to be contradicted, at least after 2008 and to date, by the very large monetary base injections engineered by the ECB which did not activate a traditional money credit creation process and price increases. Massive recourse to non-traditional quantitative easing (QE) appeared necessary to avoid *deflation*. The links between monetary base, money, income and prices are by no means as simple and mechanical as CW would lead to assume.² This paradox manifests itself—in varying degrees—in all major advanced countries (Constâncio 2015 and Sect. 3). Since 2008, central banks of major advanced countries bought an unprecedented \$12 trillion of assets, mainly domestic sovereign bonds.

The starting point in the critical review of economic dogmas in the Euroarea is precisely the relation between the monetary base impulses and price developments. Paolo Sylos Labini (1998) offered, already at the outset of the ECB, a radically different approach, which appears to be confirmed by economic trends in the past twenty years of globalisation. The key insight was that wages/unit labour costs from emerging market economies would act as a powerful restraining factor for wage increases (corrected for productivity and exchange rates) and for prices in advanced economies. His model helps to explain the paradox of the huge monetary base creation being paralleled by deflationary processes.

2.2 The Paradox of Liquidity

A specific declination of the inflation paradox is the “liquidity trap” which the ECB encounters. Unconventional monetary expansive impulses fail

²Among other things, this implies that monetary assets can no longer be easily identified in terms of: (i) stability vis-à-vis prices and income and (ii) aggregate demand for money functions (Ewe-Ghee and Subramanian 2003).

to reach many economic agents. Monetary policy is purportedly very expansionary, but it has little effect in terms of both inflation and output (Maddaloni and Peydro 2013). Market liquidity is often scarcely affected because a process of credit creation is not set in motion. This reminds the conditions of a liquidity trap, where and when central banks cannot “push on a string”. The implications of a liquidity trap for the mix of monetary and fiscal policies are outlined by Krugman (2016). The analytical concept of liquidity in a stochastic framework needs itself clarification to enact correct policy impulses.³

Monetary and credit policies inconsistent with the provision of structural liquidity to households, financial intermediaries and productive sectors across the Euroarea are likely to have counterproductive effects on the viability of EMU as a truly integrated and interconnected system (Cardinale and Scazzieri 2016).

The paradox of liquidity is also linked to the workings of capital/liquidity and other constraints on banking firms (Sect. 2.6). Structural liquidity requirements are not independent of capital requirements (Calomiris 2015). This paradox and the previous one are clear signals that the traditional monetary policy process requires urgent and profound rethinking, especially in the EMU, but also world wide. A strong warning came from the Head of the Monetary and Economic Department of the BIS: “Despite exceptionally easy monetary conditions, in key jurisdictions growth has been disappointing and inflation has remained stubbornly low. Market participants have taken notice. And their confidence in central banks’ healing powers has – probably for the first time – been faltering” (Borio 2016).

The provision of liquidity engineered mainly through purchases of public debt leading to negative interest rates also on long-term securities—Expanded Asset Purchase Programme (EAPP)—has significant drawbacks if it takes structural features. Monetary and liquidity policies acquire a distributive character which is likely to affect the boundaries of central bank independence. It is not only a question of the interest rate cuts on government debt and hence on the workings of the budget restraint in the Euroarea countries. More important is the artificial incentive for investors to take excessive risks and duration by forcing not only short-term yields, but also the term structure of interest rates. The risk of speculative bubbles becomes significant. The reduction of interest income on saving may have a perverse effect

³Appendix 1 provides an attempt to throw light on this crucial issue, also with reference to the role of the ECB in respect of Lender of Last Resort (LOLR).

on effective demand. A final key point is the impact on banks of negative interest rates: they can be viewed as a tax on their net reserves. This is akin to grinding down bank capital precisely when regulatory policies require more and more capital (see Sect. 2.6). All this underlines the need for an integrated analysis of the interdependent liquidity provision processes. The “whatever it takes” approach which proved effective to foster liquidity in dysfunctional markets may become questionable if it turns into a medium-term standard, rather than a special framework to deal with exceptional circumstances.

2.3 The Paradox of Saving

This well-known paradox is often attributed to Keynes, but it had been clearly expounded by Smith himself, who evidently did not find it inconsistent with his invisible hand paradigm. Although individual efforts to save more are well-founded from a micro-perspective, the attempt by all agents/sectors to increase the saving rate may ultimately result in a decline of income and hence in total saving. This instance of a possible fallacy of composition (Cour-Thimann and Winkler 2012) is especially relevant if aggregate effective demand is faltering. This represents the fundamental criticism to the simultaneous imposition of accelerated fiscal restraint to all sectors in all Euro zone countries (including those with a very high current account surplus) (Masera 2012; Visco 2014). If deflation sets in, the risk of a vicious loop leading to increasing debt/income ratios as a response to the austerity measures is heightened.

2.4 The Paradox of de-Leveraging

Excessive leverage is unsound for the single agent and for the economy as a whole: it is a source of moral hazard and can lead to idiosyncratic and systemic risks, as happened during the Great Financial Crisis. It was—and still is—therefore necessary to engineer a sustainable de-levering process. But, sustainable reduction of leverage requires careful consideration of transition and aggregation issues. If all individuals, sectors and notably all banking firms (also as a result of Basel standards requirements, as declined in the EU) try to de-leverage at the same time in accord with the CW approach, the result can be a negative feedback loop. Because of firesales, asset price can fall rapidly and imply *an increase* in leverage, as a result of the decline in agents’ net worth. The problem is especially acute for the banking sector, also a consequence of the forced disposal of problem loans.

The paradox of de-leveraging is, from many points of view, the financial stock counterpart to the paradox of thrift. It is generally attributed to Minsky (Roncaglia 2013), but has been accepted in the aftermath of the 2007–2008 crisis by the Fed's Yellen (2009) and by the ECB's Cour-Thimann and Winkler (2012), with specific reference to the Euro zone.

The crucial role of sustainable de-leveraging and the interaction with previously examined paradoxes have been underlined by Eggertsson and Krugman (2012). An inescapable conclusion of this paradox is the need to abolish tax advantages of debt with respect to equity for all corporations, preferably on an international basis: common equity is the only form of capital with full loss-absorption character.⁴

2.5 The Paradox of Central Banks' Balance Sheet Independence from Government Debt

The move (late 1980–early 1990) to independence of central banks was fundamentally motivated by the objective of avoiding that monetary policy be dominated by fiscal exigencies. Budget dominance was regarded an intrinsic factor leading to inflation tax and/or financial repression. Independence was meant to ensure that balance sheets of central banks would not be monopolised by government debt (monetisation of debt). This accepted wisdom clearly permeated the creation of the ECB.

In fact, central bank holdings of government debt of large central banks peaked at around 20% of total monetary base assets during the Great Depression and in the aftermath of World War II. But, the ratio of public debt to total assets and the increases in total high-powered money have never been so high as in the New Millennium: this is true notably in the USA, the UK and Japan. As already indicated, the ECB has undertaken similar policies which are at the basis of QE and of negative interest rates. Also in the Euro zone, the intertwining of fiscal and monetary policies has become a key feature of the system (Masera 2015a), which should be reassessed. The ECB purchases of sovereign debts have unavoidable, complex budgetary and liquidity implications (see below).

⁴There is a significant literature on the need to address the debt-equity tax bias. Reference can be made to IMF (de Mooij 2011) and EC contributions (Fatica et al. 2012).

2.6 The Paradox of Bank Capital and Liquidity Requirements

Basel capital requirements on the banking system, based on a risk-weighted asset (RWA) approach, aim to improve banks' ability to absorb shocks possibly leading to liquidity and solvency crises. Micro-prudential regulation fosters very high capital cushions with a view to raising the resilience of each and every banking firm in periods of stress. The objective of rapidly increasing capital standards was however also predicated on the incorrect application of the Modigliani-Miller propositions on the irrelevance of the funding structure of any firm/banking institution (Masera and Mazzoni 2016).

A CW contention is that micro-prudential aims are complementary to containing macro-prudential systemic risks and therefore to ensuring the overarching objective of financial stability. The argument is therefore advanced that greater resilience at the individual representative bank level always reduces the risk of systemic shocks.

This conclusion is flawed because a fallacy of composition can be at work. A paradox within the paradox is represented by the fact that the first to clarify this trade-off was the Director General of the BIS Andrew Crockett well before the 2007–2009 Great Financial Crisis. He indicated that the micro-prudential objective is geared to limiting the likelihood of failure of individual institutions, i.e. idiosyncratic risk. The macro-prudential dimension focuses instead on the overall performance of the portfolio of banking firms. The micro-approach does not take into account the endogenous results which can be determined by the collective behaviour of each and all banking firms. These results are taken as exogenous, i.e. given, for the individual bank. The macro-dimension must instead focus also on feedback effects: for instance, increasing capital/liquidity and other requirements during a prolonged recessionary phase implies that all banks try simultaneously to tighten lending standards. But this may lead to a negative perverse loop: economic activity falls with a further deterioration in the credit quality of banks' portfolios, and hence with higher capital requirements. In the words of Crockett (2000, p. 3) "the macro-prudential paradigm stresses the possibility that actions that may seem desirable or reasonable from the perspective of individual institutions may result in unwelcome system outcomes".

The paradox of capital and the need to clearly distinguish between micro- and macro-dimensions is made even more stringent because capital constraints have de facto replaced reserve requirements as the limiting factor in money/credit supply processes (Masera 2016a). Increasing capital and other

requirements beyond certain limits may therefore blunt monetary policy,⁵ as evidenced by the relationship between risk-free rates and lending rates of the banks.

3 Complex Economic Systems: Exogenous, Endogenous and Systemic Risks

According to the network approach adopted here, economic and financial systems are complex systems composed of a very large number of dynamic interconnected units (networks/nodes/links).⁶ Complex systems cannot be fully grasped through the study and analysis of the individual components. The whole is more than/different from the sum of the parts. This is especially so if the fallacies of composition/division are duly recognised. Complex network dynamics can be synthesised by interdependent time processes. The global financial system (Fig. 1), which includes EMU, is an example of a complex system/network.

Economic and financial systems are characterised by problems of idiosyncratic/fundamental risk and systemic risk (which are common to all complex systems). The first is specific to one element of the systems, and the second influences the entire market/financial system. Systemic risk implies instability, potentially catastrophic, not attributable exclusively to idiosyncratic agents, but arising also from the links and interdependencies (nonlinear and stochastic) that characterise the reference system. The failure of a single unit can trigger cascading failures that can result in the collapse of the entire network.

The financial system is characterised by endogenous risk, which can also occur in physical systems. Exogenous risk is related to “news”, i.e. to unexpected changes in economic fundamentals. Endogenous risk is unexplained volatility due to non-fundamental factors (perverse incentive structures, serially-related structures of opinion, methodologies of risk control, herd behaviour ...).

⁵Evidence—selected here from research undertaken inside central banks—on the changed environment is obtained by comparing the conclusions by Angeloni et al. (2002), with the new findings of many authors: Bassett and Covas (2013), Angelini et al. (2014), Aiyar et al. (2014), Bassett et al. (2014), Bridges et al. (2014), Labonne and Lamé (2014), Uluc and Wieladek (2015), Alessandri and Panetta (2015).

⁶For the application of this analytical framework to economics, see Haldane (2015) and Battiston et al. (2016).

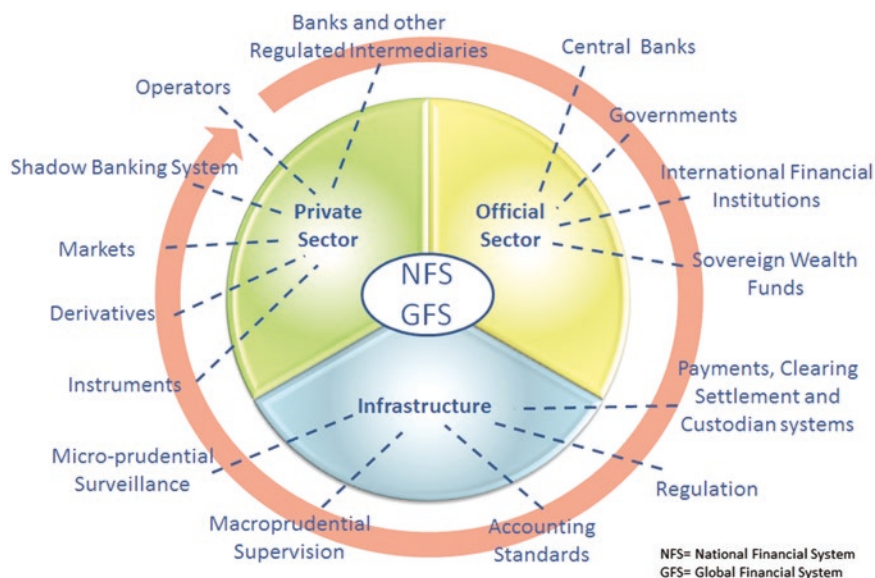


Fig. 1 The financial systems—national and global: main components (financial systems as complex, integrated networks) (Source Masera 2016a)

Analysis of the so-called “tipping points” in complex systems helps to explain the apparent paradox that strongly-connected networks (not only financial) can be “robust but fragile”. Within a certain range of values, the connections act as risk shock absorbers (robust networks). However, outside the reference range, interconnections predominantly acquire a characteristic which gives rise to propagation and amplification of shocks (contagion) resulting in systemic fragility (“at times of acute distress co-movements in the various markets amplify and reinforce themselves” and “the system flips to the wrong side of the knife edge”). Complex adaptive networks in normal conditions can be described by Gaussian distributions and by Brownian motion/random walks. Under stress, they can break down according to power laws (Helbing 2010, and Figs. 2 and 3).

As mentioned above, these events are typical of financial markets, but they are of a general nature and affect physical, biological, environmental, socio-economic etc. phenomena. A well-known example used for referring to endogenous risk outside economics and finance is that of the pedestrian Millennium Bridge in London (Danielsson and Shin 2003). The resonance phenomena related to a common factor (e.g. strong wind and the onset of swaying) can determine completely homogeneous behaviour on the part of all crossers, and potentially catastrophic resonance. The first oscillations

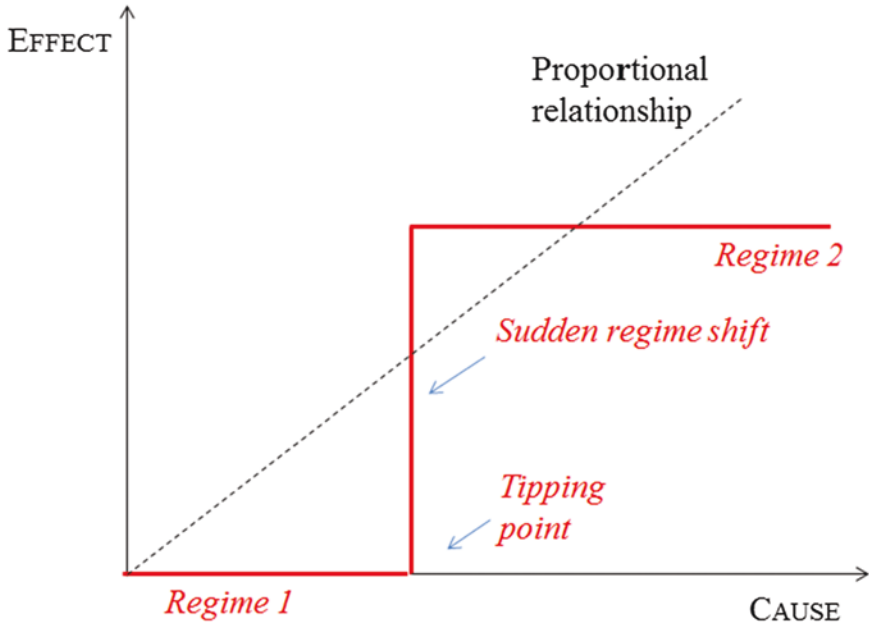


Fig. 2 Complex systems: example of regime shift (Source Helbing 2010)

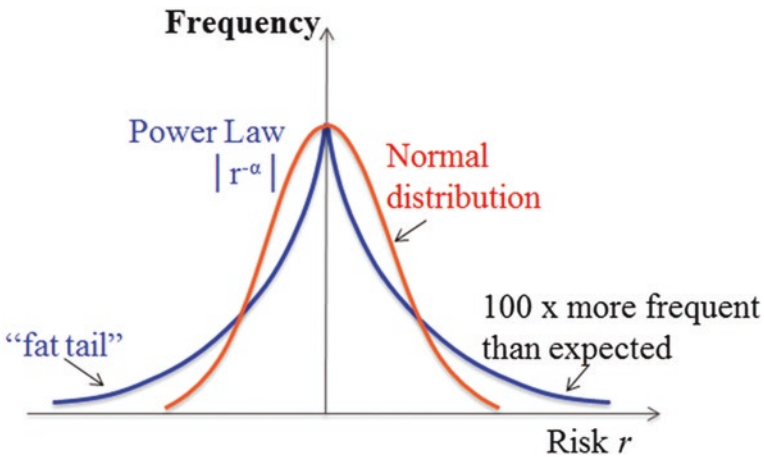


Fig. 3 Power laws and heavy-tail distributions (Source Helbing 2010)

caused by the wind (exogenous) induce/force pedestrians to walk in a manner synchronised with the swaying, creating the endogenous phenomenon of resonance. This forced the closure of the bridge two days after its opening. The problem was solved only by the installation of new fluid viscous dampers.

The endogenous risk in financial systems has an important difference compared to physical, biological, etc., risk. Participants' expectations can influence future events, pushing towards self-fulfilling prophecies, so causing overshooting/market failure, with systemic repercussions. The problem can be illustrated by comparing models and forecasts in meteorological and financial contexts. In both cases, when stress conditions are forecast, precautionary and prudential safety measures are necessary. However, in the first case the predictions and the security measures taken *ex ante* to improve and strengthen the resilience of the system do not influence the weather outcome. Vice versa, in the financial context, the traditional models of financial forecasting (VaR) and micro-prudential standards can increase the total risk, beyond the levels indicated by the fundamental analysis. This is a result of an incorrect modelling of the volatility and non-stationarity of the underlying stochastic models (notably with reference to liquidity), the homogenisation of risk aversion and buying/selling strategies on the markets (Danielsson et al. 2011).

4 Macroeconomic Policies: The Traditional vs. the Macro-prudential Paradigms

The Great Financial Crisis provided evidence of the lack of a reliable theoretical and policy framework to identify, prevent and ultimately address the consequences of systemic risk and large adverse shocks in economic systems. The intertwining of real and financial imbalances was neglected, structural factors were not considered and the need for a complex, interactive use of corrective economic policies was not recognised. Prior to the crisis, a strong consensus had developed among professional economists, banking regulators and policy-makers that a modern market economy, in the absence of short-term destabilising policy impulses, was inherently self-corrective.

In this framework, policy objectives and instruments should be fundamentally segmented and independently pursued within a medium-term, transparent, policy setting. In particular, there was ample agreement on the advances of financial surveillance and risk analysis, after the Basel standards revolution. All these tenets proved incorrect and risk increased sharply, acquiring systemic features.

The necessity of overall repair led to a profound reassessment of the analytical and policy paradigms and to the development of a new "macro-prudential" framework for economic policies to cope with systemic shocks,

and notably with the perverse interaction of bank failures, government deficits/debts and sovereign risk in the Euroarea (de Larosière et al. 2009).

This note offers a framework that takes into account a double order of interconnections: first, light is shed on the complex interactions between the micro- and macro-levels (with possible fallacies, but also synergies, of composition); second, reference is made to the links between different economic policies, notably regulatory and monetary/credit policies. From this perspective, macro-prudential policies—aimed at preventing/containing systemic risk and instability—take on particular significance, and it is proposed to extend them beyond the common focus (and related dichotomy) with respect to the requirements of micro-supervision in the financial field.

The traditional approach to policy-making focuses on fiscal, monetary/credit and structural policies. The first two policies are fundamentally macroeconomic and demand-side. The third is microeconomic and supply-side. The common goals of economic policies are price stability, sustainable full employment and growth. The alternative approaches to their adoption are discretionary vs. rule-based policies.

The adjective “prudential” has a well-defined but very broad meaning: *inspired/dictated by prudence*, i.e. the exercising and applying of prudence and good judgement. In accordance with the etymological definition, policies are defined here as *macro-prudential if they use analytical models and policy tools to prevent/reduce systemic risks to the economy and in particular to pursue the goal of financial stability*. The definition developed here is broader than that which circumscribes macro-prudential policy to the examination of financial and banking regulation (Hanson et al. 2011); it also includes the examination of other economic policies affecting the economic system which, if mismanaged, can trigger systemic risk and financial instability. On the one hand, financial stability and prevention of systemic risk become the overarching objective of overall policy making. On the other hand, the complex/network system framework highlights the multiple-instrument/multiple-authority interactions of the macro-prudential policy paradigm.

Evidently, the links between macro-prudential and “traditional” economic policies are especially close and relevant with reference to the micro-prudential financial policies and to monetary policy (Goodhart 2014). However, it is also necessary, in a complex system, to identify and analyse potentially destabilising interrelationships with other economic policies: if neglected, the problems associated with the possible occurrence of systemic risk may arise.

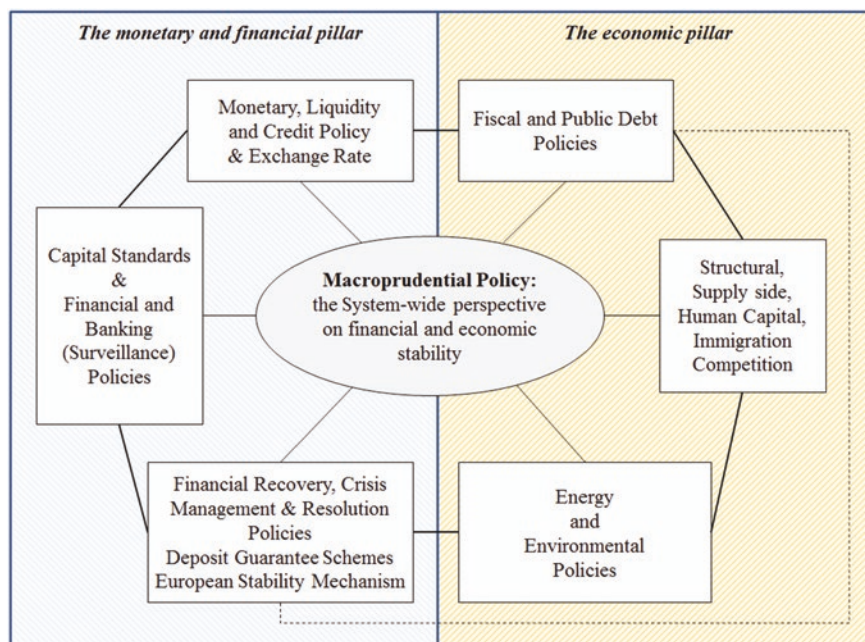


Fig. 4 A complex system (network) representation of macro-prudential and other economic policies in the Euro area (Source Masera 2015a)

As indicated, analytical reference to macro-prudential financial policies, which should accompany the rules at the level of individual banks/financial firms, was established within the BIS in Basel. At an “official European” level, the links between macroeconomic and regulatory policies were highlighted in the de Larosière et al. (2009), in which the connections between macroeconomic surveillance and crisis prevention were illustrated and the need to create a macro-prudential supervisory authority at European level (ESRB) highlighted. In the USA, the Dodd and Frank (2010) introduced macro-prudential policies and indicated a third mandate to the Fed—regulation of systemic risk and preservation of financial stability—to the traditional (1977) dual mandate (maximum sustainable employment and stable prices), and introduced a resolution framework for banks.

In the light of the foregoing considerations, Fig. 4 offers a brief overview of the following economic policy areas: monetary and credit; fiscal; structural, supply-side and competition; energy and environment; management and resolution of financial crises; and finally microeconomic surveillance and capital standards, in the context of a macro-prudential policy reference

framework. The latter takes on the leading and linking role with a view to achieving the objective of economic and financial stability at the systemic level.⁷

The macro-prudential objective is to prevent/limit systemic risk, whether financial or real in a framework of sustainable growth. The relevance of this target underlines the priority of this policy compared to traditional policies. The micro-prudential financial objective is to intervene in order to anticipate/reduce idiosyncratic risk for each individual company/agent. As indicated, in the case of an integrated and complex system, analysis cannot be carried out through a sum of the parts approach. The interactions between the individual policies require specific attention: under stress conditions certain nodes can collapse.

Financial instability can lead to systemic instability, extending from the financial system to the economy as a whole. In the absence of well-engineered Crisis Management & Resolution Policies and Frameworks and of Deposit Guarantee Schemes (see box in Fig. 4), bailouts may become a necessity, as a consequence of market failures and of negative externalities: the overall cost of non-intervention to the taxpayer could be greater than the direct burden of bailouts. This was the rationale behind the large bailouts of banks and financial intermediaries in the 2007–2009 financial crisis.

In the EU, the monetary and price stability objective was broadly interpreted by the ECB in July 2012 to permit doing “whatever it takes” to preserve financial stability and the Euro. Monetary and financial stability were viewed as intertwined. President Draghi elaborated these points in a hearing at the European Parliament (Draghi 2015). He pointed out that price stability, which is the primary objective of the ECB, is a necessary condition for financial stability, but not a sufficient one. On the other hand, financial stability is a precondition for the effective conduct of monetary policy which must rely on the effectiveness of the money transmission mechanism in order to maintain price stability. It follows that the central bank has as a task the preservation of financial stability, to pursue its primary objective of price stability. Financial stability has therefore become *de facto* a goal of both the Fed and the ECB.⁸ According to the line of analysis presented in

⁷Haldane (2015) developed an analytical framework to assess the implications of complexity theory to outline an overall architecture of public economic policies.

⁸In the UK, the Bank of England has been tasked with the simultaneous pursuit of monetary, micro- and macro-prudential policies (Bank of England 2015). In the Euroarea, the institutional problems do not appear to be settled, as cogently argued by Ramos Munoz (2016).

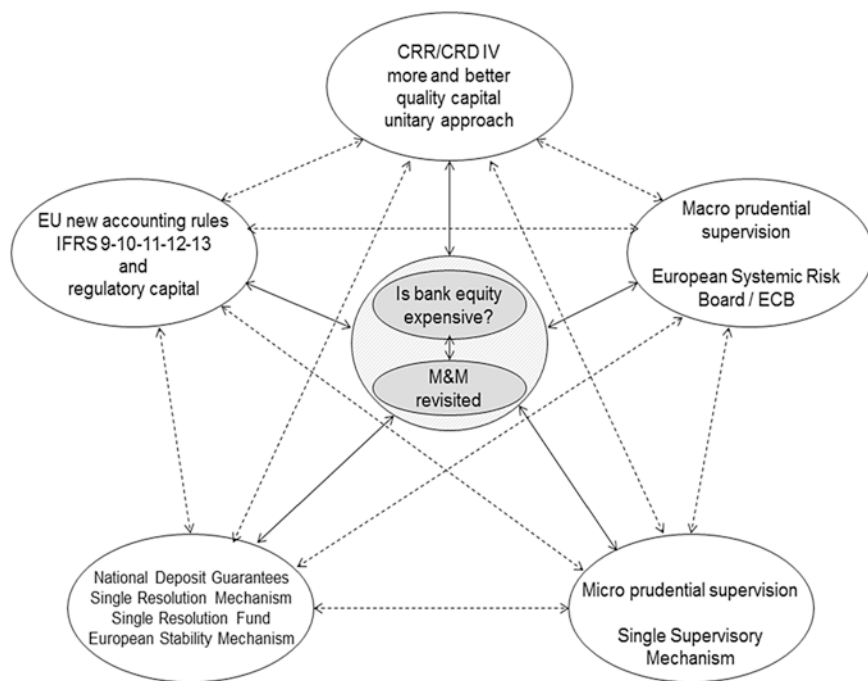


Fig. 5 EU Banking Union: a holistic network approach (Source Masera 2014)

this paper, it is, more broadly, a joint responsibility of macro-prudential and monetary policies.

The network/holistic approach is used also in Fig. 5, where the focus is on the subset of the “Banking Union Package” in the EU. Macro-prudential supervision is narrowly defined and makes explicit reference to the European Systemic Risk Board (ESRB).

Figure 5 highlights that micro-prudential supervision of significant banks is now the responsibility of the ECB, while resolution is tasked to the Single Resolution Mechanism. In this new institutional setting, the crucial function of LOLR to significant banks should be given to the ECB itself—and no longer to national central banks, to better insure financial stability in the Euroarea.⁹

⁹On these points, see, for instance, Goodhart and Schoenmaker (2014) and Appendix 1.

5 Links Between Economic Policies and Micro–Macro Interactions: Some Examples

The focus of the macro-prudential framework presented here is on the possibility of fallacies/synergies of composition and on the interactions between the different economic policy processes: a medium-term reference framework is necessary also to capture transition and aggregation mechanisms (Scazzieri 2015). Accordingly, Table 1 offers a few examples of these links, examined, for simplicity's sake, on the basis of bilateral relationships between policies. The nexus between the macro-prudential political economy network and the single/independent traditional economic policies represents an important facet of the overcoming of the traditional dichotomy between micro- and macro-analysis.

As is evident from these simple examples, the intertwining of policy processes in the macro-prudential framework highlights the need to overcome the well-known Tinbergen principle of separation, which still represents a reference point for economic policy in the Euro zone. According to this principle, in order to achieve a given number of *independent* economic policy objectives, one must have (and use separately) an equal number of instruments.

The model proposed here does not deny the principle but modifies it profoundly, in that it underlines the need to take into account the interactions between tools, the fallacies of composition and integration synergies between policies and instruments. Moreover, the linearity of Tinbergen's mathematical and econometric approach must be amended to take into account the existence of endogenous risk, possible regime shifts and reconfiguration of stochastic reference models that herald systemic risk. In this context, the problems and the effectiveness of the conduct of economic policies reside primarily in integration and interdependence rather than in separation. Conversely, the ECB was created on the basis of the "Separation principle" (Bordes and Clerc 2010). Separation and independence should not be confused.

6 Towards a New Policy Architecture in the Euro Area

As indicated, the economic policies of the Euro zone are characterised by paradoxes which deserve critical scrutiny and, in any event, can hardly be defined as successful. The objectives of a European EMU of sustained capital accumulation, significant productivity gains, stable prices, open markets, shared prosper-

Table 1 Links between economic policies and possible fallacies/synergies of compositions: some examples in the framework of a network approach to macro-prudential and other economic policies

Policies	Links
Fiscal and structural policies	<p>The intertwining of structural adjustments and fiscal policy compulsory targets is now a formal feature of the EU complex budgetary procedure. To recall, the Stability and Growth Pact is the centrepiece of the EU rulebook to foster fiscal responsibility and budget discipline, and to create the appropriate conditions for monetary union, since its adoption in 1997. Reforms and complements were agreed in 2005 and in 2011–2013. As of January 2015, existing rules are applied to strengthen the links between fiscal policy commitments and structural reforms on the one hand, and promotion of investment—in the context of the Juncker Plan and the European Fund for Strategic Investment (EFSI)—on the other hand (EC 2015). In particular, under the Preventive Arm of the Pact, Member States implementing major structural reforms are now allowed to deviate temporarily from their medium-term budget objective (MTO) or the adjustment path to it. The temporary deviation must be less than 0.5% of GDP. The restrictiveness of this limit is underlined by Paganetto (2015)</p> <p>Excessive rigidity in budget targets can lead to strong increases in taxation which undermine the willingness to invest and to work (the Mundell-Laffer approach), and hence to lower total revenues</p>
Fiscal and monetary policies	<p>The budget restraint can create linkages possibly leading to hyperinflation, public debt defaults, sovereign/banking risks (unanticipated) inflation as a tax on monetary base and on government bonds. It creates inevitable links between monetary and fiscal policies. A key example of the fiscal implication of the ECB board buying programme has been underlined by Draghi (2016b): in 2015, QE reduced by €28 billion interest rate costs on Germany's government debt. Purchases of government debt can become the preferred avenue to extraordinary monetary easing. Monetary policy becomes intertwined with debt management. Excessive fiscal contraction can lead to output losses and destabilising debt/income processes (fallacy of composition) which may be hard to offset by monetary policy</p>
Crisis management & resolution policies and fiscal policy	<p>In the absence of Resolution Policies, banking/financial crises can lead to budget/debt shocks and widespread moral hazard, because the risks of a systemic real/financial crisis can outweigh the fiscal costs of bail outs (Masera and Mazzoni 2011). But flaws in resolution schemes can undermine financial stability and lead to fiscal interventions (Banca d'Italia 2013 and Visco 2016)</p>
Energy, environmental and fiscal policies	<p>The public objective of Green energy can imply government incentives and guarantees leading to unprofitable/loss-making energy investments and to large budget costs. Ultimately, it could even be self-defeating, if substitute technologies lower the relative price of fossil fuels (Sinn 2012)</p>

(continued)

Table 1 (continued)

Policies	Links
Structural/supply-side policies and monetary/fiscal policies	<p>There is widespread agreement on the fact that in the Euroarea structural policies to improve aggregate supply, to restore competitiveness in many countries, to raise factor productivity, innovation and growth potential have been belated and inadequate. This hindered the successful implementation of traditional stabilisation macroeconomic policies. The lack of in-depth coordination between the two sets of policy actions is arguably a root cause of the unsatisfactory economic track record of EMU. “No monetary or fiscal stimulus can be successful if it is not accompanied by the right structural policies” (Draghi 2014) (synergy of composition)</p>
Monetary/credit policies and capital regulation	<p>In a phase of recession/faltering recovery and of financial stress, excessive capital requirements (predicated on micro-prudential grounds) can lead to cumulative destabilising credit restraint, invalidating monetary policy impulses: procyclicality and fallacy of composition</p> <p>Leverage is a key aggregate/regulatory requirement which should be at the centre of micro/macro-prudential analysis. The paradox of de-leveraging must be taken into account (Yellen 2009; Cour-Thimann and Winkler 2012)</p> <p>The money/credit supply process can be affected by equity requirements. Capital (and not bank reserves) can become the key factor, limiting bank credit and undermining the reliability and effectiveness of the monetary transmission mechanism</p> <p>Non-proportional capital rules can lead to artificial expansion of shadow banking and to systemic risk</p> <p>If monetary policy is overloaded and forced to resort to unconventional expansionary impulses—leading to negative interest rates for prolonged periods—a negative anticipated effect on banks’ sustainable relation between profitability and cost of finance is unavoidable. The value creation of banking firms lies primarily on the asset side of the balance sheet: for given required returns to financial investors, what matters is that the expected profitability should be higher than the overall cost of finance. In the situation considered here, more capital does not represent a sufficient precondition to foster long-term stability: it might even become an adverse condition (Masera and Mazzoni 2016)</p>
Macro-prudential and monetary policies	<p>Too loose monetary policy can create financial bubbles and inflation. Too tight can lead to recession/deflation. In both instances, financial and systemic stability is at stake: the delicate balance requires an overall assessment of the two types of systemic risk (Panetta 2016)</p>

ity, employment, innovation and sustainable growth have been advocated and actively pursued, but the task of overcoming the difficulties of monetary unification in a non-optimal currency area has not yet been accomplished.

The following charts and table taken from studies published by members of the board of the ECB (Praet 2015 and Constâncio 2015) offer synthetic evidence of this contention, notably in comparison with the USA (Figs. 6, 7, 8, 9, 10 and 11).¹⁰

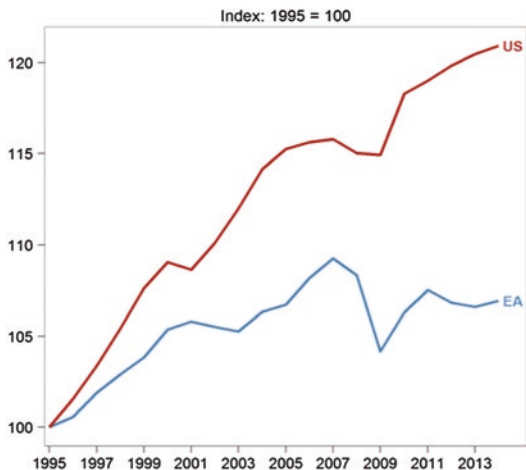


Fig. 6 Total factor productivity (Source Praet 2015)

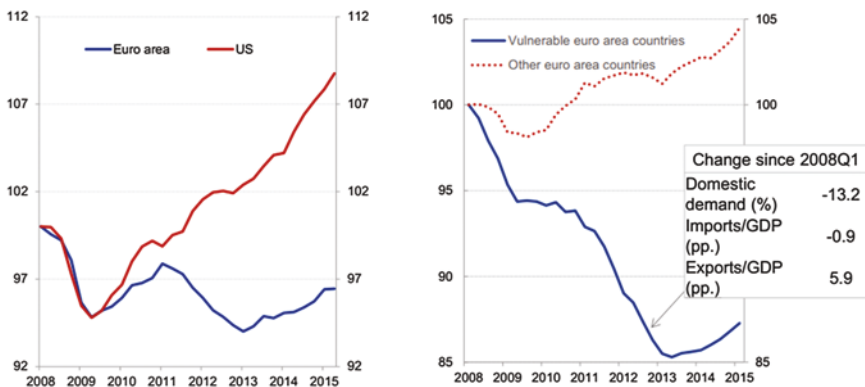


Fig. 7 Real domestic demand (Source Praet 2015)

¹⁰On these points, see also Lin (2016). Figures 6 and 7 highlight the poor performance in terms of investment and of factor productivity. The two elements are clearly intertwined, as evidenced by many studies and by the Juncker Plan (2015) itself.

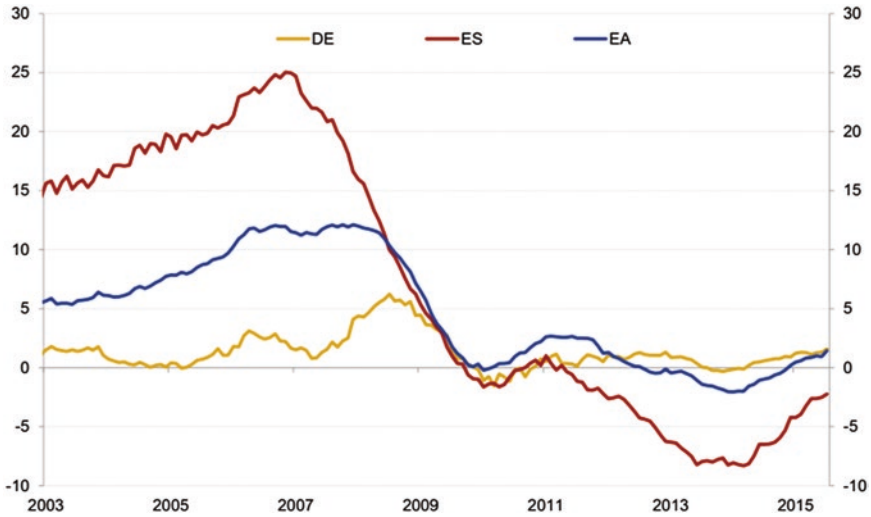


Fig. 8 Bank loans to private sector (Source Praet 2015)

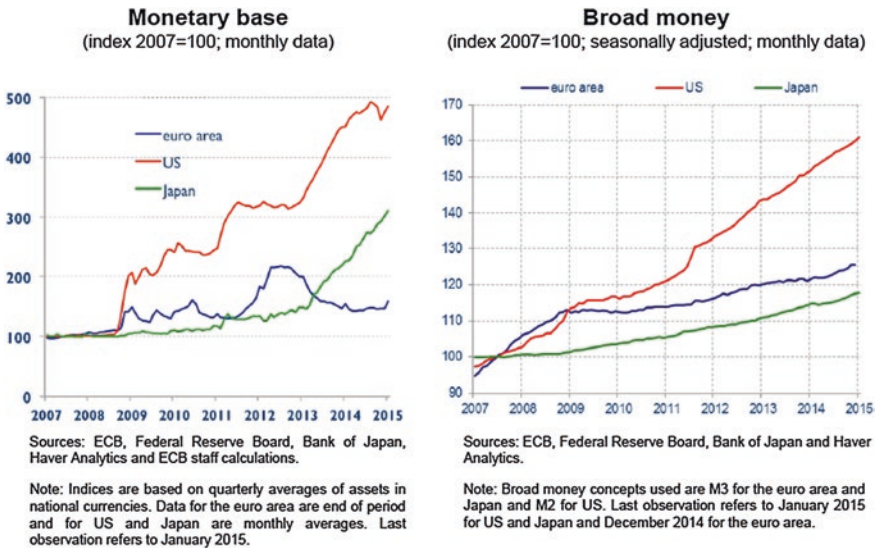


Fig. 9 Monetary base and broad money (Source Constâncio 2015)

The evidence presented here does not require explanatory comments: it is clearly indicative of an unsatisfactory track record in terms of real variables (total factor productivity, domestic demand, capital accumulation and

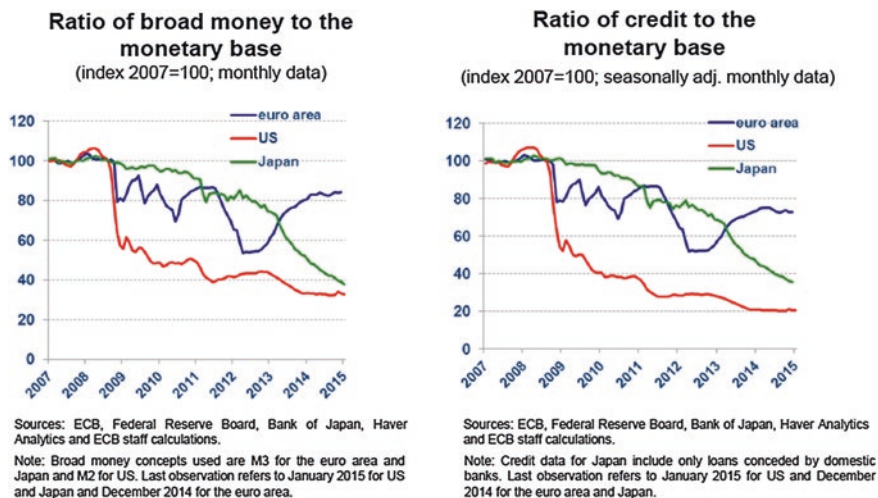


Fig. 10 Ratios of broad money and credit to the monetary base (Source Constâncio 2015)

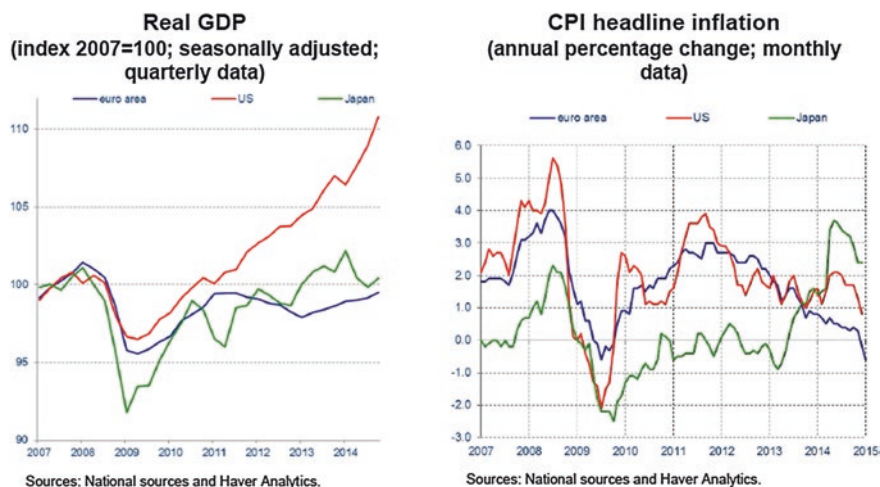


Fig. 11 Real GDP and CPI inflation (Source Constâncio 2015)

GDP growth¹¹), of the money/credit supply process (monetary base, broad money, credit), of inflation objectives and of fiscal policies results (Table 2).

¹¹The widening “real” gap with the USA is also documented in an IMF working paper (Lin 2016), where it is, in particular, highlighted that “In PPP terms, nominal GDP per capita in the euro area is now nearly \$15,000 below that in the USA, the highest gap since the start of EMU”.

Table 2 Fiscal policy: GDP losses in relation to baseline, resulting from simultaneous fiscal consolidations in seven Euro area countries from 2011 to 2013 simulated by the EU Commission model QUEST (*Source* Constâncio 2015)

	Impact on GDP 2013 (%)	Cumulative impact 2011–2013 (% of 2013 GDP)
Germany	3.9	8.1
France	4.8	9.1
Italy	4.9	9.0
Spain	5.4	9.7
Ireland	4.5	8.4
Portugal	6.9	15.3
Greece	8.1	18.0

The critical assessment of Euroarea policy is not inconsistent with the frank admissions of the “Five Presidents’ Report” (5PR) of June 2015 (Juncker et al. 2015). The Report recognises that the Euro area, as of today, does not represent a genuine EMU, fulfilling the aspirations and expectations repeatedly expressed, since 1969, by the Council, the Commission and the European Parliament:

Europe’s Economic and Monetary Union (EMU) today is like a house that was built over decades but only partially finished. When the storm hit, its walls and roof had to be stabilised quickly. It is now high time to reinforce its foundations and turn it into what EMU was meant to be: a place of prosperity based on balanced economic growth and price stability, a competitive social market economy, aiming at full employment and social progress. To achieve this, we will need to take further steps to complete EMU. (Juncker et al. 2015, p. 4)

The monetary union is a unique experiment of a single currency without a state. In the 1980s, the “coronation” theory of EMU advocated by Germany and the Netherlands (the economist approach) held that monetary union should have been the final “coronation” of a process of completion of economic, fiscal and political union. It was instead the monetarist approach which had the upper hand. The view expressed notably by France, Belgium and EC Commission held that monetary union should come first and would force economic convergence, institution building and ultimately political union.¹² The 5PR shows the intertwining of Monetary, Banking

¹²It is hard not to agree with a key observer as Otmar Issing, who recently argued that, instead, “since EMU was created no progress towards political union has been made – or even really attempted” (Issing 2015).

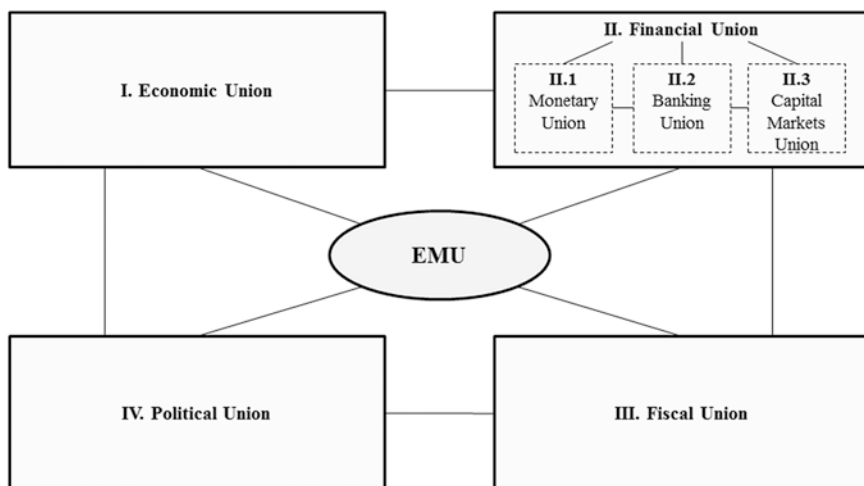


Fig. 12 The five Presidents' four interdependent unions to transform the Euro area into a 'Genuine Economic and Monetary Union'* (Source Maserà 2015b) (*"All four Unions depend on each other. Therefore they must develop in parallel and all euro area Member States must participate in all Unions for the euro area to gradually evolve towards a genuine Economic and Monetary Union... After many years of crisis, governments and institutions must demonstrate to citizens and markets that euro area will do more than just survive" (Juncker et al. 2015, p. 5))

and Capital Markets Unions (Fig. 12). This underlines, in particular, the need to examine together monetary and banking regulatory policies. The CMU pillar is relevant not only in terms of the rebalancing of credit flows from intermediaries to markets, but also because a well-functioning CMU has important risk absorption properties which help contain the fiscal backstop (Allard et al. 2013).

The issue of political union as a necessary complement to Fiscal Union and to EMU, has been taken up in the 5PR, which shares the network architecture and the policy process approach adopted in this study.¹³ The "Union Approach" has great interest and evident validity, but—perhaps as a consequence of the brevity of the 5PR—has also shortcomings and points which need clarifications.

To start with, it does not address the fundamental issue of a recognition of the flaws of the analytical and policy paradigms before and after the Great

¹³For an interesting law and economic policy framework to EMU, see Capriglione and Sacco Ginevri (2016).

Financial Crisis, and of the appropriate road to repair. In the second place, it diverts attention from a critical analysis of the policy actions taken—and the paradoxes outlined here—and does not provide explanations for the unsatisfactory results documented by the ECB itself. Finally, it neglects the need for a truly interactive macro-prudential policy framework capable of identifying the links between monetary, credit, fiscal and structural policies and their fallacies of composition/division. This is surprising because the 4/6 Union Model is based on these premises: “All Unions depend on each other and must develop in parallel...”. Without a complete analysis of the analytical framework and the policy interactions, especially under stress, the proposed Union Model may convey the wrong impression that institutional changes set in motion by monetary unification would automatically lead to the goal of a genuine EMU. This simplistic neofunctionalist approach to the Euroarea (monetary and financial unions lead by endogenous convergence to fiscal and political union) has been forcefully criticised by Pabst (2017) who outlined instead the disequilibrium traverse to a successful path for the Euroarea.

A different answer to the construction of a genuine EMU had been given in 1990 by President Mitterrand and Chancellor Kohl, who indicated to the Euro Summit that EMU should be immediately complemented by political union: “Economic and monetary union as well as political union should enter into force on 1 January 1993” (Agence Europe 1990). In a well-known speech to the Bundestag, Kohl (1991) reiterated and stressed these concepts: “The idea of sustaining an Economic and Monetary Union over time without a political union is a fallacy”. Let it be noted in this respect that in the EU the correct interpretation of the acronym EMU is not European Monetary Union, as was recently suggested by Weidmann (2016).

The Brexit case shows that economic and political domains in the EU are necessarily intertwined. This is even more true in the Euroarea (formally irreversible monetary union without a state). The political economy of an interdependent area is necessarily complex and requires the analytical distinction between the two different concepts of political economy and economics (Cardinale and Scazzieri 2014).

7 Policy Proposals and Concluding Remarks

A key feature of the broad macro-prudential paradigm is the focus on: (i) the links and interactions of the various economic policies (and, therefore, the effectiveness and potency of the policy mix), (ii) the role of fallacies of

composition/division and (iii) the prominence of a medium-term reference framework, to capture transition and aggregation processes. In the Euroarea, this complex approach goes beyond political economy and addresses directly the issue of political union. The Euro zone must be seen as a network of economic policies, governance and political integration.¹⁴ This broad approach should not however become an excuse to avoid a critical analysis of the economic policies pursued.

The six paradoxes examined in this note are indicative of the need for an in-depth rethink of the Euroarea economic policies with reference to a macro-prudential framework. A key point which must be subject to scrutiny is the alleged “fact” that a close relationship exists between the monetary base, money supply and prices.

The links between fiscal, monetary, credit and bank capital policies should be reassessed along the lines indicated in the previous paragraphs, without putting into question the objectives of fiscal rehabilitation, price stability and sustainable growth. The issue is not so much that of flexibility, but primarily of redefinition of the appropriate policy mix, which now puts an excessive reliance on monetary policy, and may ultimately result in perverse effects on systemic risks, and possibly—over time—on inflation itself.

The overburdening of monetary policy opens up also the issue of corporate governance of the ECB, which has full institutional responsibilities for monetary, liquidity, and bank surveillance policies, and *de facto* plays key roles in lending of last resort, in macro-prudential policy and in the elaboration of the Basel capital standard regulatory framework. Additionally, with the EAPP, it has acquired important institutional spillovers (which fall outside the traditional domain of central banking) and external role, notably in respect of the exchange rate of the Euro (according to Art. 111 of the Treaty foreign exchange policies should be jointly decided by the Council of Ministers and the ECB). All these competencies may lead to potential conflicts of interest. In any event, the approach of the Maastricht Treaty (single instrument, single goal, fully independent central banking) requires review.

In these concluding remarks, we focus on some key issues, with a view to making some policy proposals, accounting being taken of the interactions among the various economic policies. As indicated, a central point is represented by the contradictory effects of (i) ever-increasing capital/liquidity and other requirements on banks—including incomplete/unsatisfactory

¹⁴For a survey of the complex economic governance framework in the EMU, see Donatelli et al. (2016) and Cardinale et al. (2017).

rule-making on resolution mechanisms (Visco 2016)—, and (ii) the simultaneous pursuit of continued loosening of monetary policy/negative interest rates. The constraints on banks affected and continue to affect growth. This creates a vicious circle. The aim of micro-prudential safety and soundness becomes contradictory with the macro-prudential requirement of balanced growth. Financial stability requires soundness of the banking system. But, financial stability also requires growth; the trade-off between regulation and growth is an issue of social cost-benefit analysis; the EU (one-size-fits-all) approach has gone too far in increasing requirements on banks. This affected growth and thwarted monetary policy (de Larosière 2013; Gaiotti 2013). Also of great concern is the “collateral damage” resulting from the conjunction of: (i) the EC untiered banking regulation and (ii) the ECB negative interest rate policy. This has a profound negative effect on the profitability of banks, and notably of “traditional” small- and medium-sized banks, and hence on their possibility to raise fresh capital.¹⁵ On the other hand, wholesale-finance specialty banks (notably leasing, factoring, consumer loans...) benefit from the availability of low-interest funding from the Central Bank and the parallel decline in borrowing and lending rates.

USA experience offers evidence of a radically different approach to these issues (TARP, GSE, temporary suspension of mark-to-market accounting, support to securitisations and, above all, a tiered regulatory framework). The tiered approach¹⁶ is in the realm of the American law balancing principle. It is somewhat surprising that the corresponding German (Prussian) proportionality model¹⁷ has not been followed in the area of (level 1) banking regulation by the EU.¹⁸ An important recognition of the need to reassess the regulation/growth trade-off had been made by the former Commissioner Hill (2016).¹⁹

A second clear instance of a wrong policy mix is offered by monetary and fiscal policies. Fiscal rehabilitation and the reduction of debt/income ratios

¹⁵Small banks also suffer from the very high operational costs of implementation and compliance to the complex and ever-changing regulations (Dombret 2016).

¹⁶See Tarullo (2014), Yellen (2014, 2015) and Hoskins and Labonte (2015).

¹⁷On the two models, see Cohen-Eliya and Porat (2010). Both analytical frameworks can be viewed in the realm of the Aristotelian equity principle.

¹⁸The rationale for the one-size-fits-approach to level 1 capital legislation on banks in the EU is explained in EC (2013). Counterarguments are developed in Masera (2013).

¹⁹Important contributions to the debate on proportionality and complexity in EU banking regulation are offered by Dombret (2016)—who underlined the support recently voiced by Minister Wolfgang Schäuble to the principle of proportionality—and Hadjiemmanuil (2016).

are a highly desirable objective, but the austerity approach—as concretely applied, with emphasis on the short-term budget balance in all countries simultaneously—contributed to vicious loops (Masera 2012). The outcome in terms of lower output and higher unemployment has been underestimated; hence, the ratios of debt to income increased in many countries with high debt ratios. In Italy, for instance, the increase in the ratio was especially high during the austerity-driven Monti and Letta governments. These perverse effects were heightened because of (i) the insufficient thrust of consistent structural policies, (ii) the inappropriate burden of the banking regulation concretely implemented in the Banking Union framework and (iii) the fact that certain countries have been characterised by very high current account surpluses (which exacerbated the paradox of saving). The burden on monetary policy to avoid deflation/depression became higher and higher: the ECB had to stand alone for nearly a decade to prevent the dissolution of the Euro, but the collateral negative effects create increasing damage.

There is a clear need to combine the appropriate fiscal and monetary actions with well-designed, mutually consistent structural policies. This underlines the medium-term nature of economic policy processes. A key structural policy to be adopted through a concerted action by Euro zone countries would consist in ensuring tax neutrality of debt and equity, which is key to overcoming the paradox of de-leveraging in the private sector. This is especially important now: the perverse effects of the combination of very low/negative interest rates and of tax incentives for debt are evident: financial bubbles may put at risk the long-term stability of the Euroarea. Saving is penalised in the attempt to reduce the imbalance between saving and investment! More specifically, pursuit in the area of a single overburdened monetary policy, of constrained fiscal impulses and of uncoordinated structural policies may prove inconsistent with Hicksian-type complementarities over time and space of successful trajectories of structural change, and therefore with an effective inclusive political economy of interdependence (Cardinale and Scazzieri 2014).

It has been argued that interest rates are negative in the Euroarea fundamentally because of an excess of saving over investment (Draghi 2016a). Also from this point of view, it is necessary to foster investment from the lows recorded in the past decade (Garonna and Reviglio 2015). The European investment plan—as is certified by the EFSI and the EIB—shows that there are ample opportunities for public and private investments in infrastructure, human capital, the environment, innovation, with positive

social and private returns.²⁰ These investments also yield significant returns in mitigating the adverse impact on low-income groups of fiscal consolidations (Ostry et al. 2016).

If public investment projects are rigorously selected and undertaken on the basis of economic return, effectiveness and cost-efficiency—preferably within a PPP framework—public and private investment become fundamentally complementary (Valla et al. 2014; Economic Insight 2015; Masera 2016b). Under the conditions outlined, public capital has a crowding-in effect on private investment: increases in public capital raise the marginal productivity of private capital. These arguments carry special weight in the current situation of excess saving, negative nominal interest rates and slowing multi-factor productivity (OECD 2016; ECB 2016). The Ricardian equivalence preoccupations recede (the marginal productivity of new investment outlays is higher than the nominal and the real cost of funding).

A compelling case can therefore be made to adopt now in the Euroarea a, say, three-year (or until nominal rates of interest remain negative) productivity-investment compact to reinforce the Juncker Plan (2015). More specifically, public investments selected by the EFSI—with direct country contributions to its capital, in the form of guarantees or cash—would be exempted from the Stability and Growth Pact, possibly up to predetermined ceilings. The proposal made here: (i) ensures the effectiveness and productivity of new public capital, financed at negative interest rates; (ii) helps overcome the current market failures and inappropriate burden of monetary policy; (iii) ensures that EFSI-financed projects are allocated on their merits in a European perspective, and not on the basis of national keys. The problem of “*juste retour*” would thus be overcome.²¹ Under the special circumstances of the EMU process and the vital need to foster growth, innovation, productivity, a forward-looking D/Y fiscal policy framework would therefore temporarily be adopted (with the emphasis on the sustainable decline of the ratio, and not on the actual decline of the stock of public debt). Admittedly, this might require in Germany a rescheduling of the debt-brake policy at the federal level (e.g. from 2016 to 2020 as already envisaged at the level of the regional governments) (Federal Ministry of Finance 2015). As indicated, this programme would be accompanied by precise commitments of

²⁰The view of an inevitable secular stagnation predicated on the non-availability of valuable capital accumulation options is contradicted by the strong evidence which shows that ample opportunities exist for social/private investment-grade projects (notably in innovation—including Industry 4.0—, in human capital and in the environment). See EIB (2016) and Invest Europe (2016).

²¹On these points, see EIB (2016, pp. 75–88).

Member Countries to enact coordinated in-depth structural reforms to help raise sustainable, inclusive economic growth. A different but not inconsistent approach has been advanced by Quadrio Curzio (2017), who argued that liquidity provision in the monetary union through Eurobonds to cofinance infrastructure investments would lower equilibrium interest rates on government securities of highly indebted countries, without having to resort to the distortionary EAPP.

A final point is the need to reconsider also the international financial architecture in which Euro zone policies are necessarily inserted: in particular, the simplistic approach to the exchange rate and to external imbalances must be questioned. The assumption according to which the market is left to determine the Euro exchange rate, so that the ECB can direct money and credit policies to the domestic objective is evidently reductive. EMU growth should be anchored to sustainable expansion of domestic demand in the internal market, not to net exports.

Appendix 1

Liquidity: The Difficulty of Theorising a Will-o'-the-Wisp

The concept and the term of liquidity have been used in the literature in innumerable not necessarily consistent ways. It is not even clear whether liquidity represents a flow or a stock variable and whether different definitions apply to different economic agents.

Let us start with the classic Keynesian approach to liquidity (although the term long precedes Keynes). Reference should not be made to the *General Theory* (1936), where the analysis of liquidity preference was introduced, money was viewed as *the* liquid asset, and the liquidity trap situation became a centrepiece of macroeconomic analysis. It is instead necessary to go back to the *Treatise* (1930, vol. II, p. 67): one asset is more liquid than another if (i) it is more certainly realisable (convertible into money) with a regular market price at short notice (i.e. marketable) and (ii) without loss. Marketability is a necessary but not sufficient condition for liquidity: marketable assets possess varying degrees of liquidity, while all liquid assets are marketable; their additional key feature is the possibility of liquidating them without incurring in abnormally low prices. It is the latter element which is key in assessing the liquidity spectrum.

It is clear from the above that the use of liquidity in the sense of referring to “moneyness” that different securities are supposed to possess in different

degrees is confusing and should be avoided. All securities which can be used for payments functions should be classified as monetary assets (Lucas 1990); it remains true that money and securities with values fairly stable in terms of money represent liquid assets.

Asset liquidity can also be analysed through the asset portfolio selection models (Markowitz 1952), where a key role is played by the Treasury bill market and its corresponding interest rate (*the risk-free rate*). The interaction between asset portfolio selection and liquidity analysis is very complex (Hicks 1967). Beyond the common argument that the degree of liquidity is a relevant pricing factor for securities (positive premium for holding less liquid securities), attention is drawn to the relevant literature, notably on liquidity betas (Pástor and Stambaugh 2003). To recall, portfolio selection analyses asset choice under uncertainty:

$$r_a = r_f + \beta_a \cdot (r_m - r_f) \quad (1)$$

where r_a = return of asset a ; r_f = time value of money = risk-free rate \cong Treasury bill rate; r_m = return on the market portfolio, and β_a indicates the risk of asset a compared to the market. The Treasury bill is, in general, a very liquid asset. In the Euroarea imperfect monetary union, its liquidity can however become questionable because of insolvency risk of the sovereign debt of the issuing country. The ECB Quantitative Easing (QE), negative interest rates market interventions, can eliminate/lower the fears of insolvency, but paradoxically reduce its marketability/liquidity.

The following elementary table offers a representation of the various elements introduced so far by making explicit reference to a balance sheet (and, therefore, stock) approach and by a restricting analysis to assets in the financial sector. Assets are, therefore, viewed from the perspective of financial instruments held by economic agents. They could be equally defined as liabilities issued by sectors/operators.

In order to clarify some of the issues related to the analysis of liquidity, a fundamental reference is Hicks (1967, 1974), who draws specific attention to the term structure of the interest rates as a key connecting factor between liquidity preference, monetary analysis and portfolio selection.

M_0 (Base Money) is the sum of currency in circulation and banks' reserves with the central bank. The same definition is given here for perfectly liquid assets (L_0). M_1 is the sum of currency plus banks' demand deposits. Also this aggregate is highly liquid being redeemable in terms of base money at par on demand; the principal uncertainty relates to deposits held with banks which

might be (become) illiquid or even insolvent. A bank produces perfect liquid asset if the nominal value of its corresponding liability is fully guaranteed (Mazzoni 2016). Liquidity is related to both the store of value and the transactions motives to hold money: in the extreme case of hyperinflation, these features would be lost (Hicks 1974).

In general, liquidity aggregates are a broader measure than broad money, but considerable overlaps exist between liquid and monetary assets. As indicated, this should not lead to confusing the two typologies, and more specifically to defining liquidity with reference to the key attribute of money: the payment for goods and services, the repayment of debt and the acquisition of assets. This approach is not uncommon and is apparently partially endorsed also by the ECB: “The notion of liquidity in the economic literature relates to the ability of an economic agent to exchange his or her existing wealth for goods and services or for other assets. In this definition, two issues should be noted. First, liquidity can be understood in terms of flows (as opposed to stocks), in other words, it is a flow concept. In our framework, liquidity will refer to the unhindered flows among the agents of the financial system, with a particular focus on the flows among the central bank, commercial banks and markets. Second, liquidity refers to the “ability” of realising these flows” (Nikolaou 2009).

The other principle concern with this line of analysis refers to the tenet that liquidity is a flow variable and should be examined strictly in terms of flow analysis. This approach is typically operational and should not be disregarded, but it is evidently incomplete. Liquidity and illiquidity processes are dynamic, stochastic and therefore linked to the passage of time. Measurement of liquidity often requires reference to ratios of both stocks to flows and flows to stocks. It is by no means a coincidence that a famous debate after the publication of the General Theory was precisely on stock vs. flow analysis of liquidity preference and loanable funds theories (Hicks 1939; Patinkin 1958). The interconnectedness should not however lead to fuzziness. Any economic/financial variable is characterised by unit of measurement (m) and time dimension (t): without a precise definition of both, analysis of economic phenomena and processes is necessarily blurred and ultimately unsatisfactory. The concept of liquidity is emblematic of these difficulties. Stock variables exist at a point in time, and flows are defined over a time interval. Capitalisation of flows permits to establish consistent relationships with stocks. The dimension of the reciprocal of the rate of interest with the selected appropriate maturity is the corresponding time interval. As originally explained by Hicks (1974), what is relevant in respect of (stock)

Table 3 Prototype overview of monetary, liquid, marketable assets and of asset portfolio selection

	Monetary assets ^a	Liquid assets ^a	Marketable assets ^a	Asset Portfolio Selection ^a
Type of security	M_0	L_0	M_0	✓
	$M_{1,2,3,4}$	Money market instruments	Money market instruments	T-bills ^b
	✓	Short-term securities	Short-term securities	Short-term securities
	✓	✓	Bonds	Bonds
	✓	✓	Stocks	Stocks
	✓	✓	Hybrids/ABS ^c	✓

^aIn the first three columns, securities are ordered by decreasing degree of moneyiness, marketability, liquidity, respectively. For a comprehensive survey of monetary and financial aggregates, see IMF (2008)

^bIn certain countries and during certain periods, T-bills are included in the official broader definitions of money

^cMarketability and liquidity of asset-backed securities (ABS) are dependent upon the liquidity of the collateralising assets; under stress their liquidity can evaporate rapidly

liquidity is not “the” rate of interest (defined as the marginal rate of substitution between bonds and money), but the spread between short and long rates (the marginal rate of substitution between bonds and bills).

A key dimension of liquidity is its intrinsic stochastic nature (ECB 2002 and Watanabe 2003), beyond the $L_0 = M_0$ stock levels. It is only the value of perfectly liquid assets which is insensitive to the arrival of new information (Diamond and Dybvig 1983; Gorton 2010; de Angelo and Stulz 2013). The problem of statistical modelling of risk can be handled with relative ease in the traditional approach, where the assumptions are made of (i) exogenous/fundamental risk and (ii) Gaussian/stationary distributions. If instead, in the framework of Table 3, allowance is made for endogenous/systemic risk, stochastic volatility can become time-varying. More specifically, assets with uncorrelated statistical distributions under idiosyncratic risk predominance can become highly correlated. The notable exception, as indicated, is represented by central bank liabilities which retain their unique properties. Correlations, volatilities and asset/market/funding liquidities become path dependent and give rise to feedback loops, possible financial bubbles and liquidity spirals.²²

²²On these points, see, for instance, Brunnermeier and Pedersen (2009), Cont (2012), and Danielsson (2013).

More generally the overall analysis should not be conducted exclusively in terms of individual idiosyncratic risks, but with reference to a holistic approach (Persaud 2016). As indicated in this paper, a complex interdependent system framework is required, which allows for fallacies of composition/division, micro- vs. macro-prudential perspectives, systematic interdependence of economic policies. This broader framework embraces the role and significance of L_0 stock analysis and of liquidity creation/support of the central bank (flow approach), notably in its traditional fundamental function of LOLR (Thornton 1802; Bagehot 1873).²³ In the Banking Union framework, these key operations are not the direct responsibility of the ECB (Art. 14.4 of the ECB and ELA ECB decision of 18 October 2013) (Lamandini and Munoz 2015).²⁴ Instead, since 2012, the LOLR has been de facto applied by the ECB to the government bond market to break the bank sovereign debt-liquidity/solvency spirals²⁵: this created however a new liquidity problem for Treasury bills, because of the drying up of the market for such securities.

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²³Both authors considered it necessary to give LOLR liquidity powers to the Bank of England to help preserve the good functioning of the monetary/credit transmission process in case of threat because of illiquidity of commercial banks.

²⁴For a different approach, see Lautenschläger (2016).

²⁵The yield from these operations and the corresponding possible solvency risk are however largely transferred back to the central banks of the countries whose debt is bought. The dynamic relationship between market liquidity and credit risk in government bond markets is examined in Pelizzon et al. (2014) and de Pooter et al. (2015).

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15

Modern Fiscal Sociology

D'Maris Coffman

1 Introduction

Fiscal sociology as a discipline enjoys a centenary in 2018, with its origins in Joseph Alois Schumpeter's seminal essay of 1918, which only appeared in English in 1954. The complicated publication history of the article has spawned a variety of approaches to fiscal sociology, each with different methodological assumptions born of their respective historical moments and the national economic literatures in which they were established. One variant, the Anglo-Italian school established by D'Maris Coffman and the editors of this volume, has a particular methodological approach, which is consistent with structural political economy, while maintaining a tri-partite interest in taxation, expenditure and public borrowing. This approach is sensitive to the role of macro-fiscal policy in expressing and also in shaping sectoral interdependencies, social relations and economic dynamics. The historical roots of this approach can be found in William Petty, David Hume, Quesnay and Smith, but the heirs to their hermeneutic strategies for understanding the fiscal state are principally concerned with evolution of fiscal systems in the twenty-first century, and their operation at sub-national, national and supra-national levels.

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2 Varieties of Fiscal Sociology

‘Fiscal Sociology’ is a term that was coined by Joseph Schumpeter after the first World War to characterise his approach to studying what he regarded as ‘The Crisis of the Tax State’ War I (1918, pp. 4–7). Forty years later, his essay, originally published in German, was translated into English alongside the posthumous publication of Schumpeter’s *History of Economic Analysis* (Coffman 2017, p. 40). This dating is important to understand, because the original German reception of Schumpeter occurred in a period dominated by the crisis of small-state capitalism (Janeway 2012), by Max Weber’s concept of the state as elucidated in ‘Politics as Vocation’ (1920), and by the ascendancy of functionalist theories of state relations (Groom and Taylor 1975). Schumpeter and those who followed his lead strove to explore how, following Rudolph Goldscheid, ‘the budget is the skeleton of the state stripped of all misleading ideologies’ (Schumpeter 1954, p. 6) in order to understand the formation of bureaucratic states and the challenges they faced. They wanted to know how far the putative ‘crisis of the tax’ state was an inevitable feature of a polity so constituted or if it was an historically contingent outcome (Mommsen 1974). In doing so, Schumpeter and Weber helped to establish institutionalism, alongside the canonical contributions of Veblen and Hamilton (Swedberg 2002). This tradition developed into what is known as the Austrian or German approach to fiscal sociology (McLure 2007, p. 4). Jürgen Backhaus (2005) is the most important descendant of this tradition, and its most influential practitioner today.

Italian fiscal sociology, while indebted to Schumpeter’s initial formulation, is more commonly associated with Vilfredo Pareto and his followers (McLure 2007, pp. 3–4). How far they were ‘independent’ of the Austrian strain, as has often been alleged, is debatable, but Pareto and his student, Guido Sensini, gave the project a different valence (McLure 2003, 2007, pp. 4–5). They were chiefly political economists who opposed those they regarded as ‘literary’ economists (McLure 2007, pp. 8–10). Pareto and his followers were interested in expanding his theory of economic equilibrium to include a theory of social equilibrium (McLure 2007, pp. 12–13), in which there was a place for fiscal theory, so as to maximise the social utility associated with economic policy. Although such claims may be contested, some would argue that it is upon such a basis that Italian contributions to Public Choice Theory were founded (Wagner 2003). Moreover, Paretian fiscal sociology still has adherents today, as it provides a helpful lens through

which to understand the way in which technocratic elites design fiscal processes (Forte and Silvestri 2013).

By contrast, readings and applications of ‘fiscal sociology’ which followed in the wake of its English publication in 1954 occurred in a different context. The English translation was widely read by contemporaries as an intervention into Cold War debates about the growth of the social democratic state, and the ‘the step-changes in defence and social welfare spending in the post-war period’ (Coffman 2017, p. 40). The intellectual climate was different as well: Claude Lévi-Strauss’ structuralism was in the ascendancy in the social sciences, and Schumpeter’s fiscal sociology provided a vehicle for understanding structural configuration of the state. Marxist structuralists, in particular, read Schumpeter to understand state expenditure as a locus for the exercise of power by elites: ‘radicals attempt to measure the relative distribution and redistribution of resources by government and use these measures as indices of government support for particular classes and groups’ (Bates 1985, p. 23). This achieved orthodoxy as the dominant reading of Schumpeter on the Left in the 1980s, as Richard Bates explains, citing Patrick Dunleavy:

Fiscal sociology breaks more or less completely with the approach practised in conventional public finance of analysing budgetary decision-making in isolation from the concrete groups and interests promoting expenditures or deriving benefits from particular budgetary decisions. Instead these relationships are taken as central to any explanation, and the budget is treated as a summary measure of the balance of state policy as between social classes and groups’. (Bates 1985, p. 23; Dunleavy 1982, pp. 221–222)

As with earlier readings of Schumpeter, the object was to strip away ideology to reveal the occult operation of class conflict. As Philip Abrams pointed out a few years later, ‘Marxist theory needs the state as an abstract-formal object in order to explain the integration of class societies’ and thus made the state an unproblematic locus for the exercise of power (Abrams 1988, p. 70). The chief difficulty with this approach to Fiscal Sociology, quite apart from other objections that might be levelled at conventional Marxist structuralism as an intellectual project, is the extent to which it conflates the ‘causal and symptomatic elements in the Schumpeterian tradition’ (Coffman 2017, p. 37).

Such a distinction can be found in the original essay (1918, pp. 4–7) and plays a central role in the revival of fiscal sociology in the early twenty-first century. As Jürgen Backhaus explained in 2004, fiscal sociology considers

‘the ramifications of the fiscal activities of the state into areas which are not their primary target. These effects may occur in sectors not directly affected such as related markets, but they may also occur outside the economic sphere proper, such as in politics, culture, religion, or society at large’ (Backhaus 2004, p. 1). In this reading of Schumpeter, the concern is thus with the consequences, occasionally intended but most often not, of the fiscal activities of the state.

In the last few years, there have been various claims to a ‘New Fiscal Sociology,’ each founded in a different reading of Schumpeter. The dominant approach, articulated in by Martin, Mehrotra, and Prasad in their eponymous edited volume (Martin et al. 2009) is most clearly aligned with Backhaus, who himself published a collection based on essays presented at the Erfurt Conference on Fiscal Sociology (Backhaus 2005) and who holds The Krupp Foundation Chair in Public Finance and Fiscal Sociology (Coffman 2017, p. 40). The epilogue to the Martin volume, written by John L. Campbell, casts fiscal sociology as a ‘comparative and historical study of taxation,’ which exposes how states ‘could sustain welfare or defense programs; maintain infrastructures like roads, airports, schools and public transportation systems; regulate businesses and markets; enforce property rights and the law; or support commerce’ (Martin et al. 2009, p. 256). Theirs is an admirably interdisciplinary project, which can explore the role of taxation in the rise of neoliberalism, the dialectics of taxation and globalisation (including global capital flows and the place of tax arbitrage), and ‘taxation as a source of institutional competitiveness’ (Martin et al. 2009, pp. 257–262), which can be virtuous in creating social value or vicious in sparking a race to the bottom. In other words, fiscal sociology can expose how tax regimes either promote greater inequalities or resolve them (Martin et al. 2009, pp. 262–264). This variant of fiscal sociology can also contribute to more nuanced and robust histories of policy (Martin et al. 2009, p. 265), including those of the premodern fiscal states (Monson and Scheidel 2015).

If this is the mainstream ‘New Fiscal Sociology,’ then other approaches are still possible. The Anglo-Italian school has its origins in the attempt by D’Maris Coffman (2013) to revive ‘fiscal sociology’ as a lens through which to view the paradigmatic case of excise taxation in the British Isles, which was ‘foundational to the advent of the Hobbesian Leviathan’ (Coffman 2017, p. 40). This intellectual project, the discussion of which forms the balance of this chapter, is to restore Schumpeter’s fiscal sociology to its rightful place as an instantiation of structuralist hermeneutics and as a mode of economic analysis.

3 Hermeneutic Strategies: Understanding Historical Structural Change

In the version of New Fiscal Sociology advocated by Coffman and her colleagues, Ivano Cardinale and Roberto Scazzieri, it was no accident that Schumpeter's seminal article first appeared in English alongside Elizabeth Boody Schumpeter's publication of *History of Economic Analysis* (Schumpeter 1994). 'Fiscal sociology,' which has acquired a renewed urgency today amidst what commentators have labelled the worst crises in public finance since the interwar period, is but one domain of Schumpeterian 'economic analysis' and should be recognised as such. In that respect, Coffman's 'New Fiscal Sociology' is closely related to Roberto Scazzieri's proposal for a 'Structural Heuristics' (Scazzieri 2012; Cardinale et al. 2017b; Cardinale and Scazzieri 2016).

Both Anglo-Italian New Fiscal Sociology and Structural Heuristics make an important distinction between interpretation and explanation, or between causation and causality. Causality rests on a particular mechanism by which X has an effect on Y. Explanations can be realistic in the sense that they try to account for external reality, or epistemic (anti-realist) in the sense that they strive for the internal consistency of the empirical model (Mayes 2013). In general, modern mathematical economics strives for the latter, whereas the natural sciences present themselves as interested in the former, except perhaps in cosmology. In economics and finance, the movement of prices is easy to explain: they rise when there are more buyers than sellers, they fall when there are more sellers than buyers. The willingness to buy or sell is, indeed, partly influenced by individual expectations of future prices, such that for markets to function there has to be heterogeneity of belief. Predicting the movement of prices is an occult science, whether practiced by 'chartists' who do 'technical analysis' or by punters who pontificate on the market outlook for a particular stock. Interpreting price behaviour (explaining *why* market prices rise or fall) lies somewhere in between, though much of it depends on normative judgments about 'value.' To imagine that you are in a speculative bubble is to imagine that the current prices of an asset have diverged from some 'rational' judgement of fundamental value.

Similar problems occur when explaining and interpreting the effects of taxation. The legal incidence (who is meant to pay) and economic incidence (who actually pays) of taxation is relatively easy to establish: some indirect taxes are forward-shifted onto consumers, others are back-shifted onto other economic agents in the supply chain, some are capitalised (thereby changing industrial organisation) and eventually most appear in reality (as well as in

the Dynamic General Stochastic Equilibrium or DGSE Framework) in the form of higher wages (Seligman 1899; Coffman 2013; Coffman and Gao 2011; Coffman 2017). Although welfare assessments are less straightforward, it is also comparatively easy to assess the mean welfare effects, or whether a given tax is progressive, regressive or (the unicorn) proportional. Interpreting these phenomena is much more elusive: which sectors of the economy benefit, whose socio-economic and political interests are served, what kind of path dependencies may be created, and so on. These are valid questions for political economy, even if they are scarcely of interest to most practitioners of public economics.

Because economic, social and cultural systems are complex structures of interdependencies, their elaboration requires an interpretative strategy capable of identifying structural discontinuities while remaining sensitive to longer-term causal processes that proceed incrementally. Anglo-Italian New Fiscal Sociology offers a strategy for framing the backdrop against which it is possible to understand the historically contingent formulation of fiscal policy. Such an intellectual project of investigating the occult interests and interdependencies at work in fiscal policy formation requires a simultaneous consideration of causes and consequences, in a dialectic that advances through chains of narrative causation. This variant of Fiscal Sociology rests on particular assumptions about historical structural change, while providing a specific modality for identifying and interpreting the causal forces at work with a given field of possibilities. This is essentially Aristotelian casuistry, with the assumption of a relationship, albeit a complex one, between policymaking and sociocultural configurations, i.e. structural change.

The Anglo-Italian variant of Fiscal Sociology interprets the dynamics of economic systems as showing both features of variance and features of change, and that the frequent recurrence of the same debates (about the economic incidence of various forms of taxation and about normative tax burdens) point to fundamental structural characteristics of economic systems as they evolve across space and time. These recurrences point to relatively invariant structural features of the economy, whereas the irregularity of recurrence points to the irreducible historical uncertainty concerning 'ruptures' and 'shifts' from one dynamic regime to another. This characterisation of historical structural change can be described as an instance of 'non-Marxist structuralism,' in the sense that it is not deterministic and preserves contingency. This approach also maintains a clear consideration of the way in which fiscal policymaking shapes societal expectations. Instead, it might be called 'structural historicism.'

While possible objects of historical analysis are manifold, studies of historical structural change can roughly be characterised as either examining an entire system of interdependencies (whether sectoral or social) or investigating the evolution of a given sector or social group, both internally and in conjunction with competing sectors or groups (Scazzieri 2012). Anglo-Italian 'New Fiscal Sociology' offers an example of the first approach in studies of the early modern fiscal state. Schumpeter's modern fiscal state developed in the early modern period as a solution to the strains placed upon power-elites (usually in the form of the crown estate) as a result of the ever-rising cost of warfare. This development, characterised by some as the Military Revolution necessitated the imposition of taxes to mobilise the vast domestic resources needed to finance participation in armed conflicts between mercenary armies. Much contemporary economic writing, including that of those who are often called mercantilists and those who are classified as physiocrats, was 'concerned with how to maximize tax revenues without impairing either agricultural production or the growing commodity economies' (Cardinale and Coffman 2014, p. 278).

In France, commentators, including Quesnay in his famous *Tableau Économique* saw the aristocratic or rentier class (as well as the crown, insofar as royal estates accrued rents) as identified with absolutist monarchy (Cardinale and Coffman 2014, p. 279; Quesnay 1972). In British economic writings, the 'state' had emerged from mid-century crisis, i.e. the Civil Wars and Interregnum, as an abstract-formal 'artificial person that was not dependent on the idea of monarchy, much less on the feudal system, but instead had a distinct role in the circulation of the economic system by exacting charges (in the form of taxation) that would defray the costs of securing the whole' (Cardinale and Coffman 2014, p. 279). As Cardinale and Coffman (2014, p. 279) observe, the fiscal apparatus of the state thus became a battleground between Whigs and Tories and their competing socio-economic and sectoral interests.

In furnishing analytical tools with which to understand both the diachronic (the rising cost of warfare amidst the territorial ambitions of early modern states) and synchronic (the social and sectoral interdependencies which characterised in the composition of power elites) processes, Anglo-Italian Fiscal Sociology reconstitutes a rigorous and robust methodology for understanding historical structural change at the societal level. This in stark contrast to the crudity with which mainstream economists promote their own heuristics about fiscal sociology. For example, the 90%-rule promulgated by Kenneth Rogoff and Carmen Reinhart (2009), which does not acknowledge the possibility of fundamental structural changes in the

economy and, in fact, ridicules such possibilities, may very well prove to encourage inappropriate policy responses (Coffman 2017, pp. 38–39).

4 Beyond Taxation: Expenditure and Public Borrowing

Another key principle of the Anglo-Italian variant of Fiscal Sociology is that taxation is only part of the story; a rounded fiscal sociology ‘must include not just expenditure but also both taxation and public borrowing’ (Coffman 2017, p. 37). If this approach has a genealogy, then the genesis can be found in David Hume’s writings on political economy, when he notes the relationships between modalities of taxation, the technological and sociopolitical conditions that create them, and the assessments by elites of their probable distributional effects, as well as their value as collateral for increasing levels of public borrowing:

In every nation, there are always some methods of levying money more easy than others, agreeably to the way of living of the people, and the commodities they make use of. In Britain, the excises upon malt and beer afford a large revenue; because the operations of malting and brewing are tedious, and are impossible to be concealed; and at the same time, these commodities are not so absolutely necessary to life, as that the raising their price would very much affect poorer sort. These taxes being all mortgaged, what difficulty to find new ones! What vexation and ruin of the poor! (David Hume, ‘Of Public Credit’ 1753, p. 171)

The public debt, in turn, financed the unprecedented expansion of British military infrastructure with which to fight the European and colonial wars of the eighteenth and nineteenth centuries. Holding taxation apart from expenditure and borrowing obscures the sense in which these processes are necessarily interdependent, and, in doing so, has the potential to depoliticise the legislative processes that shape them. Coffman’s study, *Excise Taxation and the Origins of Public Debt*, treats the domestic excise taxation as both a ‘compelling case study into the institutional mechanics of state formation in the British Isles and a lens through which to re-assess the political culture and economic thought of the Civil Wars and Interregnum’ (Coffman 2013, pp. 11–12).

As Coffman explains, excise taxation was introduced in response to political crisis. Its opponents thought it unconstitutional, regressive and divisive,

‘but as David Hume had realized, excise taxation (especially on the production of native liquors) proved nicely suited to the evolving English economy and its new commercial society’ (Coffman 2013, p. 11). More importantly, the excise could be used to extend the fiscal reach of the state into remote geographies and, to the extent it was assessed on commodities rather than on individuals, could be imposed on friends and enemies of the Parliamentary regime alike. Both sides also immediately apprehended the value of the excise in gathering intelligence and monitoring dissent (Coffman 2013, p. 11). Extending the reach of the state offered social benefits like ‘discouraging consumption of luxuries, in promoting social cohesion (by making the poor stake-holders), in encouraging the protection and consolidation of domestic industries, in enforcing a positive balance of trade, and in giving the regime the capacity to reduce or expand the quantity of coin in circulation in the realm’ (Coffman 2013, p. 5).

The success of the mid-century experiment in excise taxation was the catalyst for the seventeenth-century destruction of the old fiscal system; it also led to new formulations of the principles of taxation, beginning with William Petty (1662) and culminating in the formulation given by Adam Smith (1776). The retention of the excise after the Restoration (1660) and the permanent abolition of the Court of Wards completed this transition from a demesne state to a tax state (Coffman 2013, p. 8). In short, excise taxation ‘catalyzed structural change, but furnished a political compromise, which preserved pre-revolutionary discourses of legitimation even as new ones evolved to describe the new underlying realities’ (Coffman 2013, p. 6).

Cardinale and Coffman (2014) further explore the relationship between the fiscal mix and social structures in eighteenth-century Britain and France, in which they observe the path dependence of the sociopolitical configurations established in a century earlier. Not only did pamphleteers in the British Excise Crisis of 1733, which had erupted in the wake of Prime Minister Walpole’s proposal to make up a shortfall caused by a reduction in the land tax by imposing excise taxes on tobacco and wine, recycle (without changing more than the date on the title page) the pamphlet literature of the 1640s, but also interlocutors on both sides of the Massachusetts Excise Controversy of 1754 recycled the pamphlet literature of 1733 in their own arguments (Boyer 1964; Becket 1985; Coffman 2013; Cardinale and Coffman 2014).

This persistence of argumentation and interest is striking, not least because it has bequeathed us our modern categories of analysis. But as Coffman and Kabiri (2017) observed, the real value of the eighteenth-century case for the Anglo-Italian New Fiscal Sociology is that it permits

easy mapping of political parties and economic interests to the primary (agriculture) and secondary (manufacturing) sectors. More complex polities, such as the Eurozone, with their highly variegated systems of taxation, require considerably more nuanced analysis.

This is important because the ability of states to borrow from international capital markets is directly a function of their fiscal capacities, their institutions and governance structures, and their political stability (Coffman et al. 2013; Murphy 2013; North and Weingast 1989). Equally the existence of fiscal rules within the European Union, enshrined in the Maastricht Treaty, or alternatively rules promulgated globally by the Washington Consensus, put constitutional and political limits on contra-cyclical fiscal policy and prohibit intergenerational transfers. In some American states, similar ‘balanced budget amendments’ enshrine a particularly rigid method for ensuring fiscal probity into constitutional law, while preventing local fiscal stabilisers (Liu et al. 2013). Often the operation of these rules only serves to reinforce racial and class hierarchies in the United States (O’Brien 2017). Competition among sub-national polities can also create virtuous circles (if regions attempt to align fiscal policy and industrial policy) or promote races to the bottom as polities compete to offer low-tax regimes to business and financial interests. These are all valid objects of study of the Anglo-Italian School of New Fiscal Sociology. Other approaches may well attend to them, but with different emphases and without the appreciation of the ways in which they both catalyse and confound structural change.

5 Conclusions

The Anglo-Italian variant of New Fiscal Sociology is a mode of economic analysis and a hermeneutic strategy for apprehending the role of fiscal policymaking in shaping the course of historical structural change. Our movement is concerned primarily with the way fiscal strategies exploit, shape and magnify sectoral interdependences and sociopolitical competition, and in doing so create path dependencies. The approach is well-grounded historically in empirical studies of the seventeenth- and eighteenth-century British and French fiscal-military states, in studies of the modern Eurozone, and in histories of Western European economic analysis. This approach is distinct from other forms of New Fiscal History in that it is not principally concerned with teleological histories of capitalism, nor is it deployed as a defence of Public Choice Theory, but instead focuses on exploring how fiscal policy can support or hinder industrial policy and specialised credit policies

which are the result of renewed attention to intermediate levels of aggregation. The Anglo-Italian variant of the New Fiscal sociology is both dependent upon and indispensable to the methods and tools that form the basis of Structural Political Economy.

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16

Comparative Political Economy

Robert Boyer

1 Introduction

From the outset, the economic analysis intended to be associated to political choices, as it sought to shed light on some of the major problems faced by each society. The first formulations of monetary theory are intended to account for the continuing rise in prices, associated with the influx of gold into Spain from America. The Physiocrats wondered about the most appropriate tax system in an economy dominated by agriculture and rent. The English founders of political economy elaborated the first theory of international trade and advocated a free trade regime. Later German economists intended to favor the catching-up of their country by developing the theory of protection of infant industries. Macroeconomic discipline emerged from the inability of conventional theories to explain long-term and mass unemployment. Since then political economy continues to evolve to account for the dynamics of growth, the origin of financial crises, and the organization of the world economy and to propose policies that could overcome these successive challenges.

Thus, the economists have taken part with the political choices of the city at each historical period. This is even more the case in contemporary societies as economic logic has extended to many new areas, such as social

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protection, labor law, and the health sector. This has been accompanied by a diversification of the interests of researchers, a growing number of which are creating analytical tools for companies, banks and the financial sector, to the extent that management disciplines have separated from the economic analysis the purpose of which is to shed light on the strategy and policy of governments. What are the contemporary key issues economists and political scientists should address to?

- (i) Why *financial liberalization*, that was supposed to deliver an efficient and resilient financial regime, has generated the major *2008 global economic crisis*, only to be compared with that of 1929? Standard economic theory points out the moral hazard created by the public refinancing of mortgage credit whereas interventionists blamed the absence of regulation of new derivative products. Both sides basically consider the prevention of major financial crisis as a pure technical issue. A minority thinks that the loss of ethic by Wall Street actors is to be blamed. A political economy approach delivers a rather different interpretation: The implicit alliance between large public firms CEOs and Wall Street financiers (Boyer 2005) has been strong enough to prevent any regulation and to benefit from last resort central bank bailing out without any condition when the subprime crisis burst out. Furthermore, this explains why financial re-regulation has been so slow and partial in the USA (Krippner 2011; Boyer 2011). This second approach digs deeper into the structural origin of the current turmoil, by investigating *the links between economic dynamics and the structuring of political power*.
- (ii) Why *globalization* is now challenged by social movements, even within the very societies that have been promoting it? The standard economic theory forecasted that it would be a win-win transformation benefiting all economies and social groups. Unfortunately, the hypotheses of the theoreticians were not fulfilled in contemporary economies: increasing returns to scale imply a polarization the winners, under-employment might be pushed ahead by trade liberalization, whereas some countries are price makers, other price-takers, and so on. A political economy analysis points out that high-skilled professionals and large multinationals were able to extract large benefits from crossing borders, but low skilled workers, small domestic firms, and welfare dependent were adversely struck by the stiffening of competition and the rolling back of extended universal welfare. Such a conflict between democratic principles and large international opening could

be anticipated (Rodrik 2000). Why such a lag between the widening of economic gains among domestic social groups and the political and electoral protests, that Brexit and Donald Trump's election represent? De facto, the succession of marginal erosions of the economic status of weak groups may end up into a surprising but massive political protest when citizens have given voice by referendum or presidential election. Again, a political strategy of the national elites is converted into economic restructuring that leads to social movements against the current form of globalization. Thus, *economy and polity are co-evolving*, and their interactions have to be taken into account by any relevant social science paradigm.

- (iii) Has *global finance* become the enemy of *democracy*, thus opening a *clash between capitalism and democracy*? Conventional economy theory is built upon a complete separation between economic and political domains, and thus, the diagnosis is deemed to be erroneous. Basically, international financiers do castigate governments that adopt unsustainable monetary and budgetary policies. The answer of political economists is less optimistic: Virtuous governments too have to comply with the requirements of financiers, at the detriment of a response to the demand of citizens (Streeck 2014). Clearly, the macroeconomic unbalances associated with the long-lasting demise of post-Second World War Golden Age have generated structural public deficits that have been piling up into rapid growth of public debt/GDP ratios. Simultaneously the organization of a secondary public debt market has transferred the holding of treasury bonds to international funds (Lemoine 2016). This is the neglected origin of the blocking of citizens' demands in the name of financial sustainability. This is a third example of the progressive rise in the power of finance. The related *widening of economic inequality has been converted into unequal access to State power* and the design of laws and public policies.

When assessing the relevance of alternative conceptions and strategies entitled to enlighten these three major contemporary concerns, a common conclusion comes out: Misery of standard economics stuck into an ahistorical approach, bright outlook for an updated political economy open to an integrated approach to polity and economy. Clearly, the understanding the current transformations of societies and their international relations calls for a renewed political economy. This chapter sketches some possible conceptual foundations for this discipline, to be contrasted with those of standard economic theory (Sect. 1). It then shows that comparisons in time (Sect. 2) and

space (Sect. 3) are necessary for revealing/detecting viable configurations of socio-economic regimes governed by capitalism. This opens a vast agenda for further research on the complex processes that drive regime changes, internationalization, and the radical innovations that open new historical epochs (Sect. 4).

2 Misery of Economics: Political Economy Prospect

The new classical macro-economic theory was assumed to be nearly completed in the opinion of key actors (Blanchard 2008) when the collapse of the subprime bubble came to dramatically challenge this optimistic assessment. A decade later, the jury is still out and no consensus has emerged among economists, and this is an evidence for the intellectual crisis of the epistemology and methodology of economics.

2.1 The Limits of an Axiomatic Approach to Economics, the Need for an Institutional Approach

The economists are proud to have reconciled modern macro analyses with the principles of standard micro theory. So doing, they have embedded into their analytical framework all the hypotheses required for a general equilibrium to exist. Unfortunately, they are at odds with the core features of really existing economies. Actually, they are much more than pure market economies since they are built according to some key pillars that have been pointed out by *régulation* theory (Table 1):

- (i) According to a long-standing tradition, supply and demand of goods sets the volume exchanged and the relative prices; then the monetary supply, totally exogenous, sets the nominal prices. This hypothesis is common to Walras' and monetarist theories, but it contradicts the very foundations of a monetary economy where money is not only a numeraire but the necessary means for exchange and an asset that can be transferred from one period to another (Orléan 2013; Théret 2004/2008). Consequently, money is endogenous and created by credit according to processes that vary from one epoch and one economy to another. No macro analysis can be made without an

Table 1 The hidden institutions of a capitalist economy: from general equilibrium theory (GET) to regulation theory

GET assumptions	Coherence and relevance of these assumptions	Role of institutional forms
1. Money is only an accounting unity An auctioneer centralizes all transactions	Money is a means of exchange and a store of value This is not a market economy: In fact, the auctioneer is a benevolent planner	Need for rules for the creation and destruction of money A monetary and credit regime defines market premises and allows the decentralization of transactions
2. All agents are <i>price-takers</i>	Most agents have a <i>strategic</i> behavior; some are <i>price makers</i>	Variety of <i>forms of competition</i> that differs from the perfect competition
3. Labor services are traded on a market as any other good	The twofold component of labor: first a commercial transaction and then a <i>subordination relation</i>	The labor contract is embedded into an institutional and legal Web defining the <i>wage labor nexus</i>
4. Absence of state	An external market authority is required to manage money, competition, public goods	The configuration of <i>state/economy</i> relations matters
5. No international relations	Every State is sovereign only within a limited territory	Modalities for <i>integration into the international regime</i>

explicit description of the monetary creation and destruction (Lavoie 2015). The strategy of an institutional approach is studying the various configurations of *credit and monetary regimes* and they matter for macrodynamics (Boyer 2015).

- (ii) Pure competition is the benchmark for neoclassical economists, but it is at odds with business school approaches that teach firms' managers to exploit market power for setting their price formation. Contemporary configurations exhibit significant oligopolistic or even monopolistic prices. This is recognized by a special branch, the economics of industrial organization (Tirole 1988), but not so much by macroeconomic theoreticians. Thus, macroeconomic activity level and income distribution are clearly changed when the degree of competition varies. This is one of the sources of a specific form of unemployment, quite different from the involuntary Keynesian one (Benassy 1982). *Régulation* theory is proposing the concept of *form of competition* in order to take into account how it shapes price formation at the macrolevel.

- (iii) The irrelevance of the neoclassical core hypotheses is still more striking concerning labor and work: Employment and wage are formed by the interaction of supply and demand as on any other goods and services markets. This is a dramatic confusion between labor and its services, labor and labor force. From a theoretical standpoint, the exchange “work against market wage” is only the first step in the employment contract since it is then completed by the subordination of the wage earners to the directives of firms’ managers. Consequently, this duality brings the social conflicts generated by the intrinsic contradiction built into the capital/labor relation. The emergence of institutionalized compromises at the society-wide level is a method for tentatively and transitorily taming these conflicts (Boyer 2015). This is the meaning of a third concept, *the wage labor nexus*. Again there is no unique or canonical configuration, and their diversity is a key ingredient in the differentiation of *régulation* modes.
- (iv) Grand economic theorizing is concerned by a central issue: Under which conditions could a pure market economy function and thus sustain the modern interpretation of the “invisible hand”? Following this vision, introducing the State is more a negative perturbation than a positive contribution to wellbeing because it can only shift the economy out of the Pareto equilibria that self-adjusting of competitive markets warrant. This naïve fable still permeates the contemporary debates between free marketers and interventionists. It totally discards the fact that the multiplicity of public interventions is not only the outcome of ideological pressures but also the very consequences of the limits of markets as exclusive coordinating mechanisms (Hollingsworth and Boyer 1997): macroeconomic instability, recurring financial crises, unsustainable inequalities, and lack of cooperation in the production of public goods and commons. *The State/economy* relation is the fourth institutional form for *régulation* theory, and it occupies a specific locus since it synthesizes and organizes a hierarchy among the other institutional forms: the Fordist wage labor nexus in the post-Second World War Golden Age, then the competition regime and ultimately the financial regime (see Sect. 2, *infra*).
- (v) *The nature and degree of openness* is the fifth dimension covered by *régulation* theory, and it is much more than the conventional opposition between closed and open economies. The nation-state has the privilege to exert legal coercion over a given political territory and to negotiate and set the rules governing the exchange of goods, financial assets, the entry of foreign direct investment, and last but not

least migration flows. The related rules have a definite impact on the macroeconomic adjustments, and they strongly differ from one historical epoch to another and today among contemporary national economies. Under this respect *régulation* theory encounters International political economy: International trade theory is unable to capture the complex mix of economic logic and political objectives embedded in the choice of an *international regime* and the *form of integration of each nation-state* into this regime.

2.2 The Political Foundations of Most Institutional Forms

By training and professional affiliation, the economists tend to consider that economic institutions derive from pure economic objectives: the overcoming of market failures and the internalization of externalities, positive for education and research, and negative for pollution and climate change (Tirole 2016). If efficient markets do not emerge, standard economics invokes the irrationality or lack of economic literacy of policy makers and they declare: “this is a political economy problem.” However:

- (i) Is it a joke or does it mean that the economist is unable to theorize the basic institutions of a market economy? A recent research program on the *history and theory of money* convincingly argues that the money has generally noneconomic foundations, let them be religious, symbolic, or political (Théret 2008; Aglietta and Orléan 1998; Alary et al. 2016). This analytical approach is largely confirmed by monetary history and the launching of the Euro is a new example of the intricacy of political, symbolic, and geopolitical source in the invention of a genuine *monetary regime* (Boyer 2013). Political economy precisely looks for the role of power in the genesis of economic institutions. *Régulation* theory is part of this research agenda, since all institutional forms, and not only the monetary regime, require the seal of political and legal processes.
- (ii) As already pointed out, the *labor contact* is the locus where the asymmetry in economic power is the clearer. This is the source of recurring conflicts: Near full employment, workers have the initiative in asking for better wages and a say in work organization, but long-lasting mass unemployment triggers opposite demands from the firms’ owners in terms of concession bargaining and more labor flexibility.

Table 2 The political components of any institutional form open a research agenda for comparative political economy

The institutional forms	The role of polity	Consequences for CPE
1. Monetary regime	Institutionalization of the currency unit, legal requirements, control of credit	No neutrality of money, hence plurality of regimes
2. Wage labor nexus	Monitoring the social conflict between capital and labor	Various styles for governing labor
3. Competition	Defining and enforcing a conception of "fair" competition	Variability across historical periods and territories
4. The State economy nexus	The very locus for political conceptions and projects	Open to innovation out of social conflicts and economic crises
5. The degree of integration into the world economy	Defending a conception of national sovereignty	Away from the dualism between free trade and protectionism, a myriad of regimes coexists

These episodes call for State interventions in the direction of countervailing rights granted to wage earners in good times, but more freedom for firms by the relaxation of labor laws when unemployment becomes the major threat addressed to governments. As times elapses *different styles for the wage labor* nexus emerge, and they coevolve along with firms' organizations and national economic specialization. For instance, continental Europe has developed a special branch of the legal system codifying capital/labor relations, but in the USA, the reference to a variant of a commercial contract is the implicit norm for labor contract. This conception is enhanced by the opportunity opened by Communication and Information Technologies that blur the frontier between commercial and labor contracts. These features are the origins of contrasted macroeconomic adjustments, i.e., *régulation* modes (Table 2).

- (iii) *Pure and perfect competition* is far from being the attractor toward which all economies are bound to converge. On the contrary, one observes long swings that oscillate between the constitution of oligopolies in sunrise sectors and then their erosion via the diffusion of the goods and techniques, and the erosion of innovation rents by the entry of followers. Nevertheless, some *competition regimes* tend to favor producers that may capture the regulatory authorities created by policy makers, while others respond to the pressure of consumers asking for

more competition in order to benefit from the conversion of technical advances into lower prices. The exact configuration of competition varies from one epoch to another and across national economies. The policy makers are involved in their emergence and evolution since historical record suggests that unleashed competition leads to oligopolistic or monopolistic dominant positions. Thus, only a powerful actor, not directly involved in the economy, can try to curb down these tendencies. This actor is the State, and again the intricacies of political processes explain the nature of the third institutional form, the *form of competition*.

- (iv) *The State* cannot be reduced to a pure technical role of economic stabilization and the provision of “natural” public goods. On the one side, the effective supply of public goods does not echo the teaching of economists about the need to internalize the externalities associated with education, health, and research: Public good provision is the outcome of the lagged responses to recurring social and political demands of citizens and/or social groups. An enhanced economic efficiency is the ex post outcome of these pressures. Similarly, the tax system is rarely the optimal response to the challenges addressed to an economy since it summarizes the sedimentation in the relative power of the leading interest groups. For orthodox economists, the term “economic policy” means the application of scientific economic findings, if not “laws,” to political issues. For political economists, State interventions call for an analysis of economic consequences and feasibility of a policy agreed upon by a *political coalition* (Palombarini 1999). On the other side, *régulation* theory adds a more general hypothesis: in response to a given political coalition, *the State/economy nexus* has to exhibit a form of coherence with the architecture of institutional forms by organizing their complementarity or their hierarchy when a major asymmetry in power distribution among social groups is prevailing. For instance, commercial law may recognize the primacy of all stakeholders, including the wage earners in continental Europe during the Golden Age, but by contrast, the exclusive power of shareholders in contemporary USA (see Sect. 2, *infra*). The binding problem is then the *long-term legitimacy* of such a configuration, especially when citizens may end voting against the government.
- (v) All the institutional forms operate within a political space, that of a centralized nation-states or of federal systems where two different levels of public administration are nested. *The form and degree of integration into international relations* is a matter of political decision: Does it sustain

the political coalition and the autonomy associated with national sovereignty or is it a threat to the governability of a society? Between these two extremes, each government has the ability to work out the ad hoc mix of tariffs, external trade regulations, facilitation or limits in foreign investment entry, exchange rate regime, and the hot contemporary issue of migration. But this complex mix has constantly to be adjusted to react to the ups and downs of the world economy and the shift in the balance of the winners and losers of the past policy. Political economy thus rejects the irenic vision of international theory that wrongly states that the so-called globalization is a win-win strategy for all national economies and all their citizens. Some full and rapid opening to foreign competition for goods, services, productive, and financial capital flows might end into a structural crisis, where simultaneously economic viability, financial stability, social cohesion, and political legitimacy are at risk and finally collapse. The 2000 crisis of Argentina is emblematic of such a process (Boyer and Neffa 2004, 2007).

A political-economic approach has thus at least three merits: First, it brings back economics into other social sciences; second, it proposes tools in order to analyze the emergence of economic institutions via the interaction between social movements and political processes; and last but not least, political economy opens to a comparative methodology that helps understanding the diversity of socioeconomic regimes (Théret 1997).

2.3 The Economic Institutions Shape Individual Rationality and Firms' Objectives

Conventional economic theories are built upon an absolutist conception of rationality: Isolated individuals maximize their utility under the constraint of limited resources and then confront their supply and demand across a series of markets, the only explicit coordinating mechanism available. A myriad of microdecisions sets directly macroeconomic outcomes. Within the present framework, the institutional forms define *the intermediate level* between individuals and firms strategies and their fallouts at the society-wide level. Given the built-in inertia of institutions, everyday decisions are to be taken in accordance with the incentives and constraints that they imply. Consequently, the general principle that agents decide according to their best interest now defines *a context/institution dependent rationality* (Boyer 2015).

The application of this vision provides an alternative to consumer theory based on two pillars: The existence of preferences independent of the social context and the maximization of a utility that depends only on the goods consumed and the efforts made. Many evidences suggest that two hypotheses are invalidated. Clearly, in contemporary societies, consumption norms are the subject of intense *mimetic processes*, themselves fueled by the innovations proposed by firms to extend their market power and profit margins (Frank 2010): This form of interdependence is too rarely taken into account by microeconomic theory. In the same way, the goal pursued by individuals depends on the productive, social, and political context, to the extent that a branch of institutionalist theory postulates that the context determines almost completely the objectives set by the individuals (Douglas 1986).

At this stage, political economy has to ally with the *economic history* elaborated by the *Annales School* that provides a characterization of various typical configurations. Why, for example, did the peasant of the Middle Ages diversify the localization of his plots? For economists studying contemporary agriculture, it is pure irrationality: This peasant should have regrouped his land to benefit from increasing returns to scale. But it is only an anachronism, since the agricultural economy of the Middle Ages is analyzed in light of contemporary American agricultural capitalism. In fact, the poor peasant, faced with the succession of climatic incidents, aimed to ensure the survival of his lineage by the greatest possible diversification of risk: flooding near the river but frost on the hill. There is no irrationality, on the contrary, an attempt to adapt to an ancient regulation marked by the periodic return of famines in line with Malthus conceptions (Boyer 1991). Similarly, the rich French landowner of the eighteenth century was anxious to defend his interests by mobilizing physiocrats' theory and influencing taxation or the level of customs duties. A third configuration is that of American or Argentinean agriculture in which a flow of innovations in culture extends the benefits of returns to scale.

The *extreme diversity of individual rationality*, because it is context dependent, is the major finding when one compares the objectives and resources of the nineteenth-century craftsman, Henry Ford's employee, the Toyota salaryman, the venture capitalist of the Silicon Valley (Table 3). Without even mentioning the case of the "trader" or the "quant" whose behavior, which the rest of society considers irrational, is in fact the consequence of a system of remuneration based on profit sharing and risk-taking, it is mainly observed within finance-led capitalism (Godechot 2001).

Paradoxically, it is within the framework of *modern public administration* that one would find the clearest expression of the principle of rationality,

Table 3 As many forms of individual rationality as contexts

Social position Behavior	The poor peasant	The rich landowner	The tradesman	The rational Weberian bureaucrat	The Fordist blue/white collar	The venture capitalist	The trader
Objective	Survival facing uncertainties (climate, crisis, epidemic)	Absolute and differential rent	Professional independence	Effectiveness of management	Income during the career	Detecting epochal innovations	Bonus and profit- sharing
Type of reasoning/ justification	Maintaining family income	Physiocrats	Work needed to support lifestyle	Substantial rationality	Stakeholder in generating competitive- ness	Contribution to technical progress	Market fluidity
Type of action	Diversify cultivated plots	Defense of land owner-ship, control over political power	Collective work team, output related payment	Invention and coordination of formal procedures	Loyalty to the firm	Portfolio diversification	Risk-taking in response to incentives

but in this case, the preoccupation is not integration into the capitalist economy but rather the invention and coordination of rules and routines enabling it to thrive (Weber 1921). If we extend the analysis to the present period, is it not remarkable that with financial domination and internationalization, it is the private sector methods that are mobilized to reform public administrations? Inherited from the past, they were functional in relation to another regime in which State policies had the capacity and initiative in the design key institutional forms and indirectly private economic organizations. Such is the heart of the contemporary liberal strategies of which an emblematic example is Great Britain (Faucher-King and Le Galès 2010).

These remarks could well define the corner stone for institutional macro foundations for *a realist micro-socio-economy*.

2.4 Farewell to an Illusory Equilibrium or Steady State Growth

The nesting of economic domain and the sphere of polity is at the core of institutional forms (see Fig. 1, *infra*). Let us now address more directly to their theoretical relations and derive some consequences for the dynamics of modern capitalist societies:

- (i) The first step recognizes, from a conceptual point of view, *the autonomy of the two fields*. The economic field deals with the accumulation of wealth in the space governed by market exchanges. The political field is focused upon the accumulation of power and calls for a principle of legitimate coercion. At the most abstract level, these two spaces are orthogonal. This geometric image aims at resisting the temptation to project a space on the other: On the one side, *economism*—yesterday that of a certain Marxism, today that of Chicago economists—and, on the other side, *politism*, now forgotten, by virtue of which everything in the economy would be directly political.
- (ii) At a second level of analysis, the proper operation of *each of the fields makes use of resources coming from the other field*, for reasons that are not purely contingent. On the one hand, economic logic in order to operate requires preconditions that can only come from another sphere: a stable monetary and credit regime, commercial and labor laws, a legitimate public authority preserving national sovereignty, and the required collective infrastructures, as many institutions which the economic logic left to itself is be incapable of engendering or even sustaining in

the long period. On the other hand, without financial resources and integration into the economy, polity will not be able to satisfy its primary objective, the accumulation of power, which is not directly economic, but needs to be realized through a tax system and public spending.

- (iii) Consequently, *the two fields tend to evolve in concert* since a form or another of compatibility must prevail *ex post*. Historical experience suggests an important result: Neither of the two logics, whether economic or political, has succeeded in imposing itself on the whole socioeconomic system. When the market is pervasive and becomes omnipotent, it ends up with the impossibility of its own logic to produce and reproduce three of its pillars and preconditions: money, labor, and nature. Symmetrically, the failure of the Soviet regime illustrates the inability of polity to completely seize the material reproduction of society, in short to manage both goods and people and to merge them into a unified sphere. Thus, *the political regime and the economic regime are condemned to coevolve*, since any of the two extreme configurations (i.e., “all is polity” or “all is economy”) are unable to prevail in the long run (Théret 1992).
- (iv) Researchers must therefore give up the ideal of neoclassical theory built on the concept of a static equilibrium which is also a Pareto optimum. The function of economic policy cannot be conceived as the intentional search for such a configuration. By contrast, for *régulation* theory, *a political coalition is launching a dynamic process* that ultimately escapes the control of even the most powerful and best informed actors (Fig. 1). A steady state is an exception, the rule is *a complex evolution* with cycles and from time to time *a structural crisis*, simultaneously political and economic (Palombarini 2001). Macroeconomic performances are the unintended consequences of a given political alliance. For example, the full employment that Keynesian economists see as achievable by the use of the effective demand theory is not so if employees are not part of the ruling coalition. One measures the gap between a *normative theory* (according to the theory X, this is the best or at least a good policy) and a *political economy* approach (what are the factors that explain the effective adoption of policy Y?).
- (v) As a final consequence, it is no longer possible to propose from the outset “a general theory” and to derive immediately precise results for any society, since any analysis has to start from *a given society at a precise period of its history*. It must clarify the nature of the political sys-

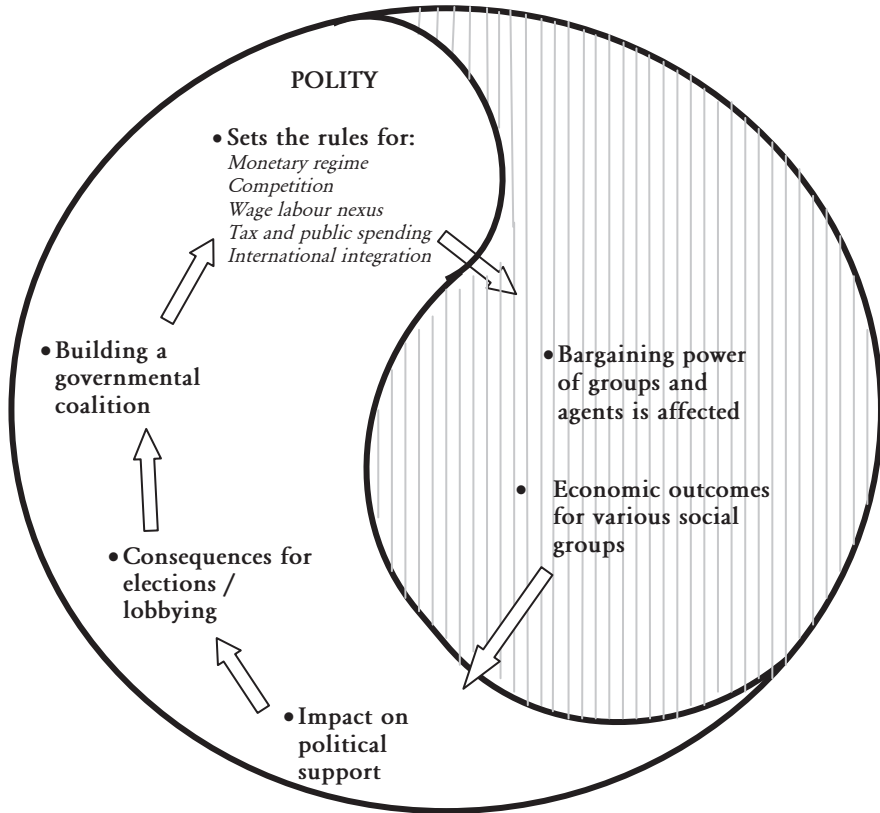


Fig. 1 The interweaving of political and economic spheres launches an endless dynamic process

tem, explain the structuring of the relevant social groups in relation to the formation of governmental coalitions and the existing *régulation* mode largely determines the relevant variables that guide the adhesion or the rejection of the different socioeconomic groups. This is a striking contrast with the research agenda of the “New Political Economy”: apply neoclassical tools to political choices and present the optimal policy as universal (Drazen 2000). De facto, it frequently extrapolates without precaution a precise configuration somehow representative of a country, often the USA, but problematic in most other cases. Indeed, there are at least as many forms of democracy (Tilly 2007) as brands of capitalism, therefore quite numerous political–economic configurations are observed with distinctive features (see Sect. 3, *infra*).

2.5 How and Why Political Economy Differs from Economics

The notion of market economy is central to conventional economics, and it implies that markets are the dominant, if not totally exclusive, mechanism for coordinating economic activity. States, communities, civil societies, networks, and firms are a priori excluded (Hollingsworth and Boyer 1999). This might be defended and perceived as evidence for the limited ambition and modesty of the economic profession that limits itself to the economic sphere. But as soon as actual observations contradict the hypothesis of self-equilibrating markets, the neoclassical economists are prone to attribute the related malfunctioning to an imperfection with respect to the ideal of a “pure” market. Why are such imperfections so widely present, for example, for labor and credit? The reason is simple enough: These markets are embedded into social, symbolic, and political relations that distort the mere pursuit of self (economic) interest and the convergence toward an optimal equilibrium. This is precisely the starting point of political economy.

By contrast with economics, General equilibrium theory (GET) is the implicit—and frequently explicit—benchmark in many empirical analyses by conventional macroeconomists (Lucas 1981). Contrary to frequent statements, a market economy approach is not necessarily devoid of any value judgment, since it assumes that efficiency is the key performance criteria and markets are the least imperfect mechanisms of coordination between free and independent individuals pursuing their own interests. Indeed, for some fundamentalists, markets are the only perfect mechanism.

The *normative content* of the notion of market economy should never be underestimated. Last but not least, since Adam Smith (1776), the market is perceived by economists as an abstraction for the price mechanism itself. The power of the metaphor of “the market” is quite strong since its use has been extended to some domains of sociology (the marriage market) or of political sciences (the market of ideas and political programs, voting as a market, the median voter...).

The notion of *capitalism*, adopted by political economists, evokes for most conventional economists an ideological construction that is supposed to be sustained by the doctrine of liberalism, to follow feudalism and to be opposed to socialism and communism. Actually, it can also be an analytical tool. A synthetic definition would state that *capitalism is a legal regime, an economic system and a social formation that unfolds in history and that is built upon two basic social relations: the market competition and the capital/labor nexus.*

Table 4 Market economy versus capitalism: two research programs

	Economics	Political economy
Concept of markets	1. A pure economic abstraction of supply and demand adjustments 2. Horizontal coordination among equals 3. Ideally self-equilibrating	1. A nexus of social relations 2. Both horizontal (competition among firms) and vertical relations (capital/labor nexus) 3. Propagation of an unbalanced capital accumulation
Links between various spheres	4. Ideal of a total disconnection of the economic sphere (pure economy)	4. The interdependence of economy, society, and polity is constitutive
Nature of evolutions	5. Implicit conception of a "natural equilibrium" 6. At best, kinematical time	5. Law of accumulation and changing social and economic relations 6. Fully fledged historical time
Uniqueness/diversity	7. Ideal of Pareto optimality ... benchmarking, ... and competition reduces variety	7. Succession of historical stages and coexistence of various brands of capitalism at each epoch

The differences with respect to a market economy are not purely semantic (Table 4).

- (i) First, the role of market is only one component of a capitalist economy that does not exclude *other coordinating mechanisms* or actors than markets and firms.
- (ii) Second, capitalism is not by nature only an economic system, since it requires legal rules and a precise type of *political power distribution*. Empirical observations exhibit more diverse social, economic, and political configurations than a single economic system. This explains why the literature on capitalism stresses so much the existence of stages of capitalism (commercial, industrial, financial, and cognitive) as well as the variety of its brands in contemporary world.
- (iii) Third, the interplay of market competition with the conflicting nature of the capital/labor nexus promotes the *accumulation of capital* as a systemic constraint that causes disequilibria, contradictions, and crises, at odds with the smooth moving equilibrium typical of the stable world

captured by the notion of market economy. Capitalist economies are dynamic systems, putting into motion *structural change, innovation, i.e. history*. The authors working along these lines—Marx, Sombart, Veblen, Schumpeter, in a sense Keynes, Braudel, Galbraith, Minsky...—do recognize the historical nature of capitalist configurations and the interdependence between the various spheres (*economy, polity, and society*) that are kept disconnected by “market economy” approaches.

These two last hypotheses have now to be tested against empirical evidence. Can one detect changes in institutional forms architecture from Second World War until the 2010s (Sect. 2)? Do distinct national trajectories coalesce into contrasted brands of capitalism and more generally different socioeconomic regimes when the analysis is extended to new emerging configurations, including rentier regimes (Sect. 3)?

3 Tracking Socioeconomic Changes: A Path Toward Generalization

The purpose is now to show how the framework previously elaborated calls for a *comparative political economy* first across time for a given economy, second by systematic international comparisons. A lot of researches have analyzed the transformation of American and French capitalisms in the very long run (Aglietta 2000; Cepremap-Cordes 1978), and the interested reader may refer to a synthesis of the main findings (Boyer and Saillard 2001; Boyer 2015). The present section focuses upon the period 1945–2016 with a special emphasis on the USA and France socioeconomic changes.

3.1 An Unprecedented Regime: Fordism

After the Second World War, *the Pax Americana* reorganized international relations in order to avoid the dramatic interwar evolutions and collapse of the world economy. The establishment of a fixed exchange rate regime, an administered international trade, and the preponderance of public capital flows to promote the reconstruction and modernization of European economies; all these transformations open the possibility of establishing coherent *régulation* modes at the national level. Domestic political compromises are based on the establishment of a *genuine wage labor nexus* guaranteeing the insertion of wage earners into the economy. As a result, this institutional

form largely determines the type of competition that becomes oligopolistic, since wage indexation on productivity tends to reduce the imbalances between production capacity and effective demand. Similarly, the nominal wage becomes the variable from which prices are formed, and this inaugurates a new style of monetary policy with the abandonment of a typically monetary standard (formerly the gold standard) to be replaced by the equivalent of a labor standard (Hicks 1955; Boyer 1993).

Thus, the post-Second World War *régulation* mode is characterized by *an unprecedented hierarchy among institutional forms*, featuring the dominant position of the wage labor nexus. Macroeconomic patterns reflect this institutional configuration: Real wage dynamics becomes an essential determinant of consumption and thus of production given the acceleration mechanism governing productive investment, since the profit-sharing split is more or less stabilized in this accumulation regime. It was labeled as Fordist since it synchronized mass production and mass consumption, contrary the divergence observed in the interwar that caused the 1929 great crisis. As monetary policy accommodates a certain rate of inflation to maintain near full employment, a price-wage loop tends to fuel permanent inflation. As inflation rates differ from country to country, exchange rate adjustments need to be made periodically by governments. Given the structural stability of the international system resulting from American hegemony, this form of integration into international relations makes compatible notable national differentiations in terms of political compromises and, in particular idiosyncratic wage labor nexuses (Fig. 2).

3.2 A Competition-Led Regime: A Different Hierarchy of Institutional Forms

Since the 1970s, this hierarchy has been called into question in reaction to major changes affecting all domestic economies and the collapse of the Breton Woods international regime (Fig. 3).

On the one hand, the dynamism of growth and the increases in living standards provokes a movement of extraversion of the economy which opens successively to external trade, international investment, and finally to global financial flows. In this respect, two factors turn the international integration into a strong constraint to growth and this puts under pressure the domestic institutional configuration, and it calls for its restructuring. First, the exploitation of increasing returns typical of mass production comes up against the narrowness of the domestic market and elicits the export strategy

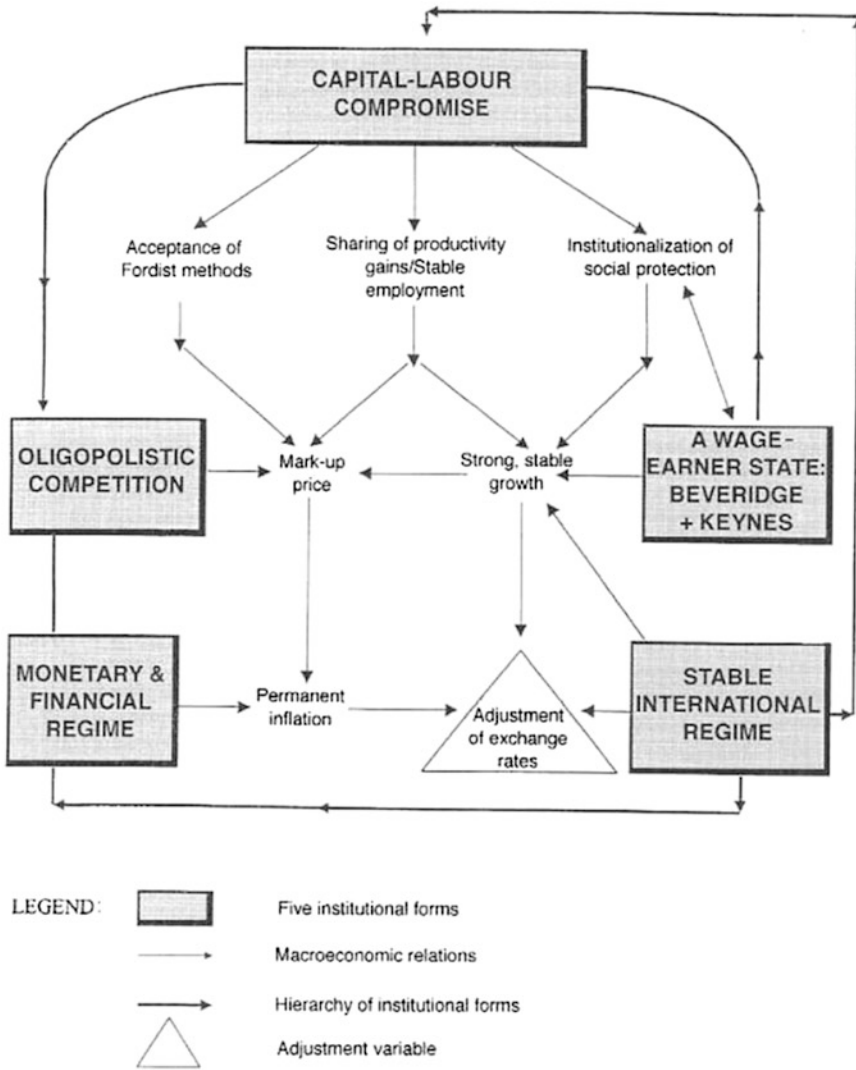


Fig. 2 The primacy of the national compromise between capital and labor 1950–1970

of firms. Second, the search for competitiveness by firms and governments means the progressive domination of a *new and internationalized competition regime* that retroactively erodes the viability of the institutionalized wage labor nexus that successive reforms intend to make more flexible that is to say, responsive to competition that becomes the leading hierarchical institutional form. On the other hand, the erosion of the dominant economic and

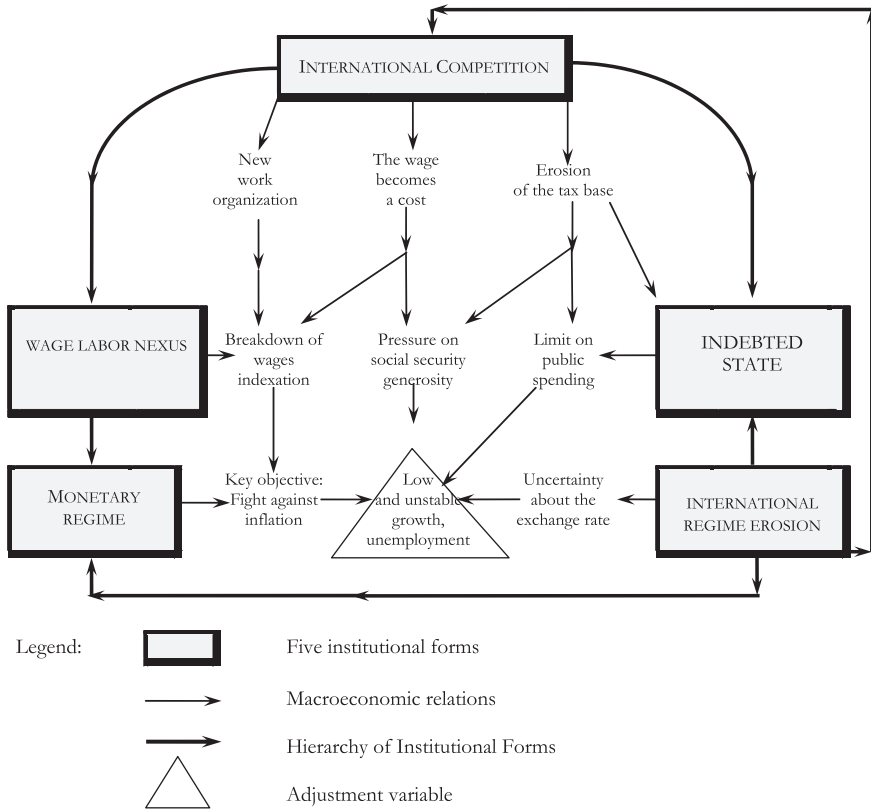


Fig. 3 International competition becomes the leading institutional form 1971–1994

financial position of the USA clearly points to a conflict between their role as guarantors of international stability and the strict defense of their national interests. Thus, the international economy becomes more unstable and difficult to predict, leading to a reconfiguration of almost all institutional forms: revision of the State/economy nexus, increasing difficulties of a monetary policy torn between conflicting objectives: internal (optimizing the inflation-unemployment trade off) and external (controlling the exchange rate). Finally, the hardening of competition is largely due to the increasing openness of domestic economies. *The international becomes dominant*, and all domestic institutional forms have to adjust.

Beyond a certain threshold, the opening to the world economy changes the demand regime and affects the *régulation* mode: The wage which was the essential component of effective demand, via consumption and investment, becomes a cost penalizing foreign trade hence production and employment

(Bowles and Boyer 1990). However, the impact of international competition follows other multiple channels. In the search for an industrial production paradigm capable of overcoming the exhaustion of the productivity gains of the Fordist era, the pressure is put upon to the reorganization of work at the firm level. It must become more responsive to international volatility, and the intensification of labor becomes another adjustment variable. The fight against inflation and then stagflation leads many governments to decide a reduction or even suppression of nominal wage indexation in relation to consumer prices. In the end, *the wage labor nexus has become the dominated institutional form* (Fig. 3).

As a result of the sudden reversal of monetary policy in the USA in the 1970s, the world economy is transmitting a process of disinflation that must then be adopted by other central banks. Their inspiration is no longer Keynesian since the principle of a trade-off between inflation and unemployment is abandoned in favor of the monetarist vision which considers that inflation is everywhere and always a purely monetary phenomenon (Blinder 1999). Insofar as social security expenditure has taken a considerable part in total wage costs, the tightening of competition leads to efforts to “rationalize” the Welfare State (Boyer 2000b). Furthermore, the lasting growth slowdown introduces a structural deficit caused by the gap between the deceleration of tax revenues, and the persistence of public and social spending trends from period to period. Thus, States are forced to go into debt and open themselves to financing by foreign investors. Moreover, a process of relocation and internationalization of the productive chains begins, which reduces the tax base of the mature industrialized economies. Finally, the switch to flexible exchange rates enhances volatility that contributes to penalizing productive investment. The result is the emergence of a new *régulation* mode, at odds with the Fordist configuration: The pace of growth weakens and a pro-cyclical economic policy reinforces the instability of this regime dominated by international competition.

3.3 A Finance-Led Regime: Another Hegemonic Bloc

The liberalization of international trade precedes *gradual deregulation of financial markets*. Originally, governments think that indebted states can finance themselves more easily on foreign market, but afterward, the large companies follow the same strategy in order to optimize their financing, thanks to complete capital mobility at the world level since the 2000s (Boyer 2005). Consequently, the regulation mode is financialized, insofar

as all the institutional forms have to meet the imperatives of international finance.

Once the inflation inherited from Fordism is overcome, interest rates are adjusted downward, which favors stock market valuations of large firms and triggers a succession of speculative bubbles from the Internet to the subprime. In capitalisms dominated by finance, the shift to funded pension systems (Montagne 2000) brings in a considerable mass of capital in search of high remuneration, thus the acceptance of higher risk, largely underestimated by options pricing methods. The central banker then becomes the key figure who interacts with the financiers in an attempt to channel their views on the future (Boyer 2011). The wage labor nexus itself implies an increased risk-taking for the employees (wage flexibility, contingent working duration, more work intensity, layoffs, and employees' mobility) in order to guarantee the stability of the remuneration of the shareholders. This is a complete reversal of the Fordist epoch, when wage earners were protected from short run-risk, taken by firms and shareholders (Fig. 4).

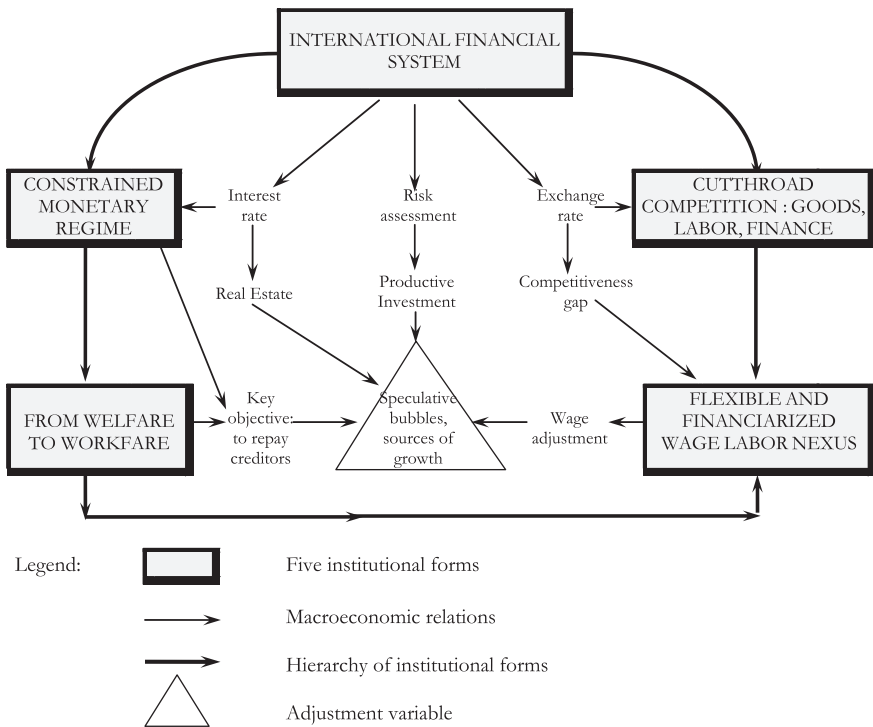


Fig. 4 The domination of international finance: still another hierarchy 1995–2016

There is also a *shift in power relations* between governments and financiers. Beyond a threshold for treasury bills holdings by non-residents, government officials have to convince financiers of the credibility of their policy, i.e., their ability to repay their debts ... or to obtain their renewal (Lemoine 2014). Under these conditions, the coverage of unemployment benefits and more generally the various components of Welfare Systems are reformed in order to encourage the unemployed to return to work, on the assumption that the worst inequality is the absence of any access to employment. Similarly, all the collective services for which this is possible are delegated to the private sector or to public/private partnerships. A Logic based on economic efficiency rather than social solidarity is then embedded into national social security systems (Boyer 2007).

The *régulation* mode converges toward a third configuration: The power of financiers allows them to mobilize huge volumes of capital according to their representation of the future. Thus, right or wrong, financiers set in motion the whole of society, and they cause a succession of phases of expansion drawn by credit and speculation, suddenly interrupted by a reversal of anticipations. The return of major financial and economic crises is the typical pattern of this third epoch.

3.4 A General Interpretation of the Diversity of Regimes: The Interplay of a Hegemonic Bloc and an Architecture of Institutional Forms

The commonalities of the three configurations are to be pointed out. Firstly, they require a form of political legitimacy itself built upon a *hegemonic bloc*, defined as a de facto alliance between key socioeconomic groups. Secondly, this is the basis for a specific *architecture of institutional forms*: An asymmetry in the distribution of power allows a definite hierarchy among them. But the coherence of the *régulation* mode has to be checked by its ability to monitor the ups and downs of accumulation: It might be so during a period, but the very success leads to an *endogenous destabilization* of the socioeconomic regime (Lordon 1996). This is the third feature that the three past configurations share (Fig. 5). Let us review again them within this analytical framework.

- (i) The *Fordist regime* displayed a genuine and rather surprising *alliance between industrialists and workers* that excluded the financiers who were so powerful during the interwar. The institutionalization of the wage

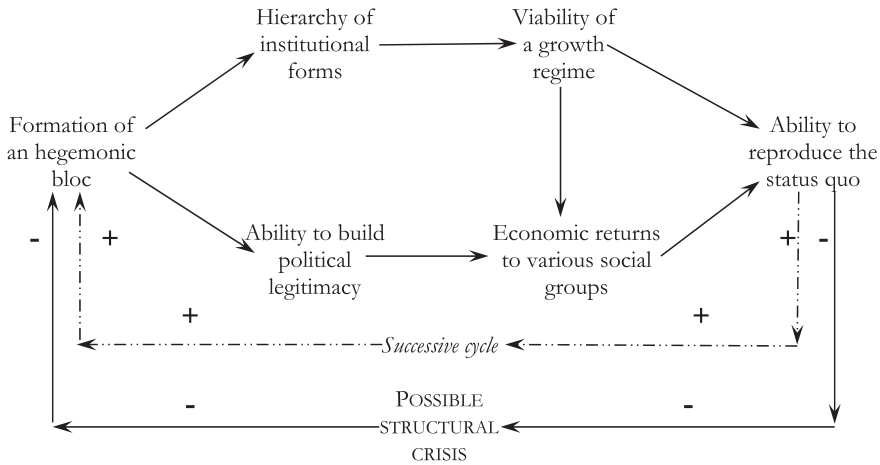


Fig. 5 Coherence principles of socioeconomic regimes

labor nexus was a novelty, and it had a knock down impact upon the stabilization of competition and the tipping of the monetary regime and the management of the exchange rate. This *genuine hierarchy of institutional forms* contributed to the resilience of the *régulation* mode. Nevertheless, the premises of this configuration have been *progressively eroded*: The maturation of the Fordist productive system and the decline of productivity growth rates have triggered recurring conflicts on income distribution, soon converted into accelerated inflation by the permissive monetary policy. The fixed exchange rate system could not cope with diverging national inflation rates and the *structural crisis of the 1970s*, both domestic and international, meant the end of the post-Second World War era.

- (ii) *The competition-led regime* progressively emerged out of this demise. Under the threat of acute international competition, the capital/labor conflict resurfaced because firms and wage earners interests diverged again. An implicit alliance took place between *industrialists and consumers*: Workers had to accept wage austerity, more working hours and labor shedding, but they were supposed enjoying lower prices for the goods that were part of living standards, due to international opening and slimming down of domestic firms. Each domestic economy was now moved by the evolution of the world economy and the cyclical booms and burst tended to be imported, and they became the main concern for national policy makers. Silently but steadily, the social structures and economic specialization were recomposed along a

new dividing line opposing *the winners and losers* from this new phase of internationalization. Diverse nationalist and protectionist movements appeared and have been prospering exploiting this breach in the post-Second World War social contract. Since the 1990s, this is the *potential source of major crises* that ultimately burst out in 2016 with the Brexit (Boyer 2016) and American presidential elections.

- (iii) *The finance-led regime* is a follow up of the competition-led one, but it displays a different configuration. De facto the key alliance then brought together *financiers, top management of large firms, and a new rentiers' class* that jointly benefited of high rate of returns of equity and generous valuations by the stock markets. Consequently, the logic and time of finance are redesigning corporate governance, labor contracts and employment management, the tax system, public deficit financing, and of course exchange rate evolutions. These are clear evidences for *the hegemony of the financial regime over all other institutional forms*. Economic growth is moved by a succession of bubbles that ended up by *a structural crisis*, simultaneously financial, economic, and global. Since the 1990s, the orthodoxy had been stating that financial liberalization would enhance efficiency and economic stability, internationalization would benefit to all countries and socio-economic groups, and that the State was the problem and the market, the solution, and so on. During the 2010s, these beliefs undergo a brutal reassessment. It is evidence concerning the severity of the crisis opened in 2008.

Thus, *a renewed political economy* provides some intelligibility of a quite turbulent epoch. It offers an alternative to conventional economics, destabilized by the irruption of a structural crisis, totally unexpected by orthodoxy but not for some more rigorous analysts within the economic profession and for economic historians and political economists (Boyer 2008).

3.5 A Renewed Diversity of Contemporary Capitalisms: A Second Generalization

This brief historical review has shown the changing architecture of institutional forms. Does an equivalent diversity persist in contemporary world? Recent literature has explored a central issue: Does globalization imply the convergence toward a canonical brand of capitalism (Sect. 3.5.1)? Can one diagnose certain convergences between the literature on business models and the analyses of capitalism brands (Sect. 3.5.2)? How to test the regulation

theory hypothesis of persisting capitalism diversity and do empirical comparative analyses sustain it (Sect. 3.5.3)? Are the East Asian emerging economies a repetition of mature capitalisms or do some countries, for instance China, explore unprecedented socio-economic regimes (Sect. 3.5.4)? Do capitalism brands cluster by geographical proximity or belonging to the same region of the world economy (Sect. 3.5.5)? How to extend the analysis to economies governed by rents or dominated by informality (Sect. 3.5.6)?

3.5.1 Liberal Versus Coordinated? The Variety of Capitalisms Approach

Liberal capitalism is not the only nor the most efficient configuration: That is a major key contribution of research initiated by Peter Hall and David Soskice (2001). For simplicity's sake, they propose to dichotomise the distribution of the various forms of capitalism. From a *régulationist* perspective, it is difficult to accept that the dichotomy of *two polarised models* can account for an entire distribution of modern economies and that *the causality* runs from the firms' organization to institutional forms (Table 5). The first reason is *empirical* since it is difficult to get all countries to fit into these two polarised models, even given the data collected by Variety of Capitalism (VoC's) proponents. It frequently arises in analyses that Japan bubbles out of one side of the plot and the countries of Southern Europe out of the other. Authors are then tempted to interpret the observable phenomena as minor variants of liberal market economies (LME) or Coordinated Market Economies (CME) or intermediary configurations potentially unsustainable.

Table 5 The difference between coordinated and liberal market economies according to VOC

	Liberal capitalism	Coordinated capitalism
Education and training	Investment in general skills	Specific human capital in different industries or firms
Labor market institutions	Deregulated markets, flexible remuneration systems	Employees cooperation and institutionalization of wage
Finance	Monitoring by market information and venture capitalists	Reputational monitoring by banks
Competition policy	Possible cutthroat competition	Intercompany relations allow cooperation and competition

The second difference with VoC and RT (regulation theory) relates to the relations between *the micro- and macro-levels*: For the former, the coherence of a productive model at the firm level is the origin of the complementarities observed at the economy-wide level, for the later the opposite causality is binding for sustainable socioeconomic regimes.

3.5.2 The Links Between Firms' Organization and Brands of Capitalism: Two Conceptions

It is theoretically possible to generate varieties of capitalism based on a combination of two hypotheses: a technological or organisational type of complementarity between work, equipment, and product; an isomorphism between companies' organisation and global economic institutions. We could summarize VoC theorizing by the following equation:

(Hall–Soskice [2001]) = (Milgrom–Roberts [1990]) + (Di Maggio–Powell [1991])

or in less cryptic terms by:

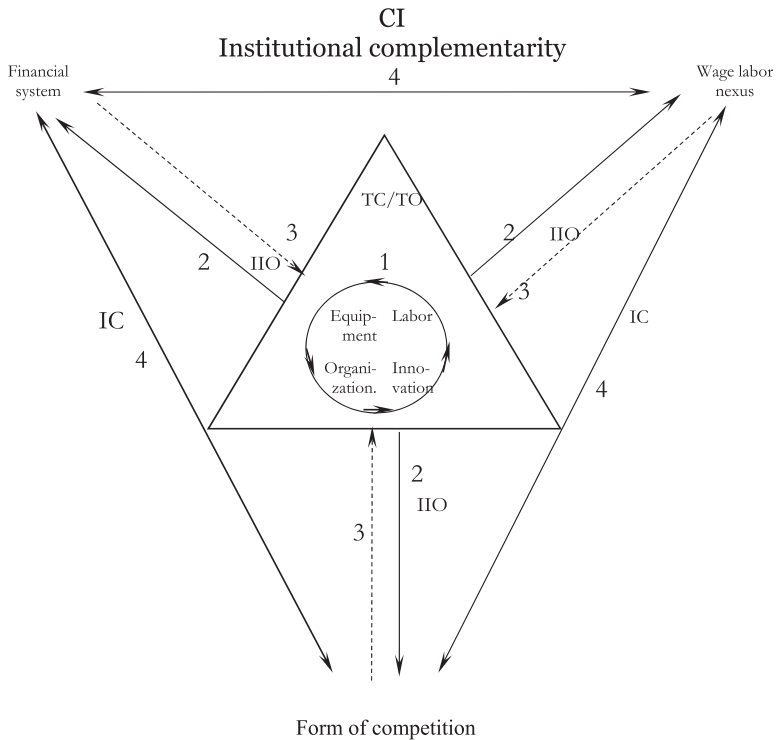
VoC = theory of super-modularity + isomorphism between firms'
organisations and national institutions

Nevertheless, a careful examination of the reasoning of Hall and Soskice's figures 3 and 4 (2001, pp. 28, 32) suggests that the complementarities relate to global institutions, which, in turn, shape, constrain, or provoke appropriate management mechanisms and routines within firms. The causality is clearly expressed: It goes from the macro- to the microeconomic, even if the overall dynamic is never more than the result of a conjunction of the development of different firms. And yet, there is no clear reason to select these macroeconomic properties as an expression of the constraints that the representative firms face.

Thus, the distance between VoC's and RT's conceptualization is finally reduced. Figuratively, we could postulate a second equation that is representative of the latest RT developments, but, in a sense, of VOC as well:

RT Microeconomics = institutional complementarity + isomorphism between
national institutions and firms' organisation.

This paves the way for a vast but difficult field of research, where we would examine the extent to which these two concepts constitute alternatives or,



- 1 TC/TO Technological/organization complementarity
(Ex. Just-in-time, total quality, polyvalence)
- 2 & IIO Isomorphism between institutions and organizations
- 3 (Ex. Just-in-time, industrial district polyvalence, training system)
- 4 IC Institutional complementarity
(Ex: industrial district, stable employment, patient financial market)

Fig. 6 Links between organizational complementarity, organizational/institutional isomorphism, and institutional complementarity

inversely, can be combined in practice, if only because technology, companies' organisation, and economic institutions all co-develop over the long run (Fig. 6).

This last remark points out a convergence between two strands of literature: On the one side the search for taxonomy of *capitalisms brands*, on the other side, the analysis of the variety of *business systems* among and within the regions of the world economy. Basically, they deal with the same issues:

How and why the relations between firms and their environment differ from one continent to another: in Europe (Withley 1992a), Asia (Withley 1992b; Witt and Redding 2014), and thus capitalisms tend to diverge (Withley 1999), in spite of the benchmarking of firms by consultants. Remarkable idiosyncracies within and across each region emerge, and this is converging results from the vast literature on the diversity/variety of capitalisms that the next sections develop.

3.5.3 The Number of Capitalism Brands Is an Empirical Issue: The Regulation Approach

The option is thus to leave open the number of configurations that has to result from the comparison of qualitative and quantitative methods and various research strategies, ranking from automatic data clustering to macroeconomic modeling. These methods allow us to successively order social systems of innovation and production (SSIP), institutional architectures, modes of regulation, and finally types of specialization. All studies (Boyer 1991, 1996; Amable et al. 1997; Théret 1997; Amable 2003) have converged to reveal at least four configurations (Table 6).

- (i) *Market-oriented capitalism* in which a typical market logic, adopted by the entities in charge of competition supervision, constitutes the main organizing principle for almost all coordination procedures. In this group we find all of the English-speaking countries.
- (ii) *The meso-corporatist capitalism's* driving principle is the exchange of solidarity against labor mobility within conglomerates large and diversified enough to survive temporary booms and busts. Japan and Korea are two examples of this configuration.
- (iii) *A state-driven capitalism* is characterised by an economic circuit where most of the components (innovation, production, demand, industrial relations, credit, etc.) are molded by a myriad of public interventions occurring at a national, regional, or local level. This configuration is typical of the continental countries taking part in the European integration process.
- (iv) *Social democratic capitalism* is based on frequent negotiations between social partners and public authorities concerning the rules governing most of the components of social life and economic activity. The Scandinavian countries are flag-bearers for this model.

Table 6 A taxonomy for OECD national economies (Source Amable et al. 1997, pp. 194–95)

Regulation	Market-oriented	Meso-corporatist	Statist	Social-democratic
1. Overall logic and hierarchical principle	Commercial logic is the organising principle for almost all of the institutional forms	Principle of solidarity and mobility in an economic unit that is large in size and diverse in output terms	Economic circuit shaped by public interventions in areas like production, demand, and institutional codifications	Social partners negotiate rules governing most aspects of society and the economy
2. Implications for institutional forms				
Wage labor nexus	Significant decentralisation of wage bargaining, individualisation of pay, and segmentation of labor market	Wage compromise within large companies, but pay hikes are synchronized	Trend towards a strong institutionalization of rules on employment, working hours, wages and social benefits	Traditionally with a centralisation of collective negotiations, under a constraint of short and medium-term competitiveness
Competition	Concentration restricted by legislation, reshuffling from one oligopolistic type of competition to another	Relatively intense in the product markets, involving big companies with activities in many different markets	Moderate seeing as it is channeled by public regulations or by professional associations, with high degree of capital concentration	Small number of big firms (that are also highly internationalised and thus have to compete)
Money and finance	Central bank is independent; financial market logic prevails, financial innovations proliferate, companies are tightly run by a financial logic	Role of main bank and keiretsu in funding and capital allocation. State authorities (financial supervisors/Central Bank) have tight control	State has tight control over credit and monetary policies. Traditionally, the Central Bank has had little autonomy to speak of, the financial sphere having played a crucial role	Most funding is by the banking sector. Monetary policy aims to enhance employment and at a later date competitiveness

(continued)

Table 6 (continued)

Regulation	Market-oriented	Meso-corporatist	Statist	Social-democratic
The state	Fragmented into series of agencies and control entities, growth possibilities are highly restricted because of competition in the political marketplace	Ensures provision of collective services plus coordinations that the big firms are incapable of running. Small size but significant role	Strong quantitative and qualitative development of State interventions: nationalised companies, regulations, public spending, social benefits, etc.	Multitude of public interventions lead to financial transfers and extensive and restrictive regulations
Insertion into international system	Adhesion to free trade principles, degree of autonomy varies depending on status and size (differences Us vs. UK)	Trade and finance-related choices are conditioned by imperative of technological and economic development	Traditionally with a tight State control over external relations (tariffs, norms, quotas, restrictions on financial flows)	Acceptance of competitiveness principle based on technological and organisational innovation

In a sense, this includes and generalises the dichotomy between LME and CME, since the two other forms are more than simple intermediaries between market-oriented and institutional coordination. Both are built on original principles the purpose of which is to smooth out economic imbalances and to overcome social conflicts. For example, we find an equivalent complementarity between the innovation system and type of capitalism to that we observe in the USA (Hall and Soskice 2001, pp. 42–43), but now the hypothesis that competitive advantage stems from one's institutional endowment is extended to statist and social democratic capitalisms, each deploying an economic specialization that differs from its two predecessors. VoC seems to prefer parsimony to the detriment of precision or more relevance, whereas RT prefers the other way around.

3.5.4 New Brands of Capitalism Have Emerged in Asia: China in Perspective

Many contradictory interpretations have been proposed concerning the fast and surprising development of China. For some, the transition from State to market is the key explanation, but for others, China, success originates from the visible hand of public planning. The *Régulation* approach brings out another feature: the trajectory out of a Soviet-type regime via a continuous flow of pragmatic reforms is closely related to a typically Chinese configuration that displays an original mix in which economic rationale and political objectives are made first compatible and finally complementary (Nee 1992; Chavance 2000; Lin Justin 2004; Naughton 2007; Fairbank and Goldman 2006). A converging set of researches suggests that China has invented a way to align, at least partially, the interests of politicians and entrepreneurs and thus it is exploring *a genuine brand of capitalism*.

The starting point is the *tax reform* that gives greater responsibility to each local public entity. The public status quo is maintained, but there are strong incentives for local authorities to nurture the emergence of entrepreneurs who will create more value, hence a larger tax base, and finally more resources for public spending. The *local State corporatism hypothesis* gives a precise definition to this hybrid form (Oi 1992; Peng 2001). In a sense, this cooperation between politicians and entrepreneurs is the logical outcome of the simultaneous compliance with their respective objectives: On the one hand, recover the maximum tax revenue, on the other, optimize the competitive edge of each locality via the dynamism of investment, production, and employment (Krug and Hendrischke 2007). Nevertheless, the struggle

of all localities, one against another, does not turn into chaos and permanent conflict: This is the contribution of *intense networking* between business and government and the micro and the macro levels, whether that of the *Communist Party or of Guanxi* (Xin and Pearce 1996). However, this would not be sufficient to arrive at a coherent pattern at the macroeconomic level: One institution more is required. The historians and political scientists who have investigated the role and functioning of the Communist Party confirm that so-called bureaucrats have been quite instrumental in creating a group of entrepreneurs that would sustain the process of reforms and economic growth. Therefore, at the national level, *the intricacy of the State-party functioning* allows a permanent exchange between economic and political spheres (Bergère 2007). The mobility of the elite from the political to the economic, and conversely, is observed at all levels of the Chinese society. What is the glue that makes such a complex architecture coherent? Many political scientists suggest that the Chinese growth regime is built upon an *implicit compromise*: “Better standards of livings against the political monopoly of the Communist Party.” It is itself open to the most dynamic groups of society, from organic intellectuals to the most successful entrepreneurs (Domenach 2008).

If one accepts these premises, the Chinese economy is not typical capitalism moved by the exclusive search for profit by private entrepreneurs; the elites have both the political power and the control of economic resources in order to monitor the society. Therefore, the efficiency criterion is not the maximization of welfare of consumers according to a consumerist variant of capitalism; it is not the maximization of value for shareholders; and it is the *mix of political and economic objectives*. In this configuration, the relevant actors tend to maximize investment growth rate or production growth per se (Grosfeld 1986; Zou 1991). The synergy between these domains and levels can now be made more explicit. In the absence of a full-fledged legal system and of a unique form of incorporation of firms, public authorities have the ability to define, at least locally and for a given period of time, the rights around the use of resources (land, raw materials, work force, talents, etc.) and those to legitimize some rules in the appropriation of income flows. Under this umbrella, entrepreneurs may make decisions about production, investment, and technology. When they are successful, they are creating value that can be allocated for reinvestment, social and infrastructure expenditure, and contribution to the tax base of the related entity. Conceptually, this exchange may propel a virtuous circle involving bureaucrats and entrepreneurs. However, in isolation, such a system could become more predatory and corrupt than efficient in value creation. There are two

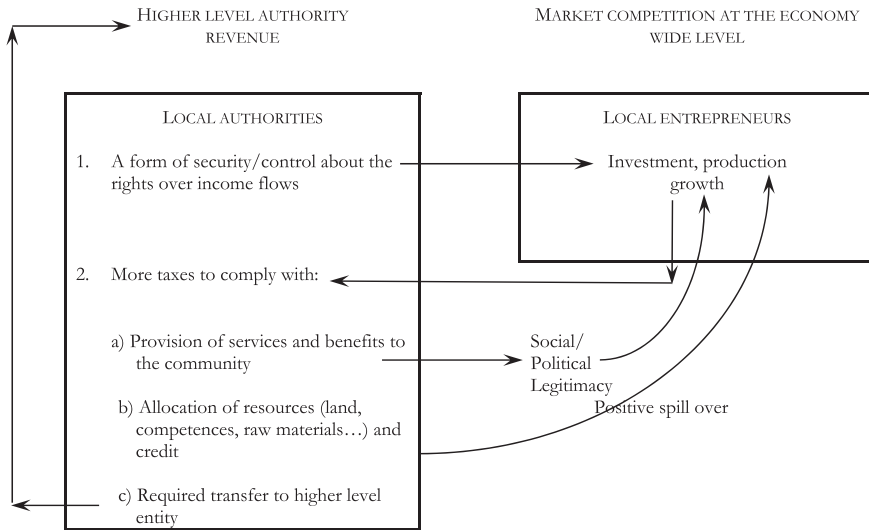


Fig. 7 Chinese capitalism: a series of local state corporatism

additional features of *the local State corporatism*. On the public side, each entity is partially accountable with respect to a higher rank entity that could correct the most detrimental forms of private appropriation. On the business side, if local entrepreneurs make wrong decisions, they will be penalized in the competition with other businesses nurtured by many other localities. Thus, the local State corporatism has another relevant property: to articulate *the various levels* of Chinese society (Fig. 7).

This structural analysis suggests that the related *accumulation regime in China is competition led*. In fact, numerous entities with variegated legal status and localization (village, district, province, and so on) permanently compete to capture the natural resources, capital and, finally, the product markets. This logic applies to foreign multinationals; all of them want access to the booming Chinese market and low labor costs. Thus, they are ready to make concessions in terms of technology transfers. On the other hand, localities propose land tax exemption and free infrastructure to attract FDI. The size of the economy and the dynamism of each local State's corporatism do compensate for the lack of legal enforcement of competition by public authorities. Large fixed costs and increasing returns to scale are so strong that they generate a permanent state of *overinvestment*. This unbalanced growth pattern is sustained by very large productivity increases: Rural workers are transferred from very low productivity jobs to state of the art technologies embodied into the most modern machine tools. Thus, this growth

pattern is mixing extensive (more workers enrolled into capitalist production) and intensive (continuous productivity increases) accumulation. The related over-capacities imply cutthroat competition, declining production costs, and thus declining market prices. The rising prices of raw materials, partially generated by Chinese growth itself, are the only countervailing forces to this deflationary bias. The second basic institutional form, i.e., the *wage labor nexus*, has also quite an atypical configuration. First, from a legal standpoint, there is no single status for the worker; it differs drastically for urban and rural workers, and this differentiation is monitored by the *hukou*. Thus, migrant workers going from the rural to the urban zones had, until recently, no formal rights. Second, since the workers organization is embedded in the Communist party itself, labor has no autonomy to defend its own interest and to coordinate its struggle across firms, status, and localities. Consequently, the *wage labor nexus* is *balkanized and serialized*, and this is not strictly equivalent to a competitive wage labor nexus, in which anonymous market forces would govern the entire working population (Zhao 2003; Knight and Li 2005). Of course, migrant workers play the role of the reserve army, but other workers employed in urban or rural firms with the relevant *hukou* benefit partially from profit sharing, in conformance with typical corporatism (Song 2001). However, since there are many such local corporatism, labor segmentation and great inequalities define the normal pattern in the Chinese wage labor nexus (Fig. 8).

Can this development strategy define a successor to the past Washington consensus? The Chinese institutional setting is quite idiosyncratic indeed (how many capitalist economies have a ruling Communist Party?), and functional equivalent is difficult to manufacture given very different political and economic histories.

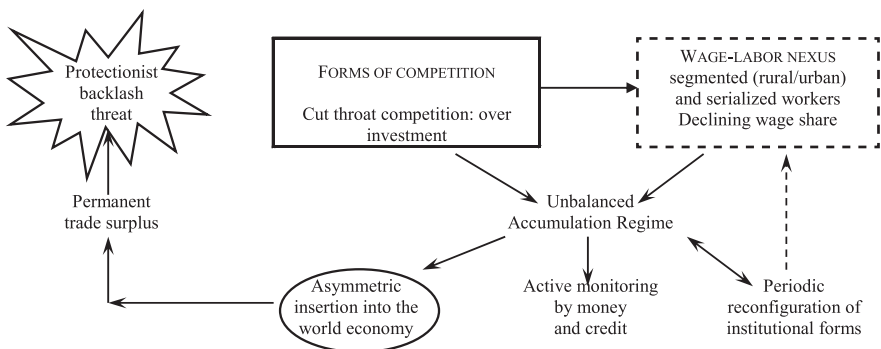


Fig. 8 Chinese growth regime: a competition-led growth

Table 7 How Asia and Latin America differ

Economic regime	Degree of constraint from the international system		
	Limited	Moderate	Strong
Mainly industrialist	Taiwan South Korea		Mexico
Hybrid Mainly rentier		Brazil Venezuela	Argentina

3.5.5 Why East Asia and Latin America Differ: The Curse of Rentier Regimes

It might be tempting to look for common features for all developing or emerging countries, and sometimes the Asian successes are taken as the benchmark for Latin American strategies. These expectations have been ruined by the divergent trajectories of the two regions of the world economy since the 1990s. Researches inspired by the *régulation* approach highlight that the political compromise, the hierarchy of institutional forms, and thus the source of growth are at odds. Basically, it comes out that Asian and Latin American socio-economic regimes are more complementary than competing or converging. Actually, they differ in terms of the balance between capitalist and rentier logics and the nature of the integration into the world economy (Table 7).

Many Latin American countries continue to depend on the export of raw materials, despite their efforts to industrialize. The legacy of typically rentier regimes is present in quite all Latin America, even in Brazil. This is not the case for the Asian countries, which have generally entered the world economy through industrial subcontracting operations and subsequently integration into the global value chains, an emblematic case being the Taiwanese economy. In a sense, their specializations are complementary, as evidenced by the strong growth of raw materials exports of Latin America to Asia and especially China. There are evidences that this differentiation of specializations has deepened during the 2000s (see Miotti et al. 2012). A second differentiation concerns the integration into international relations: is it essentially a constraint that periodically induces a stop and go policy linked to the difficulties of balancing external trade? Or, on the contrary, is opening up to the world market an opportunity for entrepreneurs to develop new sectors, mainly for manufacturing? Most Latin American countries belong to the first group and the Asian countries to the second group. Yet the question of the reasons for this differentiation needs to be explored further, since at the end of the fifties the level of per capita income in Korea or Taiwan was ultimately very similar to that in Mexico.

These findings remind us that *any theory is born local and inspired by a given historical epoch*. As soon as the research is extended to new territories, the initial framework shows its limits, and it needs to be redesigned. In this case, the social, economic, and finally political *nexus associated with the rents intrinsic to non-renewable natural resources* has to be taken into account and articulated with the capitalist logic. This opens a process of *hybridization* between them, and it generates a whole spectrum of socio-economic regimes. Second teaching is important: It might be misleading to regroup countries that experiment an acceleration of growth, as proposed by the acronym BRICS since they belong to quite contrasted institutional configurations: competition-led industrialist for China, typically rentier for contemporary Russia and hybrid ion Brazil. Furthermore, geographical proximity does not imply a common socioeconomic regime, as evidenced by the comparison of Argentina and Brazil, Mexico and the USA and in Europe UK and Germany for instance.

3.5.6 A World View: Many Other Idiosyncratic Configurations Coexist

The next step consists in the extension to the maximum number of national economies in order to include North and South America, Europe, Asia, and Africa. The methodology first elaborated for OECD countries (Amable 2003) has been applied to East Asia (Harada and Tohyama 2011), and it is now to be tested again a wider sample. Homogeneous institutional data have to be collected for the wage labor nexus, education, product market, social protection, and the financial system. Nevertheless, two other domains have been added: Agriculture that is so crucial for most countries on the one side, the environment and natural resources management on the other (Rougier and Combarrous 2017). The techniques of data analysis such as hierarchical clustering reveal the coexistence of *six socioeconomic configurations* among the 140 countries investigated.

Immerged into the extreme variability of economic and political institutions, *the mature capitalist economies* display the opposition diagnosed by the Variety of Capitalism analyses (Table 8):

Liberal Market Economies are featuring a contractual and flexible wage labor nexus, an intense market competition, a market based social protection and a deep and fluid financial system. All English speaking societies belong to this cluster. This is a remarkable convergence with both Hall and Soskice (2001)

Table 8 Enlarging the diversity of socioeconomic regimes (Source Rougier and Combarrous 2017, p. 194)

Cluster	Label	Countries and their income levels	Overall sample share	Share of developing countries
(1)	<i>Liberal market (LM)</i>	<u>Australia</u> , <u>Canada</u> , <u>Denmark</u> , <u>Iceland</u> , <u>Republic of Ireland</u> , <u>Israel</u> , <u>Japan</u> , <u>Korea</u> , <u>New Zealand</u> , <u>Switzerland</u> , <u>UK</u> , <u>USA</u>	8.6	–
(2)	<i>Coordinated market (CM)</i>	<u>Argentina</u> , <u>Austria</u> , <u>Belgium</u> , <u>Bulgaria</u> , <u>Czech Republic</u> , <u>Croatia</u> , <u>Estonia</u> , <u>Germany</u> , <u>Finland</u> , <u>France</u> , <u>Greece</u> , <u>Holland</u> , <u>Hungary</u> , <u>Italy</u> , <u>Luxembourg</u> , <u>Norway</u> , <u>Portugal</u> , <u>Sweden</u> , <u>Lithuania</u> , <u>Poland</u> , <u>Romania</u> , <u>Slovakia</u> , <u>Slovenia</u> , <u>Spain</u> , <u>Ukraine</u>	17.8	4.9
(3)	<i>Globalization-friendly</i>	<u>Azerbaijan</u> , <u>Botswana</u> , <u>Chile</u> , <u>Ghana</u> , <u>Hong Kong</u> , <u>Jamaica</u> , <u>Jordan</u> , <u>Kazakhstan</u> , <u>Kuwait</u> , <u>Latvia</u> , <u>Malaysia</u> , <u>Mauritius</u> , <u>Namibia</u> , <u>Panama</u> , <u>Singapore</u> , <u>South Africa</u> , <u>Thailand</u> , <u>Trinidad and Tobago</u> , <u>United Arab Emirates</u> , <u>Uruguay</u>	14.2	14.8
(4)	<i>Statist resource-dependent</i>	<u>Algeria</u> , <u>China</u> , <u>Ecuador</u> , <u>Egypt</u> , <u>El Salvador</u> , <u>Guatemala</u> , <u>India</u> , <u>Iran</u> , <u>Mexico</u> , <u>Morocco</u> , <u>Oman</u> , <u>Pakistan</u> , <u>Peru</u> , <u>Russia</u> , <u>Sri Lanka</u> , <u>Syria</u> , <u>Tunisia</u> , <u>Turkey</u> , <u>Venezuela</u> , <u>Yemen</u>	14.3	18.8
(5)	<i>Hybrid-idiosyncratic</i>	<u>Albania</u> , <u>Armenia</u> , <u>Brazil</u> , <u>Colombia</u> , <u>Costa Rica</u> , <u>Cote d'Ivoire</u> , <u>Dominican Republic</u> , <u>Gambia</u> , <u>Georgia</u> , <u>Honduras</u> , <u>Kyrgyz Republic</u> , <u>Lebanon</u> , <u>Lesotho</u> , <u>Macedonia</u> , <u>Moldavia</u> , <u>Nicaragua</u> , <u>Philippines</u> , <u>Saudi Arabia</u> , <u>Serbia</u> , <u>Sudan</u> , <u>Swaziland</u> , <u>Tajikistan</u>	15.7	20.8
(6)	<i>Informal (weak state)</i>	<u>Angola</u> , <u>Bangladesh</u> , <u>Benin</u> , <u>Bolivia</u> , <u>Burkina Faso</u> , <u>Burundi</u> , <u>Cambodia</u> , <u>Cameroon</u> , <u>Central African Republic</u> , <u>Chad</u> , <u>Congo</u> , <u>Congo (Democratic Republic)</u> , <u>Ethiopia</u> , <u>Gabon</u> , <u>Guinea-Bissau</u> , <u>Guinea</u> , <u>Haiti</u> , <u>Indonesia</u> , <u>Kenya</u> , <u>Lao PDR</u> , <u>Madagascar</u> , <u>Malawi</u> , <u>Mali</u> , <u>Mauritania</u> , <u>Mongolia</u> , <u>Mozambique</u> , <u>Nepal</u> , <u>Niger</u> , <u>Nigeria</u> , <u>Papua New Guinea</u> , <u>Paraguay</u> , <u>Rwanda</u> , <u>Senegal</u> , <u>Sierra Leone</u> , <u>Tanzania</u> , <u>Togo</u> , <u>Uganda</u> , <u>Uzbekistan</u> , <u>Vietnam</u> , <u>Zambia</u> , <u>Zimbabwe</u>	29.4	40.7

Note **Low-income countries** are shown in bold characters, *Lower-middle income* in italics, *Higher-middle income* in underlined italics, and High income in double-under lining

and Amable (2003) findings. It is somewhat surprising to find Israel, Japan, and Korea in this group but this is probably the consequence of the liberalization that followed their crises during the 1990s. All these countries are supporting the orthodox view about how modern capitalisms should be organized but they represent a very limited fraction of all configurations. However some of them, especially the US, are important in the dynamics of the world economy and the elaboration of the economic thinking of governing elites.

Coordinated Market Economies display distinct characteristics: various institutions are organizing the labor mobility and wage formation, an extended social protection is collectively organized, a democratic and universal education is an important ingredient for national competitiveness, whereas competition is intense upon the product market and an intermediated bank-oriented finance contributes to productive capital formation. Furthermore an effective environmental governance has been developed and a highly formalized and productive agriculture is part of the national economy search for competitiveness. The cluster includes Austria, Belgium, Finland, France, Germany, Greece, Holland, Italy, Luxembourg, Norway, Portugal, Spain, and Sweden. This is a regrouping of state led and social democratic capitalisms in 'régulationist' taxonomy (see Table 6, supra). Many Central and Eastern European countries join with group in accordance with previous research (Becker 2009) and it fits with their history since the collapse of the Berlin Wall. The inclusion of Argentina is more puzzling and it suggests that institutional coordination may deliver an unsustainable regime in the long run. Sophisticated institutional forms do not necessarily coalesce into a viable mode of development.

The *developing and underdeveloped economies* do not form at all a homogenous group, and this is a welcome conclusion for the understanding the challenge of development. Four clusters emerge from Rougier and Combarrous (2017):

The Globalization-Friendly regime is characterized by the domination of sector-specific institutional types such as a deregulated labor, an education favoring high school and an export-oriented strategy that takes into account an acute international competition. This cluster includes mostly small- and medium-size dynamic emerging market economies: Hong-Kong and Singapore are paradigmatic and well investigated examples, also detected by Harada and Tohyama (2011). The case of Chile and Uruguay fits with the findings for Latin America (Miotti et al. 2012). This configuration is present in quite all continents: Eurasia (Azerbaijan and Kazakhstan), Africa (Botswana, Ghana, Namibia and South Africa) Asia (Thailand and Malaysia) in Central America and the Caribbean islands (Jamaica and Panama) and finally Mauritius. The existence of this group is directly allowed by the large opening of the world

economy for governments that are able to build some of the specific institutions for a successful integration in the global value chains.

The Statist Resource-Dependent model groups economies characterized by a high dependence to either traditional agriculture or natural resources, and/or by massive State regulation of the labor, financial and product sectors. Among the first subgroup, one recognizes typically rentier economies that thrive when international prices for their commodities are high but enter crisis when they fall (Algeria, Iran, Pakistan and Russia). The second subgroup includes emerging or developing economies that have inherited high degrees of state interventionism from earlier historical episodes (China, Egypt, India Mexico, Turkey), but also smaller countries with different historical backgrounds (Ecuador, Guatemala, Morocco, Oman, Peru, Salvador, Sri Lanka, Syria, Tunisia and Yemen). The presence of China and to some extent India points out one the limit of clustering methodology: the proximity of some institutional complementarities does not mean the identity of the national trajectories. Just compare Russia and China or Algeria and Mexico.

The Hybrid-Idiosyncratic cluster is a composite of countries that are different from the others and exhibit two different logics. The Idiosyncratic configurations are featuring sector-specific types of institutional architecture not easily comparable with other more pervasive ones. The sub-cluster includes Central American (Costa Rica, Honduras, Nicaragua), Central European or ex-socialist countries (Albania, Kyrgyzstan, Macedonia, Moldavia, Serbia, Tajikistan). The Hybrid regimes proceeded to experiments by assembling sector-specific institutional types from different internally consistent institutional models. Brazil is an example of this regime, first successful and finally in structural crisis, whereas the trajectory of Philippines is more turbulent. The other countries showing hybrid institutional systems are Armenia, Macedonia and Georgia, Colombia and the Dominican Republic, Lesotho and Lebanon. The Hybrid-Idiosyncratic group is thus highly heterogeneous and this points out the limit of this methodology, unequally powerful for developed and developing economies.

Informal regimes can be described as associating a predominantly stable set of sector-specific institutional types: informal labor, export oriented agriculture, protection of domestic production, limited finance intermediation, quasi absence of welfare state, weak or not existing environmental regulation and poor and limited education. The informal regimes are generally poorly regulated, because the State is fragile and has weak capacities. It includes thirty Sub-Saharan countries, as well as Bangladesh, Bolivia, Haiti, Indonesia, Lao, Nepal, Uzbekistan and surprisingly Vietnam. Again the trajectories might differ significantly and this calls for a complementary historical investigation that another chapter of the book “Diversity of emerging capitalisms” initiates (Chapter 13).

All these international comparisons have extended the scope of a theory that intended to explain the rise and demise of the post-Second World War regime in the USA and France. Quite different and challenging issues are now to be addressed at.

4 A New Frontier for Comparative Political Economy

Will the diversity of capitalisms and other regimes, for instance rentier, persist in the long run or are they only the expression of a transition period? Is the internationalization eroding this diversity or does it contribute to its renewal (Sect. 4.1)? Can one detect some key processes that govern the evolution of socio-economic regimes or are they totally stochastic (Sect. 4.2)? Is macroeconomic theory able to propose general models relevant whatever the institutional architecture built by successive political alliances or should economists limit their ambition to detecting different core mechanisms that have to be combined idiosyncratically for each epoch and type of society (Sect. 4.3)? Last but not least, the most ambitious question is the following: Should comparative political economy limit its ambition to study stable regimes or does it have the tools to investigate some institutional innovations that open new epochs (Sect. 4.4)?

4.1 More than Globalization, the Interdependence of Contrasted Socioeconomic Regimes

The present framework faces one major question: if there is no single pattern in socioeconomic regimes how to explain their persistence? Basically, their respective external and internal disequilibria are compensating one another and make them *compatible* and in some cases *complementary* (Fig. 9).

The finance-led capitalism in the United States is associated with external trade deficit, growing public debt and the rise of inequality due to the explosion of top income. It is the mirror image of the Chinese competition led capitalism: the permanent over supply finds an outlet in a structural trade surplus that is partially used to finance the American economy. This complementarity allows in China the surge of inequality generated by the rapid productive modernisation. Consequently these two capitalism brands co-evolve and thrive out their differences.

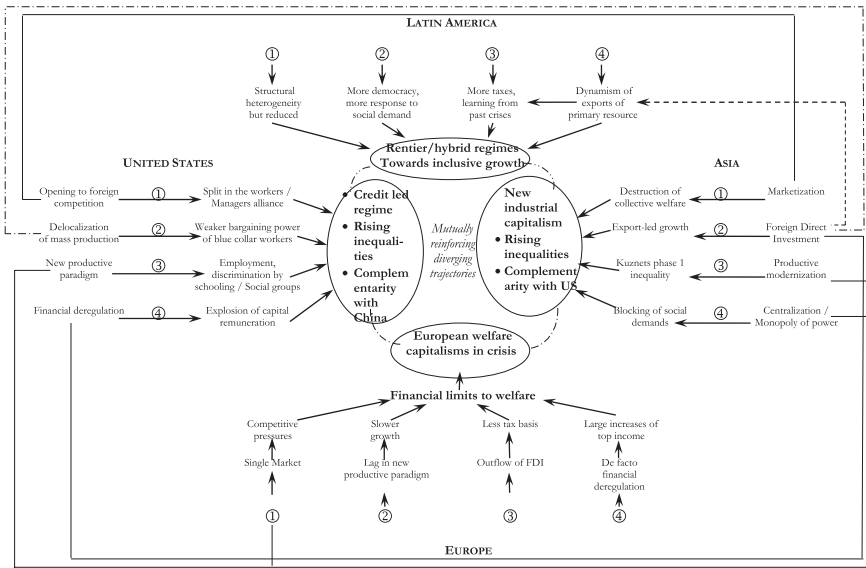


Fig. 9 An interdependent world, complementarity development modes, and growth regimes

The Euro crisis of the 2010s strikes another regime that could be labelled as welfare capitalism, with state led or social-democrat variants. Public opinion defends the ideal of solidarity and the income inequalities remain rather moderate. But a redistributive tax system and a generous public spending are under the joint pressures of Chinese rapidly catching up in most industries and of the recurring global financial crises generated by the American victory in promoting liberalization and globalization of trade, capital, and finance. The future of these welfare capitalisms is thus partially shaped by the evolution of Chinese and North American capitalisms.

The resource based rentier regimes, very relevant in Latin America, either typical (Venezuela) or hybrid (Brazil), are structurally dependent from the demand from industrial and financial capitalisms. When both are booming in the early 2010s, governments celebrate the success of an inclusive and new socioeconomic regime and the (modest) reduction in economic inequality starting from an extreme social polarization. Nevertheless when the world demand and prices of primary resource collapse, the viability of these regimes is at stake. Again this reversal of fortune is explained by Latin American specialization that is complementary to that of China and the US. When economic crises burst out the past political alliances, allowed by the transition to democracy, are challenged. A political economy approach is required to understand these episodes. (Palombarini 2001)

- The macro-economic imbalances, generated by the widening of inequality within each domestic economy, are symmetric in the USA and in China, and consequently only the compensating movements in international trade and finance restore the viability of socioeconomic regimes that could not be sustained within closed borders: abundant credit to sustain the American way of living with stagnant average real income in the US, massive industrial overcapacity due to the squeeze of labor share in China and low American household saving rate versus Chinese high savings, partially channeled back to the US financial system.

Thus, the internationalization of production, capital, and finance makes *compatible and viable contrasted inequality regimes*, themselves embedded into complementary development modes. Furthermore, this explains the puzzling observation of opposite evolutions concerning inequality: Less inequality between nations since globalization allows a variety of capitalisms and growth regimes—credit-led, export-led, and innovation-led—but each of these regimes nurtures widening inequalities for individuals within the same nation-state.

4.2 The Structural Changes of Capitalisms: Two Basic Mechanisms

The previous analysis provides a snapshot describing the interactions between different socioeconomic regimes at a given period.

Capitalism sets into motion the ups and downs of accumulation and its crises trigger the search for new productive methods, products but also private organizations and genuine economic institutions. In a sense this regime converts innovation into an endogenous process. Let us call endo-metabolism this process (Lordon 1996). However, this is not the unique mechanism governing structural change: the diverse regimes interact constantly by exchange of goods, capital goods, financial flows and ideas about science, technology, management of firms, principles of government and public policies. Since pure imitation is quite difficult by lack of compatibility/complementarity with the domestic context and economic specialization, an adaptation process is required to reap the expected benefits generated by the import of any device supposed to be the source of the superior performance of a leading firm or national economy. Let us call hybridization the related process that may lead either to a failure or to an unintended breakthrough. (Boyer et al. 1998)

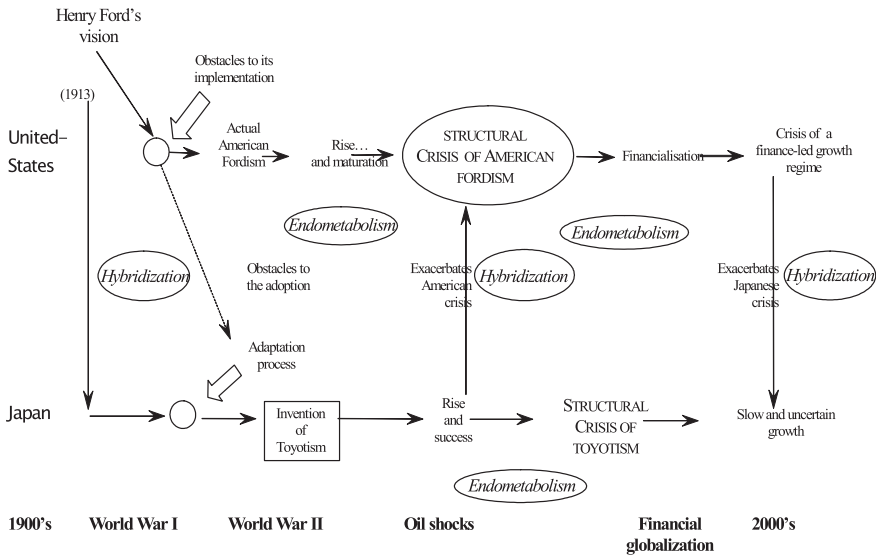


Fig. 10 How endo-metabolism and hybridization generate various brands of capitalism

A review of last century economic history of the USA and Japan illustrates the explanatory power of these two notions (Fig. 10):

The American mass production and consumption is first very efficient in generating productivity increases and better standards of living but it enters a zone of decreasing returns by its very diffusion since acute conflicts upon income distribution are the origin of more inflation, hence a destabilization of the domestic and international financial regime: the key parameters of the economy have progressively been altered and pushed it out of the past trajectory. This is a first example of endo-metabolism: innovation, diffusion, maturation and finally crisis and a hypothetical return to Golden Age policies is unable to propel the economy back to a high growth trajectory. Any structural crisis implies the impossibility to turn back the clock, i.e. it shows the irreversibility of a regime. (Boyer et al. 1994)

The Japanese production system is the unexpected outcome of the tentative implementation of American mass production that failed because it was blocked by an open conflict with the nature of the wage nexus and technical backwardness of subcontractors. A trial and error process unfolded and finally brought a genuine production system, different from both the

traditional Japanese and American systems. Productive hybridization was complemented by the emergence of a genuine wage labor nexus and subcontracting organization. During the 1980s and 1990s, this socio-economic regime was deemed superior to the aging American system. But endo-metabolic forces have played against the long-run viability of Japanese economic success: tension over work intensity and the wage labor nexus, adverse consequence of trade surplus over the exchange rate appreciation, international frictions with the USA, and the European Union finally eroded the competitive edge of Japan. A long period of stagnation follows and makes evident the impossibility to go back to the high growth. This irreversibility is a puzzle for policy makers who rely on pure market reversibility.

The failure of American firms to import the Japanese productive methods points out that hybridization may fail and calls for the search of totally different engines of growth. The American finance-led capitalism coalesces after a series of innovations such as pension funds, large deregulation favoring financial innovations, and the formation of a hegemonic bloc controlling State decisions. But again endo-metabolism strike back and implies the succession of phases from rapid growth, maturation and then a brutal reversal of expectations that turn into a major crisis. A new period opens with a brand new conception and practice of Central Bank, but the return to past growth appears as elusive. A new and uncharted epoch begins. In turn, the American trajectory exerts a clear impact upon the Japanese economy via the evolution of international capital flows the Yen/dollar exchange rate.

Thus, *the interaction between endo-metabolism and hybridization* is a typical pattern that shapes the long-run transformations of capitalisms, but they are not the only processes involved. The rupture of macroeconomic regularities is a challenge for policy makers, and radical innovations may also occur and open a new epoch.

4.3 How Do Different Processes Evolve into Ever Changing Macroeconomic Regularities

This permanent evolution of techniques, products, organizations, and institutional forms challenges one of the founding hypotheses of standard macroeconomics: A general theory can be elaborated, relevant whatever the territory and the epoch. *Régulation* theory has built an alternative to *an historical and institutional macroeconomic approach* (Billaudot 2001). The Fordist growth model is structurally different from the competitive

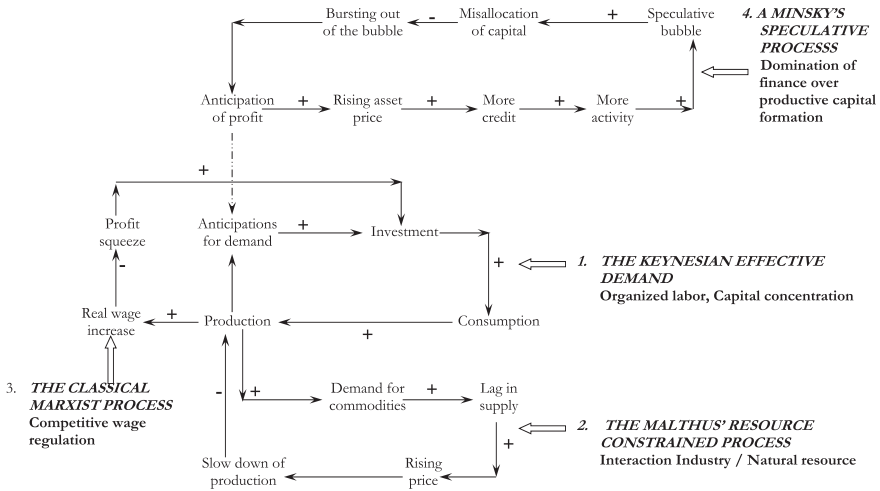


Fig. 11 The interaction of processes belonging to different logics: why macroeconomic evolutions are so difficult to capture

regime of the interwar period (Boyer 1988) but the opening of the economy is favoring profit led demand regimes (Bowles and Boyer 1990), and this calls for a complete reorientation of wage formation and economic policy (Lordon 1997a). The formalization of finance-led regimes is still different and supposes precise conditions that are fulfilled for a limited number of countries (Boyer 2000a). Pure rentier regimes require genuine formalizations because they are not imperfections with respect to a canonical capitalist economy (Hausmann and Marquez 1986).

The analysis can be pushed a step forward by the following generalization: to any socioeconomic regime can be associated *a specific mix of basic economic processes in function of the precise institutional architecture*. Here is a list of some of these elementary mechanisms or processes (Fig. 11):

- (i) In a regime of organized labor able to impose nominal wage and stable income hierarchy, with permanent overcapacity and nearly closed economy, the Keynesian *principle of effective demand* is relevant. Involuntary unemployment is the rule, and State policy may influence the level of activity until these permissive conditions are no more fulfilled near full employment or if the economy becomes uncompetitive.
- (ii) When large and deep financial markets govern the formation of productive capital and the access to credit for consumers, the typical pattern is a *Minsky's cycle* of speculative bubbles and their bursting out.

The *Schumpeter's innovation and diffusion cycle* allowed by the credit given to entrepreneurs displays a longer time span, but it follows the same logic. The first variant fits with a period of declining technological innovation, contrary to the second that is more likely when firms explore possible emerging new productive paradigms.

- (iii) When competitive wage formation expresses the absence of collective institutions governing the wage labor nexus, the capital-labor conflict drives a *Goodwin's cycle*, and it encapsulates the hints of *classical and Marxian vision* of capital accumulation. This leaves open the long-run dynamics of the rate of profit, linked to the endogeneity of technical change in response to labor conflicts upon control of work organization.
- (iv) *A resource-constrained process* is relevant when the limitation of food, water, primary commodities influence demography or the supply of industrial activities. One recognizes the Malthusian analysis of the limits to growth that used to be useful to understand pre-capitalist regimes. With the contemporary perception that economic activity is part of the ecosystem this process has again to be taken into account, but at a level that transcends the national boundaries.
- (v) One could add other configurations, for instance, *a small open economy* with or without the power to set the price of its product on the international market (Aglietta et al. 1980), and this is an invitation to test empirically what are the key features to be captured by any modeling.

Frequently macroeconomic controversies are termed as pure theoretical debates: Keynesian versus supply-side economists, post-keynesians versus monetarists, and so on. Nevertheless, they also point *an institutional issue*: Do the hypotheses of the theory and the applied model fit with the institutional and political setting of the case investigated or is it legitimate to model them "as if" they were absent? Finally, the assessment should include an empirical concern: Are the preferred mechanisms of each economic paradigm explaining the bulk of the phenomenon observed or are they present but of second order?

In a sense, most theories that pretend to be general, simply *propose mechanisms and processes* that are relevant in different degrees given the context of reference. If so, they can eventually be combined according to the dominant characteristics of an institutional, economic, and political architecture. Furthermore, the slow evolution of the institutional forms, technologies, and social structures implies that regularities do not last forever. As soon as detected, they tend to vanish. *An historical perspective* is a crucial ingredient

for any Comparative Political Economy approach. It is also one of the avenues for rebuilding *a modest but realistic macroeconomic modeling*.

4.4 A Challenging Agenda: Understanding Radical Change in Capitalist Economies

The concept of *endo-metabolism* helps understanding the maturation, decay, and crisis of socioeconomic regimes. That of *hybridization* analyzes the process by which the tentative of importing some components of a foreign successful regime may unfold until generating *a new configuration* different from both the foreign benchmark and the domestic initial configuration. But this is not at all an automatic mechanism, since the strategy may also fail dramatically. How to conceptualize some major socioeconomic innovations that open a new epoch and configuration for *régulation* modes?

Based on the detection of regularities of a regime assumed to be structurally stable, the typical strategy of standard economic theory and econometric studies are poorly equipped for this task: Only shocks coming from technical change, preferences or expectations can move such an invariant system of causalities. Since the 1990s, three major changes have been dramatically misrepresented by this dominant approach among economists (Boyer 2001):

- (i) *The collapse of the soviet regime* has shown that theoreticians were specialists in the analysis of markets, but they had not any idea how to transform a collectivist and planned society into a market economy: The superiority of the market of the theory was assumed to be a sufficient reason for its emergence and institutionalization. Unfortunately, *markets are not "natural," but sophisticated social constructions* only viable under precise analytical conditions (Stiglitz 1987) and collective rules, progressively elaborated to respond diverse market failures pointed by social movements. Socioeconomists and political economists were right and pure economists wrong. Some researchers investigated the optimal sequencing of structural reforms, but it did not become a central concern for the profession.
- (ii) *The new economy* was a second source of misrepresentation of the complex process that finally leads to a productive paradigm change. First, too many analysts have been confusing a technical breakthrough with the complete redesign of supporting institutions such as education, skill formation, legal and tax systems, and even performance criteria

(Boyer 2004). Second, most of trained economists forgot that the time scale of a “technological revolution” is far more extended than the time of financial speculation because it takes time to assess and measure its impact upon the set of complementary organizations and institutional forms that allow to fully capture new economy benefits derived from a technological breakthrough. The “productivity paradox” (Solow 1987) is to be understood by learning from economic historians who studied the diffusion and timing electricity and compared it with that of the Information and Communication Technologies (David 1990). Third, the reference to Schumpeter’s theory may suggest that all radical and epoch-making innovations follow the same pattern and generate similar productivity increases: It is not so, and economists have to revise their expectations and analytical tools (Gordon 2016).

- (iii) *The Euro* is a challenge addressed to monetary and economic theorizing: Different countries decide to pool a core attribute of their governments: their national monetary sovereignty. This is a *crucial political decision*, but by academic specialization economists tend to interpret the Euro as a logical follow-up of the will to stabilize exchange rates among members. The reduction of transaction costs was supposed to spur growth and employment, but the loss the domestic control over monetary policy can only be overcome if symmetric shocks prevail over asymmetric ones: This was a consensus among leading economists. Two decades later, every observer sees that the structural changes associated with the Euro were underestimated: severe constraints upon national policies for economies weakly competitive, divorce between citizens’ demands concerning employment and welfare and the enforcement of European treaties, perception of a widening gap between the winners and the losers of European integration and internationalization. Economic growth is elusive and social movements contest the benefit of the Euro, European integration and globalization (Boyer 2016).

Economics has totally neglected the political conditions for a successful Euro. *The time of political economy is back* and the circumstances of its creation help to understand the creeping and then open crisis of European monetary integration. *The three spheres of ideas, economic interests, and political power enter into resonance* and the alliance of key actors in each sphere make possible the launching of the Euro (Fig. 12).

Economic theorizing was not at all giving a unanimous and positive assessment: The theory of optimal monetary zones (Mundell 1961) was stressing

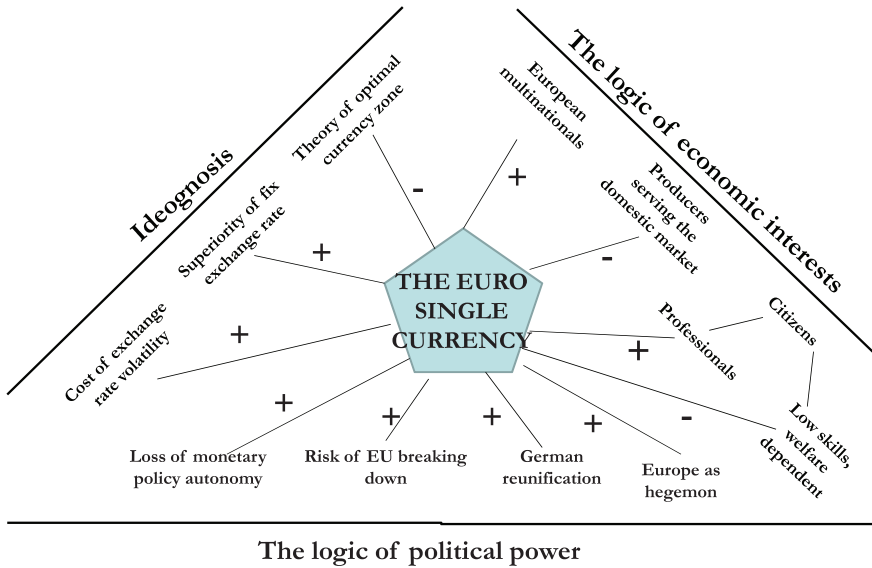


Fig. 12 The creation of the Euro: The congruence between polity, economy, and economics

that this voluntarist move ran against adverse structural conditions such as limited labor mobility and price and wage rigidities. But the rationality of expectations of governments and economic actors (the Euro is irreversible) was supposed to induce them to make all the required structural reforms in terms of public finance, industrial and innovation policy, labor flexibility, and mobility. This was *confusion between the logic of power and economic rationality*. Some dissenting economists stressed the dysfunctionality of the euro with respect to the diversity of *régulation* modes, but at that time they found few allies in civil society (Boyer 1999). *Economic interests* of the various economic sectors and social groups did not converge at all: The European multinationals were strong proponents of the Euro, and highly skilled professionals could extend their horizons and economic gains. Surveys showed that low-skilled workers, welfare dependents, and small- and medium-sized firms were conscious that they would probably be losers of the single currency. The rhetoric of a general bettering of welfare was not believed by a large fraction of public opinion (remember the No to the Maastricht treaty in France and the Netherlands), but the capacity of influence of the potential winners was overwhelming. And they could invoke that leading economists were supporting Euro creation. *The national political authorities* are the decision makers of last resort, and de facto the logic

of power had the determinant role in the launching of the Euro. The risk of breaking down of the Single Market under recurrent exchange rates crises was real, and the political costs would be heavy. Many weak currency economy governments hoped to recover at the European level part of monetary sovereignty, previously lost given the primacy of the Deutschmark. From a geopolitical standpoint, it was crucial to hook reunified Germany to Western Europe. Federalists imagined that the Euro would favor a multipolar international financial regime and replace the Bretton Woods system. These political motives have been determinant, and the fusion of the Ostmark and Deutschmark had already shown that a monetary integration is decided for political and symbolic reasons whatever the large economic and social costs to be incurred. Thus, *a renewed political economy* has the merit to try to understand how *ideas, economy, and polity* are nested and how their synergies may explain the socioeconomic innovations that launch an epochal change. But such powerful alliances are not a sufficient condition for the emerging socioeconomic regime to be coherent and sustainable in the long run. This is the major teaching of history.

5 Conclusion

The present chapter has investigated which social science paradigm is best fitted to make intelligible the contemporary structural transformation in societies and international relations. It delivers the following teachings.

- (i) Facing the *intellectual collapse* of new classical macroeconomics and international trade and finance theories to anticipate and then explain the 2008 American economic crisis and the political and social limits of the globalization process, there is an impressive opportunity for *political economy to take the lead* in understanding contemporary capitalist contradictions. One of its main trumps is precisely to deal with the *complex and lagged interactions* between political logic and economic rationale and dynamism. The more so, the more professional standard economists are looking for a marginal complement to a general theory devoid of money, credit, finance, State, and international relations and agents' heterogeneity. The new classical macroeconomics and the irenic theory of globalization have few chances to survive the 2010s.
- (ii) *Regulation theory* has a four decade- long experience in trying to mobilize and update some of the major hints from Marxist theory in order to analyze the long-term evolution of capitalisms. Basically, it stresses

the need for an intermediate level analysis and the specification of basic social relations. Contrary to “The Capital,” the *exact configuration of institutional forms* that embed these basic social relations may deliver contrasted accumulation regimes with distinctive features and crises. This research agenda belongs to the political economy since all institutional forms—the monetary regime, the wage labor nexus, the forms of competition, the State economy nexus, and the nature of integration into the world economy—emerge out of explicit political interventions. This corrects one of the more detrimental fallacies of pure economic theorizing. Furthermore, this approach provides *macroeconomic foundations to microeconomic adjustments* at the individual and firm levels. In a sense, any rationality must be related to the historical and institutional context, and this is again another difference with conventional search for micro-foundation of macroeconomics. The efficacy of any incentive mechanism is up to its compatibility with a given architecture of institutional forms.

- (iii) Therefore, any *axiomatic approach*, alone, cannot deliver a relevant analysis: An empirical investigation is required to characterize the precise configuration of the five institutional forms. The Fordist accumulation regime emerged after the Second World War in response to the founding compromise between capital and labor and the associated adoption of Keynesian, monetary, and budgetary policies, each nation benefiting from the stabilization of the world economy by Pax Americana. This unprecedented regime entered a structural crisis at the end of the 60s, and this has been teaching a major lesson: Capitalism is innovation and is setting into motion historical transformations. Any theorizing of contemporary society is simply a snapshot within a motion picture of ever-changing institutional forms, political alliances, and economic dynamics. Consequently, *all social theories are born local and representative of a given historical period*. Therefore, *comparing* various socioeconomic regimes through time is a first pattern of the *Comparative Political Economy*, as conceived by regulation theory.
- (iv) The fact that polity and economy have *different temporalities* sets into motion an ever-evolving configuration of economies dominated by capitalist logic. It is one of the reasons why a static equilibrium and a steady state growth are never observed in existing economies. This is much more general than the well-known “political business cycle” according which opportunist politicians destabilize the economy to win the next election and then adopt austerity policies. The time of creation, diffusion, maturation, and then crisis of institutional forms,

is associated with *a succession of contrasted socioeconomic regimes*. In the USA, for instance, the mass production and consumption regimes is progressively exhausted and unfolds into a quite distinctive one, governed by international and domestic stronger competition. This was the intermediate stage to a third configuration dominated by international finance. Thus, *historical comparative analysis* can provide the ingredients of a genuine approach to macroeconomics that gives full meaning to an institutionalized foundation of nationwide economic evolutions. Mobilizing comparative political economy is thus an avenue for a new start for reconstructing *a relevant macroeconomic theory*.

- (v) In the Fordist era, the capitalists of the productive sector and representatives of wage earners were part of this hegemonic bloc. The synchronization of productivity gains and real wage rise was the engine of growth. In the competition-led regime, highly ranked managers divorce from the pool of workers and try to convince consumers that they gain from competition that lowers the relative price of traded goods. The alliance is still different when CEOs of quoted firms ally with Wall Street financiers, with the support of the rich and super-rich: via the succession of speculative bubbles—Internet and then real estate—they try to win the approval of the upper-middle classes. The second commonality relates to the nature of cohesive forces that maintain the viability of a socioeconomic regime. Ideally, a hegemonic bloc imposes a *hierarchy of an institutional form*, respectively, the primacy of the wage labor nexus during the Fordism, the redesign of institutional forms under the primacy of competition, and finally the hegemony of the financial regime over the economy and society. In some other cases, *ex post an evolutionary process* delivers a complementarity between two or several institutional forms, for instance between labor flexibility and the need for active monetary policy in contemporary USA.
- (vi) Regulation theory belongs to comparative political economy due to a second feature: The theory has been progressively extended and generalized by *systematic international comparisons* for the contemporary economies. The variety of capitalism approach stresses the opposition between *liberal and coordinated capitalisms*, according to the relative importance of market mechanisms or coordination by organizations and institutions. Regulation theory has empirically found that *State led and meso-corporatist capitalisms* define other configurations with distinctive political compromises and regulation modes. The comparisons between Latin America and Asia points out two other differentiating factors: *the degree of constraints of domestic institutional forms* by

the integration to the whole economy on one side, the presence or not of *rents* linked to national resources or agricultural products. Finally, the extension to emerging economies widens the scope of the theory in two directions. On the one side, the *Chinese economy* explores a new and unprecedented form of capitalism with quite specific features and potential crisis sources. On the other side, a bulk of poor countries suggest that the absence of development may derive from the *anomy of social and economic institutions* and the absence of any complementarity among them. One could note the transformations of *régulation* theory along with this process of international comparisons. The next step could be a redefinition of the whole theory in order to deliver *a grammar of the various socioeconomic regimes*.

- (vii) The tradition in comparative institutional analysis is to detect the equivalent of ideal-types, supposed to be independent one from another. However, the proponents of globalization have pointed the homogenizing forces brought by the rise of international trade, direct foreign investment, financial capital, and the transfer of technological paradigm. The present analysis delivers an alternative picture: The opening of quite all economies has allowed domestically unbalanced accumulation regimes; thus they have been coevolving by the joint extension of their internal and internal unbalances. This international divergence also explains why domestic inequalities have been rising but inter-countries inequalities have been reduced. Since no new global order has been emerging out of the collapse of the Breton Wood system, the resilience of such contrasted national socioeconomic regimes is at stake, the more so the more problematic the strategies adopted by the British government concerning Brexit and new American administration that clearly puts the interests of America ahead of the management of a multipolar world.

We are entering a new epoch when the defense of national sovereignty and economic rivalry enter open conflict within the context of a de facto unprecedented economic interdependence. This opens a stimulating agenda built upon an *alliance between comparative political economy and international political economy*.

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17

International Political Economy

Martin Daunton

1 Introduction: International Political Economy and Policy Trade-Offs

International political economy deals with the relationships between countries in trade, money, capital and migration which also entails the relationship within each country between domestic and international interests. Were they in tension, so that pursuit of a domestic agenda led at an extreme to a zero-sum game of capturing trade from rivals, to a strategy of import substituting industrialisation, or at least to protection against foreign goods to preserve domestic employment? Or was priority given to international trade with constraints on economic nationalism in order to gain from the laws of comparative advantage? The balance between these different approaches both shifted over time and varied between countries at any one point. A major task in international political economy is to understand the reasons for these variations in time and space. The analysis focusses on the ways in which different states responded to the policy trade-offs—which is not to say that there were self-evident national interests that were expressed by politicians. Of course, politicians and their officials had their differing views of what might constitute the national interest, shaped by their own ideologies and by the ideas of leading economists, as well as by a sense of what

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might appeal to the electorate or to powerful economic interests. Politicians and the state were not simply reflecting the views of different economic interest groups, for these groups were defined through rhetorical and cultural processes as well as by self-evident material interests.

Dani Rodrik offers a starting point for thinking about these issues. He stresses the difference between, on the one hand, national economies with their complex regulatory and political institutions and, on the other hand, global markets that are only 'weakly embedded', suffering from weak governance which leaves them 'prone to instability, inefficiency, and weak popular legitimacy'. National economies may adopt different preferences about institutions and regulations, which leads to a 'political trilemma of the world economy', a need to choose two of democracy, national determination and economic globalisation. It is not possible to pursue all three at the same time: 'If we want to push globalization further, we have to give up either the nation state or domestic politics. If we want to maintain and deepen democracy, we have to choose between the nation state and international economic integration. And if we want to keep the nation state and self-determination, we have to choose between deepening democracy and deepening globalization'. A choice therefore had to be made to prevent the pursuit of globalisation threatening domestic policies, or the pursuit of domestic policies overturning globalisation.

This trade-off varied over time and was difficult to maintain, for it was always challenged by shifting forces in both domestic politics and international relations. In the 1930s, globalisation was undermined by the pursuit of national interests. A balance was struck much more successfully after 1945 when 'shallow multilateralism' allowed a reduction of trade barriers and financial stability, combined with domestic economic policies for employment and welfare. The recovery of the world economy was combined with the creation of different versions of the welfare state that created a balance between international and domestic considerations. In Rodrik's view, globalisation has recently suffered from 'hyper-globalisation' with greater capital movements and deeper economic integration that are less compatible with democracy and national determination of domestic economic policies. He argued that 'reempowering national democracies will ... place the world economy on a safer, healthier footing. A thin layer of international rules that leaves substantial room for maneuver by national governments is a *better* globalization' (Rodrik 2011, pp. xvi–xix).

At this point, a further trilemma arises. International economic policy could rest on fixed or floating exchange rates, on free or controlled movements of capital and on active or passive domestic monetary policy. Once again, a

choice had to be made between these three variables which had major implications for the precise nature of globalisation and its relationship with domestic politics.

A central feature of the globalised world economy before the First World War was fixed exchange rates on the gold standard in association with open capital markets. This choice ruled out an active domestic monetary policy. A country might wish to raise interest rates and tighten monetary policy for domestic reasons in order to stop inflationary pressures or over-heating of the economy, but free movement of capital allowed funds to flow into the country in order to take advantage of high interest rates, so leading to an appreciation of the exchange rate. Since the country was committed to fixed exchange rates, the central bank had to intervene to hold down the value of the currency. Hence, monetary contraction was reversed, the domestic money stock rose, and interest rates returned to their initial, lower level. The argument runs the opposite way if a country wished to reduce interest rates in order to stimulate the economy and boost employment. In this case, monetary supply increased and interest rates dropped; capital now flowed out of the country to seek a higher return elsewhere and the balance of payments weakened. Any benefit to the domestic economy from lower interest rates was countermanded by the outflow of capital. Instead of stimulating the domestic economy, lower interest rates encouraged capital exports, and low interest rates were not sustained because of the priority given to maintaining the fixed exchange rate. The outflow of capital resulted in depreciation of the exchange rate, and the central bank had to intervene in order to maintain the fixed parity. Monetary expansion was reversed and interest rates returned to the initial level.

This particular choice in the trilemma changed in the interwar period. After an initial attempt to restore the gold standard, many countries abandoned the effort and adopted floating exchange rates with capital controls and an active domestic monetary policy. Globalisation went into decline at the expense of economic nationalism. Let us assume that interest rates were reduced for domestic reasons, to stimulate the economy and increase employment. Capital would flow out of the country and the exchange rate would depreciate. The exchange rate could be allowed to float downwards which led to increased competitiveness in world markets, always provided that any outflow of capital did not become so serious that it harmed the domestic economy. Here was the policy adopted by the British government in 1931 when it came off gold, allowed the pound to drop in value, so boosting exports and discouraging imports, and permitting low interests to stimulate the economy. President Roosevelt followed a similar approach

when he came to office in 1933—though other major economies such as Germany did not take the same line and suffered from slower recovery and a need for extreme measures to protect its economy (Mundell 1960, 1963; Fleming 1962; Obstfeld and Taylor 2004, pp. 29–33).

The Bretton Woods regime reached another trade-off after the Second World War. Exchange rates were fixed, but with the possibility of realignment if too far out of line with economic reality. A currency could be devalued to avoid deflating the domestic economy as occurred under the gold standard. It was possible to pursue domestic monetary policies by controlling international movements of capital: a country could reduce interest rates in order to boost its domestic economy without fearing an outflow of capital that would threaten the exchange rate. Such a trade-off meant that national determination was combined with a recovery of globalisation, turning away from the economic nationalism of the 1930s to allow countries to pursue their own domestic policies and restore multilateralism.

The trade-off shifted again by the 1970s as the Bretton Woods regime fell apart. Exchange rates were allowed to float and capital became more free to move between countries, returning to the levels last experienced before the First World War. In that earlier period, capital movements were combined with fixed exchanges so that countries could not pursue their own domestic monetary policies. From the 1970s, capital movements were combined with floating exchanges which meant that governments did not need to use monetary policy to defend their currency. By the turn of the twentieth and twenty-first centuries, the balance was shifting yet again, and a new phase of ‘hyper-globalisation’ was threatening national determination—with a democratic backlash expressed in the British vote to leave the European Union and the election of President Trump in the USA to ‘take back control’. The issue here was not only the trade-off between exchange rates, capital movements and domestic monetary policies, for two other elements need to be added to the equation: trade and migration.

The trilemma may be extended to an ‘inconsistent quartet’ by adding free trade versus protection and to an ‘incompatible quintet’ by inserting labour mobility versus restrictions. Again, the trade-offs between these variables varied between countries and over time. Table 1 indicates that the level of tariffs and engagement in international trade varied widely between four countries committed to fixed exchange rates in 1913, with Britain and the USA at the extremes. Before 1914, the British government’s choice within the ‘inconsistent quartet’ was free trade, capital mobility and fixed exchanges at the expense of a loss of autonomy in domestic monetary policy. In the USA, higher tariffs were combined with fixed exchanges, but with more autonomy in monetary

Table 1 Import duties as a percentage of total imports and total trade as a percentage of GNP, 1913 (Source Estevadeordal 1997, p. 91)

	Import duties as % of total imports	Total trade as % of GNP
France	8.7	39
Germany	7.9	40
UK	5.6	48
USA	21.4	11

policy which was reflected in the decentralised structure of the Federal Reserve System established in 1913 that gave more power to the regional Federal Reserve Banks, with their boards reflecting local business interests.

The ‘incompatible quintet’ inserts the labour market and migration into the equation. The successful maintenance of fixed exchange rates is often taken to mean flexible wages in order to adjust the balance of payments. A deficit in the balance of payments could not be corrected by allowing the exchange rate to fall so that exports were more competitive and imports more expensive. Consequently, costs had to be reduced by cutting wages (or increasing productivity to reduce unit labour costs). If wages were rigid or ‘sticky’ in a downward direction and productivity did not increase, fixed exchange rates came under pressure. This trade-off caused domestic political problems when workers resisted the impact of deflationary policies on their wages and employment. One result might be protection to stop the importation of cheaper foreign goods. Another possibility was international migration which was, to some extent, an alternative to changes in the exchange rate, allowing an escape route when wages and costs were driven down in order to be more competitive. Wages are more likely to be ‘sticky’ when immigration is limited and to come under pressure when it is high. Floating rates could merely allow trade unions to demand higher wages and employers to accept their requests in the knowledge that the exchange rate could take the strain and provide an easy solution (as in Britain)—a danger that could be avoided by a tight income policy, a rise in unemployment to weaken labour’s bargaining power or an increase in immigration.

2 The Exchange Rate Trade-Off: Why Were Exchange Rates Fixed or Floating?

Dealing with all of these variables across time and between countries is a formidable task that cannot be achieved in a comprehensive way in one chapter. The aim is to suggest some of the ways in which the trade-offs can

Table 2 Policy trade-offs between domestic monetary policy, capital mobility and fixed exchanges in Britain, c.1870–1990 (Source Adapted from Obstfeld and Taylor 2004, p. 40)

	Fixed exchanges	Capital mobility	Active domestic monetary policies
<i>Gold standard</i>			
to 1913	Yes	Yes	No
1925–1931	Yes	Less	Tentatively
<i>Off gold</i>			
1931–1939	No	No	Yes
<i>Bretton Woods</i>			
to 1973	Yes	No	Yes
<i>Float from</i>			
1974	No	Yes	Yes

be analysed and understood through some case studies and illustrations. I start by considering the choice of exchange rates from which so many other things followed: were rates fixed or did they float? (Table 2).

The gold standard was reintroduced by Britain in 1821 after a period of suspension during and after the French Revolutionary and Napoleonic Wars. Its widespread adoption by other countries started with Germany in 1872, followed by the Netherlands in 1875, Belgium in 1878, France in 1878, the USA in 1879, Italy in 1884, Japan and Russia in 1897. Meissner's statistical test of the various economic variables that might lead to the adoption of gold finds that the crucial factor was the level of trade with other gold standard countries, not so much because the gold standard reduced the risks of exchange rate volatility between two different monetary regimes, than that a single standard reduced the transaction costs of trade. Gold was adopted in those countries with the largest trade with the gold bloc relative to their GNP, and the potential savings rose as the size of the bloc increased. Countries on the gold standard traded almost 30% more among themselves than with non-gold countries, and global trade would have been 20% lower between 1880 and 1910 without its widespread adoption. Hence, the decision to adopt the gold standard was encouraged by Britain's early adherence to gold, and its financial and trading significance in the mid-nineteenth century (Meissner 2005; López-Córdova and Meissner 2003). The French government realised this point in 1867, when it saw the virtues of moving from its current dual silver and gold standard. The rationale for the choice is apparent in a survey of French opinion in 1868: merchants trading with Britain supported a gold standard, whereas eastern and southern France

trading with silver regions in Germany, Austro-Hungary and Russia favoured silver (Flandreau 2004).

The gold standard also allowed preferential access to international capital by reducing exchange rate risks for lenders, offering a 'good housekeeping seal of approval'. Exchange rate risks for lenders were reduced, so that the government was able to borrow on international capital markets on more favourable terms (Bordo and Rockoff 1996). The Japanese adoption of the gold standard, for example, was encouraged by this consideration (Sussman and Yafeh 2000, pp. 442–443). Adoption was delayed where banks were unregulated and fiscal policies were weak, for in these circumstances gold might flee in search of safety elsewhere, and maintenance of a fixed exchange rate would be difficult. A successful switch from paper money or silver to gold therefore depended on political reform to control government debt and ensure stable banking. Latecomers to the gold standard needed time to introduce these fiscal and banking reforms (Meissner 2005). By contrast, Britain had a reputation for fiscal prudence and stable banking as a result of the reintroduction of the income tax in 1842 and the Bank Charter Act of 1844. British state finances were secure and stable, its national debt was falling, and government bonds had a high reputation which allowed the government to borrow on favourable terms (Daunton 2001; Ferguson 1998, pp. 127, 131). Membership of the gold standard was part and parcel of the wider fiscal constitution of nineteenth-century Britain.

Did the adoption of the gold standard entail a sacrifice of domestic interests and national determination to the pursuit of economic globalisation? The gold standard is often portrayed as in the interest of the City of London and its counterparts in international finance in Frankfurt and Paris (Green 1988). Eichengreen takes a similar view that a government's credible commitment to gold and international cooperation was possible because those who stood to lose from fixed exchanges and to gain from active monetary policies lacked political voice until after the First World War. In his view, workers suffered as a result of the priority given to international monetary stability which meant that their wages had to adjust to the exchange rate, and blocked the use of interest rates to create domestic economic stability. He implies that organised workers were hostile to the gold standard and internationalism, but could not make their voice heard; survival of the gold standard and the credibility of the commitment before 1914 depended on the ability of the state to ignore those who suffered from its domestic economic impact. Despite the rise of trade unions and the extension of the franchise to skilled workers, and a growing realisation that high interest rates harmed trade

and investment, he suggests that bankers had no difficulty in giving priority to external over domestic targets. Furthermore, Eichengreen argues that opposition to the trade-off between domestic and international concerns was ineffective before 1914 because economists had limited theoretical understanding of the link between international monetary policy, high interest rates and domestic stability. According to Eichengreen, workers and industrialists could not make a coherent link between policies designed to protect the gold standard and unemployment or depression. If he is right, then it follows that resistance to the gold standard between the wars arose both from the extension of the franchise to all adult men which gave workers political voice and from the development of economic theories making a link between the pursuit of international economic policies and their own welfare. Furthermore, he argues that commitment to gold was international and not just national, and that central bank cooperation was possible before 1914 but not after. In his opinion, the gold standard survived up to the First World War because central bankers were able to cooperate, whereas between the wars they could not (Eichengreen 1992, pp. xi, 5–12).

These explanations are open to objections. In the first place, did acceptance of the gold standard in Britain and elsewhere arise from a lack of voice prior to 1914 which prevented the expression of opposition to gold? More plausibly, many workers supported or at least tolerated the gold standard as a natural element in the institutional structure of Britain's political economy. Many workers had voice or representation as a result of franchise extensions in 1867 and 1884, and what mattered was not their silence but the fact that they had little reason to oppose the gold standard. The case for the gold standard was much wider than the self-interest of the City, for organised workers gained from rising real wages. It was 'an essential part of the "social contract" between the working class and the State', resulting in lower prices and rising real wages rather than a loss of jobs (Howe 1990, pp. 389–390). It was easy to assume that the gold standard led to improvements in welfare, economic stability and growth rather than a lack of autonomy in setting interest rates, a sacrifice of domestic prosperity, high unemployment and depression. When unemployment emerged as a political concern from the 1880s, monetary issues were largely irrelevant to discussion of its causes which were placed predominantly in the structure of the labour market or the distribution of income (Harris 1972).

The gold standard was firmly embedded in the political culture of Britain between 1850 and 1914, attracting support beyond the City. The gold standard was automatic and therefore offered freedom from manipulation by financiers and speculators which was possible in a system with

more discretion. It was considered to be 'knave proof' (Grigg 1948, p. 183). Linking the creation of money to gold was a way of purging the financial system of an over-expansion of credit that produced financial crises, removing the corrupting power of money over business and over the state (Hilton 1977, 1988). Gold was linked with peace and civilisation, a symbol of economic modernity and sophistication appropriate for advanced economies. W.S. Jevons used an evolutionary language of progress in order to criticise American advocates of a double or bimetallic standard who 'would be stepping back from the gold age into the silver age. This seems to me about as wise as if the men of the bronze age had solemnly decided to reject bronze, and to go back into the stone age'. He urged the USA not to turn away from gold to silver which should be left 'to those Eastern nations who are too poor and ignorant to employ gold' (Daunton 2006, p. 23; Jevons 1875, p. 149; Jevons 1884, pp. 309, 316).

In fact, many Americans viewed the gold standard less as a symbol of modernity than as a tool for exploitation. Shortages of gold in the third quarter of the nineteenth century meant that prices fell, so increasing the burden on debtors (above all farmers) and fuelling demands to remonetise silver. William Jennings Bryan, the presidential candidate for the People's Party and Democrats, famously claimed that America was being crucified on a cross of gold, but he was defeated in 1896. Prices started to rise modestly, and the demand for monetising silver faded away until the onset of serious price deflation in the early 1930s. There were also problems in countries that remained on silver, such as India. The decline in the value of the rupee affected both Britain and India: it meant that British exports to India (the only area with which it had a trade surplus) became more expensive, and it meant that India's costs of paying the 'home charges'—payments to Britain for administration and defence—and debt payments mounted. The Indian government complained that the declining value of silver relative to gold was causing unrest and fuelling nationalism. India was losing income because two-thirds of its trade was with gold-based countries. Furthermore, the burden of the 'home charges' was rising, with a consequent need to cut expenditure or increase taxes (Cain and Hopkins 1993, pp. 341–342, 344–347). The choice of standard therefore had major domestic and international consequences and must be carefully located in the politics of each country.

What of Eichengreen's claim that survival of the gold standard rested on cooperation between central banks? Flandreau reads the evidence in a very different way and argues that 'central bank co-operation was probably not decisive in the operation of the gold standard'. He argues that adoption of gold was not preordained but 'an accident of history', arising from a 'massive

co-ordination failure'. The timing was determined by *force majeure* rather than negotiation. The problem for countries contemplating adopting gold was how to dispose of their silver. France was considering a shift to gold in 1867, but was beaten to the adoption of the new standard by Germany. Prussian victory over France in 1870 provided a means for the new, unified Reich to dispose of silver and create a new gold currency for the new state. Germany's indemnity of 5 billion francs from France secured gold; its silver was then sent to France to take advantage of its double standard. In order to restrict German silver sales, the French government limited silver coinage in 1873 to prevent Germany's adoption of gold. The attempt failed and reinforced the shift to gold. As Flandreau remarks, 'the emergence of the gold standard was a blatant failure of international co-operation'. His analysis of the subsequent behaviour of central banks shows that cooperation was 'exceptional, never reciprocal, and always failed to institutionalize', and their approach may be understood as a mixture of 'hatred, neglect and indifference'. The banks only helped each other if it was in their own interest and not out of concern for the system as a whole. The conflicts of the 1870s reappeared in the run-up to the First World War as central bankers became part of the armaments race. Inter-bank cooperation was less significant than the fact that politicians in each country pursued their own independent policies to secure a war chest of gold and to secure the advantage of belonging to the major trade bloc of the world. Contrary to Eichengreen's claims of cooperation prior to 1914, 'most of the evils at work during the inter-war years (competition among nations to attract gold, inability to enforce a co-ordinated outcome, neglect of the international effects of national monetary policies, and the Franco-German rivalry) were already operating during the 1870s' (Einaudi 2001; Flandreau 1996, 1997, 2004).

Indeed, successful operation of the gold standard depended less on cooperation between the 'core' countries and more on the ability of the core economies to use the periphery (such as India), if necessary by coercion. Gold-based economies traded on a large scale with non-gold economies with more flexible monetary regimes, based on silver or inconvertible paper: about two-thirds of the merchandise trade of the European core economies was with such countries, and about 40% of the USA's trade. Changes in the nominal exchange rate on the periphery led to considerable fluctuations in the real effective exchange rate, both because of variations in the price of silver relative to gold and also because of monetary policy in the core and movements of capital. When high levels of capital exports led to a fall in reserves, central banks in the core increased interest rates, so checking capital exports to the periphery and forcing the periphery to adjust parities to

resolve the ensuing balance of payments problem. These changes in parities affected trade balances, so allowing adjustments in international payments. A reduction in exchange rates in the periphery in response to cuts in capital led to falling import prices in the core countries; when capital exports from the core were high, rising activity in the periphery reduced the impact of weaker investment in the core. In the words of Catao and Solomou, 'exchange rate flexibility in the periphery seems to help explain a key puzzle of the classical gold standard . . . , namely, how significant relative price adjustments were accomplished without jeopardizing the gold peg in the absence of massive reserve accumulation by the core central banks' (Flandreau 1997, pp. 760–761; Catao and Solomou 2005, p. 1272).

In Britain, free trade and the gold standard survived as inseparable twins up to the First World War. The pattern differed in other countries where maintenance of the gold standard came at the cost of partial surrender to protectionism. Adherence to gold led to an increase in world trade, from which we can deduce that membership of the gold bloc was likely to be supported by interests and sectors committed to external trade. Yet a number of countries on the gold standard adopted protectionist policies. This outcome appeared contradictory to Britain which saw gold and free trade as joint props of a liberal international economy, but it reflects the complex trade-offs within different societies. Countries adopting gold in the 1870s made the decision without considering trade policy and subsequently compensated losers by introducing tariffs, as in Germany.

The gold standard was suspended during the First World War, but there was a general desire to return in the 1920s. But circumstance had changed, and gold was abandoned by Britain in 1931 and the USA in 1933. How is this change in the trade-off to be explained? Eichengreen argues that the ability of bankers to work together after the war was limited by a loss of discretion and independence, for governments were scarred by the experience of inflation or hyperinflation in the early 1920s. In order to prevent a repeat of the devastating consequences of inflation on social relations, political legitimacy and economic stability, central bankers in many countries were obliged to abide by various rules imposed by their national governments, so removing their ability to work together and making the collapse of the gold standard more likely (Eichengreen 1987, pp. 9–10). He is right that the discretion of bankers was reduced in some countries, but as we have seen the gold standard did not rest on central bank cooperation. Rather, we can locate domestic political reasons why support for the gold standard was reduced, so that the trade-off on which it rested became less stable.

Britain had been at the heart of the pre-1914 gold standard and returned to gold in 1925. Remaining on gold was now much more of a challenge. Inflation in Britain during and after the war meant that the pre-war parity of the pound sterling was too high against the dollar and other currencies by between 5 and 20% in 1925 compared with 1913, and the decision to return to the gold standard exacerbated the problems in export markets for Britain's declining old staple industries. This over-valuation entailed deflation, attempts to cut wages and high interest rates to hold down prices (Redmond 1984; Matthews 1986; Broadberry 1990). The economic shock of the war had a long-term impact on equilibrium. Before 1914, unemployment was around 4.5% and casual under-employment was in decline; after the war, the level of unemployment was never less than 10% (Solomou 1996, pp. 44–45, 53). The changed attitude to the gold standard and its need for higher interest rates was not the result of workers securing voice to express a long-standing grievance, but rather of a change in economic conditions which created an objective justification for growing hostility to the previous trade-off between international and domestic policies. The link between fixed exchange rates and unemployment and the need to defend wage rates were much more apparent than before 1914. Further, high interest rates to deflate the economy and return to gold affected the cost of servicing the national debt incurred to fight the war. As prices fell, so the real burden of debts rose, and Winston Churchill—who was responsible for the decision to return to gold—saw that taxes and the *rentier* class 'lie like a vast wet blanket across the whole process of creating new wealth by new enterprise'. Between 1919 and 1931, the government had to balance the use of interest rates to return to and maintain the gold standard against the impact on its finances and the politics of debt redemption (Daunton 1996; Daunton 2002, p. 123). When gold was abandoned in 1931, interest rates could obviously be used in a much more active way to hold down the exchange rate, to simulate domestic recovery and to convert the national debt to a lower interest rate (Nevin 1955).

In the absence of variation in the exchange rate, international competitiveness and adjusting the balance of payments were only possible by reducing costs. The successful operation of the gold standard therefore depended on flexibility in costs and above all wages. Contemporary economists generally assumed that wages were more sticky after the First World War, and that this failure of adjustment contributed to higher costs, unemployment and the collapse of the gold standard. At the time of the return to gold in 1925, Keynes warned of the consequences of attempting to adjust wages and costs to the international situation by 'the theory of the economic juggernaut ... that our vast machine should crash along, with regard only to its equilibrium

as a whole, and without attention to the chance consequences of the journey to individual groups'. This theory held that unemployment would force workers to 'accept the necessary reduction of money wages under the pressure of hard facts'. Keynes rejected this approach as 'an essential emblem and idol of those who sit in the top tier of the machine'. Change was needed, for 'in modern conditions wages in this country are, for various reasons, so rigid over short periods, that it is impracticable to adjust them to the ebb and flow of international gold-credit, and I would deliberately utilize fluctuations in the exchange as the shock-absorber' (Keynes 1925, pp. 218, 224, 233–234; Skidelsky 1992, p. 205).

Why were wages sticky? Empirical studies of 10 industrial countries in 1935 by Eichengreen and Sachs and of 22 countries in 1931–1936 by Bernanke and Carey both indicate that wages were sticky despite the monetary shock (Bernanke and Carey 1996; Eichengreen and Sachs 1985). The reasons remain puzzling. Eichengreen suggests that there was a coordination problem. He points out that certain variables were fixed in nominal terms for some time—mortgages, rents, bonds—and 'claimants to these sources of income—rentiers, capitalists, and workers—each would have accepted a reduction in their incomes had they been assured that others were prepared to do the same. Without a mechanism to coordinate their actions, no one group was prepared to be the first to offer concession' (Eichengreen 1992, p. 16). But British bondholders *did* accept a reduction in their interest in the conversion of 1932—a change which was only possible because interest rates in general were held down, which was in turn only possible as a result of abandoning the gold standard. Was it rather that wages were more inflexible because of welfare benefits? (Robbins 1934, pp. 60–61; Benjamin and Kochin 1979). In fact there is little evidence that male heads of household opted for benefits in preference to work (Eichengreen 1987). More realistically, the nature of production institutions limited flexibility with the rise of collective agreements. Adjustment of wages to changes in prices or prosperity no longer rested on the individual action of employers, for 'the process of general wage-changes has ... been constitutionalised', so preventing 'nibbling' at wages by 'hard-pressed or unscrupulous employers' and set rates by the larger and better organised firms. The influence of unemployment relief was not a refusal of work, but rather indirect in making union leaders less inclined to take account of unemployment (Clay 1929). The politics were different in countries without tax-funded welfare and with weaker collective bargaining.

Britain abandoned gold in 1931 and the USA followed in 1933 (Roosevelt 1933b). As we noted, the gold standard faced more criticism

in late nineteenth-century America than in Britain, and falling agricultural prices after the war led to revived demands for monetisation of silver to increase the monetary supply. Roosevelt had a long-standing interest in monetary issues and was attracted by the theories of William Trufant Foster and Waddill Catchings who argued in favour of monetary policy and public spending in response to recession. They stressed the ‘dilemma of thrift’: savings disrupted the flow of money, extracting it from circulation. The solution was to increase the supply of money in order to compensate for savings and to allow consumers to purchase the larger output (Barber 1985, pp. 55–58). Roosevelt was also interested in the ideas of Irving Fisher, an economist at Yale, who stressed the role of money in stabilising the economy. Central bankers should provide sufficient money to prevent prices falling which would trigger a vicious circle of debt-deflation: as prices and wages fell, people were less able to pay their debt, cutting other spending, leading to distress selling and eventually to default which could undermine the financial system. Fisher argued that this process explained the depth of the depression. If the Federal Reserve had reflatd prices back to the average level at which debt had been contracted, the debt-deflation cycle would have been broken. Fisher argued that the gold standard made it impossible to maintain constant purchasing power at home through an active use of monetary policy; it should therefore be abandoned in favour of floating exchange rates (Barber 1985, pp. 58–60, 160–162; Fisher 1932, 1933). Roosevelt was willing to give the new monetary policy a try, rejecting the ‘old fetishes of so-called international bankers’ and ‘lifting the price level to restore a more equitable relationship between debtors and creditors’ (Rauchway 2015, pp. 19, 44, 54, 71; Toniolo 2005, pp. 145–46; Clavin 2013, pp. 118–119; FRUS 1933, I, p. 686).

Keynes was delighted by Roosevelt’s abandonment of gold with the opportunity to create ‘the managed currency of the future’ rather than following Europeans who ‘cling fanatically to their gold perches’ and ‘see no virtue in a rising price level ... until prices have risen to a level appropriate to the existing debts and other obligations fixed in terms of money’ (Ahamed 2009, pp. 465–471; Rauchway 2015, p. 71). A number of European countries formed a gold bloc—and Germany, which was not a member, in particular clung to gold (Toniolo 2005, pp. 146–147). German exports were hit by the over-valuation of the Reichsmark as a result of the devaluation of sterling in 1931 and the dollar in 1933. The obvious solution was to devalue the Reichsmark, but Hitler and his economics minister, Hjalmar Schacht, refused. German politicians were scarred by hyperinflation in the early 1920s, and they feared that devaluation would reignite inflation by increasing the costs of imported food and materials.

Devaluation of the Reichsmark would also affect the cost of servicing the debt. The costs of Germany's interest payments to Britain and America were reduced by devaluation of sterling and the dollar, and Schacht had no wish to increase the burden by devaluing the Reichsmark at a time when the weak balance of payments made debt service difficult. His reasoning was weak, for devaluation would make German exports more competitive and so increase production and employment; it would improve the balance of payments so that servicing of the debt would become easier. But Schacht could not afford to take a gamble: the balance of payments would take some time to respond, whereas his problems were immediate and pressing. In any case, Schacht followed his fellow central bankers in a commitment to monetary discipline which he learned from his experience in stabilising the Reichsmark after hyperinflation. The choice of international monetary regime therefore reflected domestic politics and the strength of economic arguments in favour of gold or floating (Tooze 2006; Eichengreen and Uzan 1990).

Most orthodox economists and bankers disagreed with Roosevelt. Central bankers doubted Fisher's view that the quantity of money so directly affected prices, pointing to other factors such as harvests and technological change. Edwin Kemmerer, the 'money doctor' and staunch supporter of gold, felt that the real issue was not the quantity of money, for there were sufficient currency and credit. Rather, a loss of confidence by businessmen led to a reduction in the velocity of circulation of money so that prices fell. The solution was to increase the velocity of circulation by creating business confidence by remaining loyal to gold, sound money and fiscal responsibility (Barber 1985, pp. 157–160). But Roosevelt had other domestic political concerns. George Warren, an adviser to Roosevelt and advocate of higher prices, returned from a visit to Europe convinced that it was 'a choice between a rise in prices or a rise in dictators'. Hitler was the product of deflation that undermined domestic institutions; by contrast, the British had successfully raised prices by devaluing. Politicians from the cotton south came to the same view that prices needed to rise, and the populist campaign of the late nineteenth century had returned (Rauchway 2015, p. 80).

In January 1934, Roosevelt abandoned his policy of manipulating the price of gold which was stabilised at \$35 an ounce by the Gold Reserve Act or 59.06% of its pre-1933 gold content. Although monetary policy was now less flexible, Roosevelt saw that he needed to control inflationists—such as Warren—who wanted to continue devaluation (Rauchway 2015, Chapter 5; Ahamed 2009, pp. 471–473). Could stabilisation provide the basis for international cooperation? In 1934, Harry Dexter White joined the Treasury and recommended a managed currency, based on a stable value for the dollar

that could be changed if circumstances dictated so that there was still the possibility of an independent domestic monetary policy. He realised that international cooperation was needed in order to coordinate changes in the value of currencies (Rauchway 2015, pp. 101–108).

Currency stabilisation became feasible when France considered devaluation on condition that the dollar and sterling did not embark on further depreciation in a currency war. In June 1936, the Popular Front government of Leon Blum came to power, with an ambitious programme for domestic recovery to be achieved without devaluation. Predictably the franc soon came under heavy pressure as a result of alarm at the alliance of socialists and Communists, and serious social unrest caused by deflation. The only way that the gold standard could be preserved was by adopting exchange controls as in Germany—a precedent that was not attractive. Devaluation would not help, for the pound would follow and so disrupt the international monetary system. The American administration saw an opportunity. The French would be able to devalue if the Americans and British agreed not to follow, so avoiding disaster in France and bringing about stabilisation between the three countries. For domestic political reasons, the French government wanted to avoid the impression that they were being forced into unilateral devaluation and abandonment of gold by presenting it as an achievement to end currency warfare and create international cooperation. In September 1936, a tripartite agreement was reached, an achievement that constrained the ultimate aim of the French to return to the gold standard which was not acceptable to the British and Americans who did not wish to surrender domestic autonomy (Clarke 1977; Bordo et al. 1994, pp. 3–6).

Walter Lippman welcomed the agreement as a way to ‘feel our way to a sound currency for the world as a whole’. He pointed out that the gold standard created stability of currencies abroad but led to fluctuations in purchasing power at home. On the other hand, managed currencies without international cooperation led to stability at home but uncertainty abroad. The virtues of the tripartite agreement were that it created stability at home *and* abroad (Rauchway 2015, pp. 122–123; Toniolo 2005, pp. 175–182). Here, it seemed, was a way of reconciling the needs of the international and domestic economy, and ensuring that national self-interest did not destroy the general good. Secretary of the Treasury Henry Morgenthau felt that stabilisation ‘represents a divorcement of the control of the foreign exchange market from the few individual international speculators. The responsible governments of the people will now cooperate to assure a minimum exchange fluctuation. Businessmen with merchandise to sell abroad or businessmen who are importing merchandise, will be free

to operate through their respective banks in regular and normal exchange operations' (Blum 1959, pp. 178–181). Stabilisation created a balance between domestic and international interests, and removed the power of Wall Street and the City of London—precisely his ambition at Bretton Woods in 1944.

Here was a motivation for the Bretton Woods agreement. Ragnar Nurkse captured the perception of the problem that 'there was a growing tendency during the interwar period to make international monetary policy conform to domestic social and economic policy and not the other way round. Yet the world was still economically interdependent; and an international currency mechanism for the multilateral exchange of goods and services, instead of primitive bilateral barter, was still a fundamental necessity for the great majority of countries. The problem was to find a system of international currency relations compatible with the requirements of domestic stability' (Nurkse 1944, p. 230). The Bretton Woods agreement struck a balance between international agreement and national autonomy. The dollar was pegged to gold at \$35 an ounce, and other currencies were then pegged to the dollar, within a band of 1% either side of par. Unlike the gold standard, countries could change their rate by up to 10%, and the International Monetary Fund would accept a larger change to deal with a 'fundamental disequilibrium', with no objections on grounds of domestic policies. As Lippmann pointed out, 'none of the great powers is willing to sacrifice the freedom of its internal policy' and there was now 'almost unlimited domestic freedom and diversity at the expense of international conformity and stability' (Lippmann 1944).

The ability to pursue an active domestic monetary policy was guaranteed by the right to control capital movements. Keynes argued that 'central control of capital movements, both inward and outward, should be a permanent feature of the post-war system', as an essential tool for an active management of the domestic economy, allowing a country to 'have the appropriate rate of interest without reference to the rates prevailing elsewhere in the world'. The Bretton Woods agreement 'accords to every member government the explicit right to control all capital movements. What used to be a heresy is now endorsed as orthodox' (Keynes 1980, pp. 48–49, 52–53, 148–149). Harry Dexter White agreed that countries should block flows of capital that were devices for the rich to evade 'new taxes or burdens of social legislation which led to currency disturbances' (Steil 2013, pp. 134–135). Keynes argued that deflation and unemployment to maintain a fixed exchange rate were ruled out, so that the economic juggernaut of the gold standard would no longer crush the British people under its wheels (Keynes 1944, pp. 12, 16–18).

In any case, currencies were not convertible until 1958 which meant that international flows of capital were not large for many years.

The Bretton Woods regime was based on pegged exchange rates with a degree of flexibility that was designed to avoid the perils of both the gold standard and competitive devaluation, so allowing stable exchanges for the restoration of an international economy, alongside an active domestic monetary policy. Problems soon emerged. Peter Peterson, President Nixon's assistant for international economic affairs, pointed out in 1971 that 'Changes in exchange rates were seen as painful evidence of the failure of political and economic policies. Exchange rate changes were postponed. As a result, the realignments needed became larger, more disruptive internally, and therefore postponed even longer'. Exchange rates were kept at values that were out of line with economic fundamentals, so leading to speculation that unrealistic parities would not survive. Devaluation was made reluctantly in a situation of crisis, with a large adjustment. The fixed but variable exchange rate regime was not working and was creating the instability which the Bretton Woods system was designed to prevent. In the absence of devaluation, a balance of payments deficit could be removed by deflation of the domestic economy which was not politically feasible—so leading to alternative solutions of capital controls or trade barriers that threatened to undermine a multilateral world economy (Peterson 1971, pp. 16–17).

The system posed particular problems for the dollar. It was pegged to gold, so that all other currencies could devalue against the dollar, whereas the dollar could only devalue against gold. No one in 1944 contemplated a future in which the dollar would be weak—and equally, they did not contemplate a situation in which other currencies would be strong so that no conditions were laid down for revaluation. These two omissions were to haunt the fund in the 1960s when the German Deutschmark and Japanese Yen were undervalued, and the dollar faced a balance of payments deficit.

Neither had the Bretton Woods agreement accepted Keynes's proposal for a form of supernational bank money. In 1942, Keynes complained that 'the volume of international currency is not adjusted to need, but remains as before mainly dependent on the volume of gold mining and the policy of those countries which already have large gold reserves' (Keynes 1942, p. 160). Liquidity creation remained a problem after the war, when the economic dominance of the USA created a 'dollar gap', for other countries wanted to buy American goods for reconstruction without having much to sell in return. As a result, America attracted large amounts of reserves without returning dollars to the world economy. By the 1960s, the situation was reversed, for other countries recovered and the USA was spending large sums

overseas on defence, investment and purchasing goods. The result was a dollar glut which resolved the liquidity problem but created new difficulties. In 1959, Robert Triffin warned that the apparently successful conclusion of convertibility in 1958 posed dangers. The 'Triffin dilemma' was that liberalisation of the exchanges and trade was assisted by international liquidity created by American deficits and hence the supply of dollars to the world economy. If America did not allow deficits, dollar reserves in the world would be too low for the expanding world economy. On the other hand, dollars might be created too fast and lead to long-term lending on the basis of short-term inflows that would result in something like the 1931 financial crisis when the pound was devalued and the gold standard collapsed (Triffin 1960). His solution was the creation of new reserve units that would not rely on gold or the dollar, so allowing the USA to reduce its balance of payments deficit without at the same time removing liquidity from the global economy.

The Americans placed the blame, in part, on the undervaluation of the DM and, later, the yen which should be resolved by their revaluation—not something the surplus countries were keen to do given the political difficulties of hitting exporters and exposing domestic industry to competition. The Europeans placed the blame on the USA. The American deficit provided liquidity, but European countries complained that the USA was abusing the Bretton Woods system for its own ends, financing overseas military adventures and permitting 'greenback imperialism'. The Americans did not need to intervene to support the dollar or worry about the loss of foreign exchange reserves, for they had the right of 'seignorage', simply printing more dollars. In February 1965, President De Gaulle complained of this 'exorbitant privilege': 'the fact that many states accept dollars as equivalent to gold, in order to make up for the deficits in any American balance of payments, has enabled the United States to be indebted to foreign countries free of charge' (James 1996, p. 169). Similarly, the Germans complained that the Americans were exporting inflation through monetary expansion. Otmar Emminger, a member of the board of the Bundesbank, complained that 'pinning the European currencies to the Dollar through a fixed par value means pinning it to an anchor which may itself be carried off by a high tide of inflation' (Emminger 1965). Germany faced huge influxes of dollars in the expectation of revaluation, so creating inflationary pressures. The bogey of hyperinflation was in the minds of Germans, and article 4 of the 1967 law on the promotion of growth and stability put internal stability above stability of exchange rates (Emminger 1977, pp. 1–2). The dominant European view was that the Americans should resolve their domestic

difficulties of uncompetitiveness and lax monetary policies—but such action ran against electoral considerations at home. American administrations—and above all Nixon when he came to power in 1969—were not willing to allow protection of the international monetary system to take precedence over domestic economic policy or security objectives. Nixon ‘relegated the survival of the postwar international monetary regime to a distant third in the priorities of the United States, lagging far behind the goals of maintaining a prosperous domestic economy and ensuring the achievement of US security objectives’. His policy was one of ‘benign neglect’, allowing a crisis to develop without taking serious steps and then hoping to reform after the event (Gowa 1983, pp. 13, 23; Matusow 1998, pp. 142–143).

The Bretton Woods regime was also threatened by a shift in the ‘trilemma’. In 1944, fixed exchange rates that were intended to create international stability were linked to freedom for domestic economic policy by allowing controls on the movement of capital. This trade-off came under strain in the 1960s. Convertibility and growth of the international economy led to more freedom in capital movements, so putting strains on fixed exchange rates and reducing the efficacy of domestic monetary policy. Although exchange controls were retained after 1958 by most countries except Germany, it was very difficult to prevent ‘leakages’ such as in Hong Kong which had a free market in foreign currencies, or through disguised capital movements (Schenk 2010). The Kennedy and Johnson administrations tried to control capital movements in response to the deterioration in the American balance of payments, but it was increasingly difficult and even counterproductive. One result was that American corporations held their foreign earnings of dollars outside the USA in a ‘Eurodollar’ market beyond the reach of the Federal Reserve. As an official of the US Treasury remarked, ‘The basic problem is that in a world where short-term capital can move freely between money-market centers, an independent monetary policy becomes difficult to achieve: an attempt by the monetary authorities to restrict the expansion of credit is frustrated as banks and non-bank firms increase their borrowing abroad’ (National Archives and Record Administration (NARA), Clark to Schmidt 1971).

The Bretton Woods system of fixed rates and domestic monetary policy could only work with capital controls, and even modest capital mobility allowed speculative attacks on currencies. ‘Bretton Woods proved untenable in the end because its rules could not reconcile independent national policy goals, pegged exchange rates, and even the limited degree of capital mobility implied by an open world trading system’ (Obstfeld and Taylor 1997, p. 41). In the days of the gold standard, capital mobility was linked to a

fixed exchange rate with monetary policy used to maintain the rate. In the 1960s, domestic deflation was not acceptable to maintain relatively fixed rates in response to capital movements. The alternative was to link capital mobility with the pursuit of domestic monetary policies and to abandon exchange rate stability and to move to floating rates.

In the 1960s, the Bretton Woods system was kept afloat by a growing number of ad hoc interventions. Central bankers developed 'swap networks' to defend their currencies, overseen at their regular meetings at the Bank of International Settlements; a gold pool was set up to manage the price of gold; and constant, and largely inconclusive, discussions took place to find means of adding a new form of reserve or widening bands around par. Supporters of the Bretton Woods system such as Charles Coombs of the Federal Reserve Bank of New York, who was at the heart of the BIS and 'swap' networks, saw success; others claim that it was 'on life support since its inception. Between 1958 and 1968, it had only been kept alive by a series of extraordinary measures that made little long-term macroeconomic sense' (Coombs 1976, pp. 80, 188–191, 196, 198, 202–203; Gavin 2004, p. 185).

Even modest reform was difficult to achieve. One difficulty was deciding who had authority, which leads to a 'furor over fora'. The IMF might seem the obvious body to reform the international monetary system, but it was cumbersome and unimaginative, failing to rise to new challenges. Although the IMF had the widest membership, it was part of the American vision for the world after the war. Less developed countries saw it as the voice of the advanced economies, and Europeans as an 'Anglo-Saxon' institution dominated by deficit countries in the USA, Britain and the less developed countries. An alternative option was the OECD which would bring together the key countries of the Atlantic economies, with a much larger role for Europe. But it was purely consultative and lacked funding. Its influence rested on the overlap with the group of ten leading economies—Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Britain and the USA, with Switzerland joining in 1964. The Europeans preferred G10 as a body dominated by creditors who could control the feckless Anglo-Saxons and less developed countries (NARA, Cates to Volcker 1972; memo to Volcker Group 1972).

The Bretton Woods regime of fixed but variable exchange rates became, much like the gold standard before 1914, more than a monetary system. Paul Volcker, undersecretary of the Treasury in the Nixon administration who played a major role in the final days of the system, pointed out that it was 'a kind of wonderful totem, representing stability of exchange rates, freedom of payments, and less tangible, a spirit of international cooperation'.

After it collapsed, he looked back and remarked that 'It's hard now ... to recapture the strength of the emotional and intellectual commitment to the international stability of the dollar and the fixed gold price Defending the dollar was less a burden than a badge of honor that went to the prestige and to the sense of international leadership and responsibility of the nation' (Volcker and Goyhten 1992, pp. 20, 25). The system seemed to have cured the problems of the 1930s of competitive devaluation and trade warfare. Coombs argued that the breakdown of gold standard and move to floating in 1931 created 'a new and even more dangerous form of economic barbarism. Multilateral trade had progressively given way to discriminatory, bilateral trading arrangements, reinforced by exchange controls, amid a welter of charges and countercharges of competitive depreciation through floating currency rates' (Coombs 1976, p. 4). Robert Roosa, undersecretary for monetary affairs from 1961 to 1964 and Volcker's mentor, argued that 'a system of fixed rates of currency exchanges provides the most hospitable environment for encouraging market-oriented adjustments', for it provided 'an established scale of measurement, easily translatable from one country to another, which enables merchants, investors, and bankers of any one country to do business with others on known terms'. Roosa firmly rejected floating rates as 'trying to do business with a rubber yardstick' that would 'contribute to a greater economic isolationism. A wall of currency uncertainty would be built around every country' (Friedman and Roosa 1967, pp. 30, 38, 42).

An intellectual case for floating rates had been made by Milton Friedman as long ago as 1950. He argued that floating rates were 'absolutely essential for the fulfilment of our basic economic objective: the achievement and maintenance of a free and prosperous world community engaging in unrestricted multilateral trade'. Multilateral trade was the main aim of policy, but there had been little success in removing trade barriers because of the commitment to 'an essentially minor goal' of rigid exchange rates. He accepted that it was no longer possible to adjust the balance of payments by altering internal prices and incomes. Friedman favoured flexible exchange rates where any move in the balance of payments immediately affected the exchange rate, and at once prompted corrective action. By contrast, fixed exchange rates meant that steps to correct the balance of payments could be delayed, and when something was eventually done, it was by administrative action such as controls on capital flows or prices rather than market forces. Friedman argued that hostility to floating rates rested on a combination of opposites. Traditionalists wanted to return to the certainties of the gold standard with its ability to constrain domestic policies and therefore had

no sympathy with floating rates. Reformers distrusted the price mechanism in all forms. The result, Friedman remarked, was a 'curious coalition of the most unreconstructed believers in the price system, in all its other roles, and its most extreme opponents', with the result that floating exchanges were not even considered in the debates leading to the Bretton Woods conference. Friedman believed that flexible exchange rates would in fact be stable, for 'the ultimate objective is a world in which exchange rates, while *free* to vary, are in fact highly stable. Instability of exchange rates is a symptom of instability in the underlying economic structure'. In his opinion, fixed exchanges 'froze' the economy by requiring various controls in order to protect the rate; if everything were flexible, the economy could respond to changing conditions and exchange rates would consequently remain stable as a result of the free play of market forces (Friedman 1953). His case was still stronger by the 1960s, for he argued that the fixed rate regime only survived as a result of controls on capital movements, import restrictions, exchange controls, with pressure to deflate in the USA and inflate in Germany. Why force all prices in a country to adjust rather than altering one, flexible price—the exchange rate. Economic policy could then be directed to 'internal stability without being hamstrung by the balance of payments'. In his view, Roosa exaggerated the uncertainties of floating rates. For one thing, the context was different from the 1930s when countries pursued competitive devaluation in order to increase employment; now, full employment removed that temptation. And the risk of currency fluctuations could be removed by hedging (Friedman and Roosa 1967, pp. 11–15, 17, 20, 73, 90–91, 118).

Friedman's views were heretical to many officials such as Roosa and Volcker who defended the status quo of Bretton Woods and wanted evolutionary change. The alternative of floating simply seemed too dangerous and a return to the perils of the interwar period—though Friedman pointed out, with justice, that the problem arose from the fixed rate of the gold standard and that floating allowed recovery. Roosa felt that hedging risks was not possible, given the lack of any benchmark and the constant interference of governments in the market to gain an advantage (Friedman and Roosa 1967, pp. 40, 46–47, 49, 51–52; Bernanke and James 1991). After Nixon closed the gold window on 15 August 1971, an attempt was made to put the Bretton Woods regime back together again by resetting parities and increasing the bands. But it was soon clear that the Americans were not willing to defend the new rates, and the world moved to floating in the early 1970s—not as a result of the intellectual force of Friedman's arguments so much as a pragmatic response to circumstances. The Germans had temporarily floated in 1969, and Emminger pointed out that 'destabilizing

international money movements could be fended off only by recourse to the weapon of flexible exchange rates' (Emminger 1977). In 1973, floating was adopted more generally—and now the obsession with fixed rates seems puzzling. Friedman was right that currency markets emerged to hedge risks—but Roosa also had a point that monetary authorities would intervene to secure an advantage. More significantly, the emergence of floating allowed the expansion of capital flows and the emergence of hyper-globalisation.

3 The Capital Movements Trade-Off: Why Were Capital Movements Controlled or Free?

Capital mobility is possible when one of two conditions apply. The first condition is when domestic monetary policy is subordinated to the exchange rate, as on the gold standard. The second is when exchange rate stability is subordinated to domestic objectives and currencies are allowed to float. In the late nineteenth and early twentieth centuries, the first condition applied, and foreign assets as a proportion of world GDP rose, on a rough estimate, from 7% in 1870 to 19% in 1900. Foreign assets as a proportion of world GDP then fell back to 8% in 1930 and 5% in 1945. The level only rose to 6% in 1960, before surging to 25% in 1980 and 62% in 1995 under the regime of floating (Obstfeld and Taylor 2004, p. 55).

There was not only a change in the level of capital movements, but also in its character and economic impact. Britain was the major source of capital exports before the First World War, with overseas assets amounting to 6.8% of net national wealth in 1850 and 35.2% in 1913. Overseas investment experienced a cycle, falling from 62% of gross domestic fixed capital formation in the late 1880s to 37% in the 1890s, before rising to an astonishing level of 76% between 1905 and 1914—and it was countercyclical to the domestic economy, so acting as a stabilising force in the world economy (Feinstein and Pollard 1988, p. 169; Pollard 1989, p. 61; Stone 1999, p. 7). To some contemporaries, capital exports were beneficial. Robert Giffen defended capital exports in 1905, arguing that 'a rich class at home living on its foreign income is, on the whole, a desirable class for a country to possess'. He argued that large fortunes and incomes led to savings and hence to investment and employment—and investment overseas was just as beneficial as investment at home in leading to the import of cheap goods and stimulating

export markets (Giffen 1905, p. 493). On the other hand, J.A. Hobson feared that overseas investment arose from a maldistribution of income and wealth which meant that domestic markets and investment opportunities were limited. The solution was not to limit capital exports but rather to redistribute wealth at home so that capital exports did not arise from a pathological social structure. Capital exports could still lead to a Cobdenite vision of peace and prosperity (Hobson 1902, pp. 134, 147–148).

The assessment of the benefits of British capital exports changed after the First World War. In the post-war boom, firms in a number of leading export sectors—above all cotton, shipping and steel—incurred high debts for what turned out to be inappropriate ventures or flotations at excessive prices. As a result, British industrialists were burdened with high costs of servicing loans out of narrower profit margins, and the high level of debt created dangers for British banks which had lent unwisely to industry. The Bank of England now had to be concerned about the domestic economy, for a collapse of British businesses would threaten the stability of the banking sector. These new circumstances contributed to a reassessment of the trade-off between domestic and international concerns, for the Bank's need to support domestic policy meant that it could not pursue international considerations so clearly as before the war—and one outcome was restriction of capital flows in order to limit pressure on domestic monetary policy.

Capital controls were imposed during the First World War and remained in some form for much of the interwar period. The motivation was in part domestic—the need to invest in 'homes fit for heroes', and to convert short-term into long-term government debt—and in part international, to protect the pound without imposing still higher interest rates with serious domestic consequences. Supporters of capital exports followed Giffen's line in arguing that they encouraged exports, sustained the empire and led to business for the City. But not everyone at the Treasury was convinced, arguing that the situation was different from before the war when there was a large balance of payments surplus available for overseas investment—though equally it did not want to 'waste' investment on public works at home at the expense of more productive investment abroad. Policy towards capital mobility had changed from passive acceptance prior to 1914 to a careful estimation of the benefits for the economy as a whole, and an assessment of its political ramifications (Atkin 1970; Daunton 2007, pp 14–21; Clarke 1990, pp. 180–183). The change was clear in the United Nations' survey of capital movements which estimated that net capital exports from the UK between 1911 and 1913 were \$1042m; during the First World War, something like \$4000m of foreign investments was sold. After the war, capital exports at first returned

to the earlier pattern, reaching \$881m in 1921. But the recovery was temporary, with exports in 1922–1928 amounting to only \$407m. In the 1930s, the UK became a net importer of capital, amounting to \$313m in 1931 and \$269m in 1938, or an annual average of $-\$74\text{m}$ in 1931–1935 and $-\$212\text{m}$ in 1936–1938 (UN 1949, pp. 4, 10, 15).

After the First World War, the major source of capital exports was the USA, but the nature of this investment was different. British overseas investment was largely portfolio rather than direct investment by British firms, and it was countercyclical. By contrast, a greater proportion of American investment was direct investment by American firms in overseas ventures, and it followed the domestic cycle. Furthermore, Britain kept its markets open before 1914 so that additional output could be sold and payments maintained; America erected tariff barriers and so created problems in disposing of output. There was also concern about the political impact of overseas investment. The American government intervened in a number of Latin American and Caribbean countries to protect investments and to impose fiscal discipline which created the potential for over-lending and ‘moral hazard’, as well as provoking complaints of neocolonialism (Kindleberger 1973, pp. 291–307).

The problems with American investment after the First World War led to concern in the 1930s that the irresponsible behaviour of financiers adversely affected American interests, and entailed manipulation of local politics. Congressional investigations found that large commissions were paid to American financiers, with onerous terms, a wasteful use of loans and defaults. Policy shifted to remove ‘moral hazard’ and to end intervention. The new approach to Latin America and the Caribbean was set out by Roosevelt in his augural address when he pledged himself to ‘the policy of the good neighbour’ (Roosevelt 1933a; Helleiner 2014, Chapter 1). During and immediately after the Second World War, discussions took place whether to control ‘undesirable’ American foreign investment. Some voices in the administration warned that over-expansion of foreign investment might have the same effect as in the 1920s, leading to hostility towards America as a result of exploitation of natural resources, special privileges given to American corporations and manipulation of local support. For these reasons, in 1946 a working group of the National Advisory Council and the Executive Committee on Economic Foreign Policy recommended registration and administrative controls over foreign loans. The approach was far from universally accepted, and a report from the Committee on Foreign Investment Policy concluded that ‘Properly conceived foreign investment is of substantial benefit to the United States and the world generally. The benefit has to do

especially with the expansion of production and trade, with facilitating the maintenance of prosperity and employment, with raising standards of living, and with the promotion of general security'. The report argued that private loans were better than government loans which should only be used when private capital was not available or when schemes were very large and public in nature (NARA, Control over American Private Foreign Investment 1946; US Foreign Investment Policy 1946).

The issues resurfaced in the discussions at the conferences on trade and employment at Havana in 1947–1948 to establish an International Trade Organization when the views of underdeveloped countries collided with American assumptions. The American delegation was anxious to stimulate overseas investment as a way of encouraging recovery of the international economy. Businessmen wished to insert a chapter into the Charter of the ITO to stimulate American foreign investment in 'economically desirable purposes' as a way of assisting recovery and dealing with the trade surplus and dollar shortage by injecting funds into the world economy. They argued that the chapter needed to provide security for investment which was currently too risky because of the policies of many countries, especially in Latin America. As they pointed out, it was one thing to deal with the ordinary risks of business, but quite another to deal with 'the hazards of debt repudiation, property confiscation, foreign exchange blockages, and discriminatory practices'. In the absence of security, American overseas investment would come to a halt and the costs of stimulating recovery would instead fall on the American government and taxpayer. There was a careful balance to be struck. If the chapter were strengthened to offer more security for American investment, it would be criticised as being no more than a disguised form of imperialism. If the chapter were not strengthened sufficiently, American businessmen would denounce the ITO for offering inadequate protection and making the world safe for socialistic planning (NARA, Investment Clause in Geneva Draft 1947; Appraisal, National Association of Manufacturers 1949).

One way of squaring the circle between the destabilising and stimulating role of overseas investment was public investment through an international institution—the International Bank for Reconstruction and Development. What should be the basis of investment by the IBRD? Should it focus on wider programmes for economic development or narrower project loans? Paul Rosenstein-Rodan argued for 'balanced growth', building on his work of 1943 on eastern and south-eastern Europe which he extended to five 'vast international depressed areas'. The basic problem was the existence of 'agrarian excess population' and disguised unemployment. Since it

was unlikely that migration to richer areas would be feasible, machinery and capital would need to be taken to labour through industrialisation. This task could be undertaken in one of two ways. The first solution was self-sufficiency without international investment as in Russia, an unsatisfactory approach that would lead to a loss of output as a result of inappropriate division of labour. He preferred a second approach: large-scale international investment and integration into the world economy, with specialisation in labour-intensive light industries. In the Far East, with its huge population, he felt that industrialisation would play a smaller role and instead agriculture should be diversified. New policies were needed in order to achieve his ambition. The nineteenth-century pattern could not be adopted, for international investment was no longer self-liquidating by exchanging agricultural and manufactured goods, and investment in individual concerns was not effective for the industrialisation of a whole area. Furthermore, high fixed capital and overheads for industrialisation meant high risks, so that state supervision and guarantees were needed. In Rosenstein-Rodan's opinion, a different institutional framework was required to plan industry as a complementary system. Private international investment looked for individual returns to the investor based on past experience and did not take account of social returns and externalities. If all new industries could be combined in a single unit, what would otherwise be external economies would become an internal profit. It was also necessary to plan the liquidation of the investment by ensuring that some industries exported goods to creditor countries (Rosenstein-Rodan 1943, 1944).

Nurkse took a similar line. His report for the League of Nations on international currency movements in the interwar period argued that they were destabilising by spreading panic as 'hot' money fled from one country as a result of a loss of confidence (Nurkse 1944). Nurkse was reassured that capital flows after the Second World War escaped from the speculation of the 1920s and 1930s, but he also claimed that they had not returned to the beneficial pattern prior to 1914. Capital exports now arose mainly from the reserves of businesses (largely American) and led to the supply of a few basic commodities for the industrial world at low prices. After the Second World War, direct ownership of capital linked American technological knowledge with the employment of low-waged local labour in an export-oriented sector with limited connection with the rest of the domestic economy. The result was a colonial type of investment that created lop-sided growth and 'specialization based on a static scheme of comparative advantage', with dependence on foreign demand for one or two commodities, low levels of internal demand and instability. Such a pattern of growth would not be as beneficial

as in the nineteenth century, when primary producers such as Argentina had high per capita incomes. Unlike Britain before 1914, the USA did not need to import so many raw materials and foodstuffs, so that growth was less likely to come from primary products, and the trade was increasingly between advanced countries. In his view, what was needed was 'a balanced pattern of investment in a number of different industries, so that people working more productively, with more capital and improved techniques, become each other's customers'. Nurkse felt that direct investment by business corporations alone could not provide international finance for development. What was needed was a revival of social overhead capital with a more beneficial impact on the domestic economy, on the lines of British investment in government loans or investments in utilities such as railways and ports which aided development, and took the form of fixed interest bonds. Such investment was not, he argued, of a colonial nature. It produced raw materials and food for Britain, but most of the funds went into overhead capital and above all railways, rather than directly into primary production. It therefore benefited the economy as a whole (Nurkse 1954 and 1961).

The IBRD moved increasingly towards investment in specific, financially viable project loans or unbalanced growth. Albert Hirschman argued for unbalanced growth, believing that the problem was not a scarcity of resources but rather providing motivations or inducements to mobilise existing, under-used resources. Domestic capital, skills and institutions were lacking for a short 'big push', and he argued for smaller steps to stimulate investment and project loans for directly productive activities. In his view, a wide programme would benefit some groups and harm others, so generating internal political opposition; by contrast, a single, defined project would be easier to implement. Instead of a 'propensity to plan', he argued for a 'propensity to experiment and to improvise'. Balanced growth would eventually appear as a result of the expansion of the market, through a succession of disequilibria or imbalances. This meant acting through entrepreneurs who precipitated problems by putting pressures on other areas of the economy and so created new opportunities, rather than through planners who tried—and often failed—to anticipate problems. His approach was 'possibilist', arguing that complete knowledge was not possible, that it was only possible to grope for change in conditions of uncertainty. Smaller-scale processes were to be preferred to grand schemes (Adelman 2013, pp. 298–309, 321–323, 333, 338–349, 437).

The decision of what approach to adopt arose when the IBRD sent its first general mission to Colombia in 1949, which posed a major question of what it should finance, on what grounds? The head of the mission,

Lauchlin Currie, argued for a policy of balanced growth. Labour should be moved from the land into a series of industries which would assist in creating a market, providing incentives to invest and delivering a 'big push' to power the economy into self-sustaining growth. Balanced growth required programme loans, an integrated development plan and investment in social overhead capital. But the IBRD was sceptical and preferred productive project loans. Their attraction to conservative New York bankers who dominated the IBRD was that they were self-financing and liquidating, and finite and bounded in a particular sector such as the construction of a hydro-electric scheme or railway. Furthermore, they avoided the charge of undermining national sovereignty and interfering in domestic politics that could be said of wider programmatic loans (Alacevich 2009; Kapur et al. 1997).

These debates over development were linked to American foreign policy and modernisation that was associated with Walt Rostow, a professor of economic history and a member of the administrations of Presidents Kennedy and Johnson where he was a hawk on Vietnam. His stance on the war was closely linked with his approach to economics and modernisation theory. Modernisation theory combined confidence that nations would undergo a transition from tradition to modernity (much as Britain and the USA) with a realisation that it posed grave dangers. Traditional society was characterised as inert and inflexible, introverted and superstitious, wary of change, dominated by agrarian elites, lacking a powerful middle class and relying on a simple economy, limited technology, subservience to nature and a general sense of fatalism. A modern society was characterised as more like America: flexible and adaptable, welcoming change, secular and outward looking, with a complex economy based on division of labour, and a willingness to subjugate and exploit the physical world.

It was a remarkably simplistic view of history that was remarkably powerful, helping to shape American economic and foreign policy in the 1960s as an alternative to Communist solutions to development. According to modernisation theorists, the transition from tradition was started by colonialism, with unfortunate results. The European empires destroyed the cohesion of traditional societies without making them fully modern, and even worse, led to suspicion of modernity as a colonial imposition. Benign American modernisers should replace European exploitative colonialists, creating a pattern to emulate rather than an imposition to reject. What was needed was a capitalist alternative to Marx and the Soviet path to modernity. The danger was that, in the initial stages, the dislocation of traditional society created 'dangers of instability inherent in the awakening of formerly static peoples', so allowing Communists to exploit the disruption of traditional society

for their own ends. Once societies passed through this difficult phase, the opportunities for Communism would decline, but in the short term it was vital to take military action as well as encourage economic development. Here was a justification for American aid and for Rostow's suggestion that the 1960s be declared the 'development decade' (Gilman 2003, pp. 49, 179; Latham 2000).

Yet at the same time as Kennedy announced the development decade, the American balance of payments started to deteriorate. Although the US Treasury was anxious to preserve a free capital market, J.K. Galbraith, an economic adviser to Kennedy, strongly supported capital controls on grounds of both domestic politics and international strategy. He was alarmed by the accumulation of dollars in foreign hands, with the potential of converting them into gold. 'We are financially weak and our allies have become strong and more than a trifle arrogant as a result. If the weakness continues we will be able to keep our military and economic aid commitments only by borrowing. In consequence we will have the economic and political weakness of a debtor nation'. Restricting long-term capital flows was the least damaging response. Savings would flow into domestic investment rather than overseas, and interest rates could be kept low. Although he was not enthusiastic, George Ball, undersecretary of state for economic affairs, agreed that capital controls would be less of a threat to American leadership than deflation of the domestic economy or large troop deployments. The result was an Interest Equalization Tax to make borrowing in America more expensive for foreigners, without increasing interest rates for domestic investment. The Johnson administration moved to greater controls on capital exports in 1967 through a tax on direct American investment, on the grounds that it would appeal to European concerns about American takeovers, without violating international agreements (FRUS 1961–1963 IX, docs 24 and 32; Kennedy 1963).

In reality, holding back capital flows was not easy. Capital controls could be circumvented by disguised capital movements, or through the Eurodollar market. The emergence of even limited capital mobility in the early 1970s was sufficient to allow speculative attacks on major currencies, encouraging a shift to floating rates. And once floating rates were adopted, industrialised countries could deregulate capital flows and pursue domestic goals without the need to defend fixed exchange rates (Obstfeld and Taylor 1997, 2004). The shift to much higher levels of capital mobility created gainers and losers. In general, financial integration implies an increase in the social and political power of mobile capital than less mobile labour. However, some capital is more mobile than others, for investment in infrastructure, farming or manufacturing is more rooted in a particular place than financial capital or the

assets of multinational corporations. Increased mobility is good for investors with mobile assets in the developed world and for internationally diversified multinational corporations; it is not good for nationally based capital specific to a particular place and industry. Capital mobility also affects attitudes towards the exchange rate. International traders and investors, and producers of export-oriented tradable goods are more likely to prefer a fixed rate or low flexibility despite a loss of monetary policy autonomy. Producers of non-tradable goods and services, and producers of import-competing tradable goods for the domestic market, are more likely to favour flexibility in exchange rates and autonomy. These preferences in turn affect attitudes towards macroeconomic policies. Capital mobility combined with an expansionary monetary policy leads to depreciation of the currency and benefits producers of tradable goods. On the other hand, an expansionary fiscal policy leads to appreciation of the currency which benefits producers of non-tradable goods and services. As Jeffrey Frieden remarked in 1991, 'the distributional consequences of international capital mobility are striking. In the long run, owners of capital have probably gained relative to other groups. In the shorter run, owners and workers in specific sectors in the developed world face serious costs in adjusting to increased capital mobility' (Frieden 1991). Twenty-five years later, his comments on the distributional consequences of high capital mobility in the era of hyper-globalisation were prophetic.

4 The Free Trade Versus Protection Trade-Off: Why Was Free Trade or Protection Adopted?

Both Roosa and Friedman argued that currency regimes were linked to trade policies—but they took different approaches. In Roosa's opinion, fixed rates gave security for traders and reduced risk; a shift to floating rates would create so much uncertainty that they might turn away from multilateralism. Friedman argued that attempting to maintain fixed rates led to import duties in order to deal with a balance of payments deficit (as in the USA) or to export duties to deal with a surplus (as in Germany). In his view, floating rates were compatible with free trade (Friedman and Roosa 1967).

In reality, both fixed and floating rates could be combined with either free trade or protectionism. Britain was committed to the gold standard and free trade, whereas the USA combined gold with high tariffs. Equally, floating

rates were associated with protection in the 1930s and with multilateralism in the late twentieth century. Understanding the choice requires an analysis of the changing dynamics of domestic politics that allowed one policy or the other to succeed, and an appreciation of international rules that constrained 'beggar my neighbour' policies of protectionism. These two levels of analysis were closely connected, for the resurgence of protectionism in domestic politics could be contained by international rules negotiated in different circumstances.

One of the most significant changes was the move of Britain from free trade before 1914 to imperial preference after 1932, when the world seemed to descend into trade blocs and bilateralism (Trentmann 2008). Another significant change—and the one that I will consider—came into play with the shift of the USA from the notorious Smoot-Hawley tariff of 1930 to its championing of multilateralism and free trade, underwritten by international rules and agreements. Understanding this shift entails analysing the changing balance of power in domestic politics, and the relationship between Congress and the executive.

The Smoot-Hawley tariff was the latest battle in a long war between Democrats and Republicans over trade policy. One of the most vocal supporters of lower tariffs was Cordell Hull, a Democrat member of the House of Representatives from rural Tennessee who went on to serve as Roosevelt's Secretary of State from 1933 to 1944 where he played a major role in trade policy. In 1913, he supported lower tariffs as a way of raising domestic prosperity and of preventing monopolies and trusts. In 1916, he came to see that free trade was vital for peace. The experience of the First World War convinced him that 'wars were often largely caused by economic rivalry conducted unfairly. I therefore came to believe that if we could eliminate this bitter economic rivalry, if we could increase commercial exchanges among nations over lowered trade and tariff barriers and remove unnatural obstructions to trade, we would go a long way toward eliminating war itself' (Hull 1948, pp. 81, 84). He held to this view in the 1930s, and Harold Ickes, Secretary of the Interior, felt that the attempt to make peace through trade was 'like hunting an elephant with a fly-swatter' (Ickes 1954, pp. 218–219). Hull's view would have been familiar to Richard Cobden, the British free trader, a century earlier, to whom the repeal of the protective Corn Laws in 1846 was a means to both peace and prosperity. In Britain, opinions evolved beyond Cobden by the First World War, where a different lesson was drawn that success rested on international coordination and planning, and free trade needed to be combined (as Hobson argued) with redistribution to create a prosperous home market. Free trade and multilateralism meant

different things on both sides of the Atlantic, leading to a failure of understanding in the debates after the Second World War (Trentmann 2008).

Hull was a Southerner, and the South was traditionally committed to an open international market as an exporter of raw cotton and other primary products, and an importer of manufactures from the northern USA and Europe. Import duties were therefore seen as a way of boosting the profits of northern industrialists, financing government at the expense of the poor and harming the ability of foreign countries to buy Southern commodities in an open world economy. A commitment to free trade was therefore more likely when Southern Democrats could shape policy in Congress, insisting on policies that met their approval—such as freer trade and more stringent regulation of bankers and financiers. This Southern influence meant that an open world trade system and liberal capitalism were linked with a ‘hierarchical racial order’ to which Hull was committed (Katznelson 2013, pp. 9, 15–16, 18, 21, 23–25, 95, 127–129, 143, 145–146, 150–155, 161–164, 172–177, 182, 191–194, 233, 261, 265, 274, 280–281, 287–291, 370–372).

In 1928, the Republican presidential candidate, Herbert Hoover, campaigned for tariffs to protect American farmers from the worldwide collapse of commodity prices that was causing them serious economic hardship. In reality, tariffs on imports did little to help American farmers who were major exporters, and would not solve the main problem of low world prices caused by over-production and lack of demand. Certainly, Hoover did not intend higher tariffs to apply to industrial goods, but his initially modest proposal was widened in the Republican platform for 1928. When Hoover won the presidential election, Congress turned to the revision of duties as the boom of the 1920s gave way to the Wall Street crash of 1929 and the onset of depression. The Smoot-Hawley tariff of 1930 started its unedifying passage through Congress in an atmosphere of crisis. Although the vote for and against the Bill as a whole was on party lines, support for individual duties was influenced by local economic interests, with members of Congress trading votes to support each other’s pet duty. The Smoot-Hawley Bill only passed by a narrow majority, and Hoover himself felt that the duties were excessive (Irwin 2011).

A return to more open trade would only be possible if the power of Congress to set general tariffs was reduced and authority was given to the president, on the same lines as in other countries where the executive had more power. Why would Congress voluntarily surrender its powers to the executive? The experience of negotiating the Smoot-Hawley duties had been a bruising one for many Congressmen, and it might be assumed that they learned the lesson that a pursuit of narrow localism through log-rolling

harmed the national interest. In reality, few Congressmen learned a lesson: only nine out of 95 members of Congress who voted for the Smoot-Hawley tariff in 1930 and were still legislators in 1934 supported the delegation of power to the president. Other reasons must have been of greater importance. One was the general sense of crisis and the need for emergency action. More significantly, the Democratic Party had control of both Houses, with a large number of Congressmen from the South who were firmly committed to free trade. It was a rare opportunity that Democrats could not let slip, and they were determined to 'lock-in' lower tariffs by removing authority from Congress. Since the end of the Civil War, the Democrats only had unified control of both Houses for four of 33 Congresses, and the tariff reductions they achieved in 1894 and 1913 were soon reversed. Passing an Act to reduce tariffs was not enough. What was needed was a method of institutionalising low tariffs (Haggard 1988).

The Reciprocal Trade Agreement Act (RTAA) locked-in low tariffs in three ways. First, authority was delegated from Congress to the president. At least until 2017, Republican Presidents have not been as protectionist as Congress, for they were less concerned about specific local interests and more with the balance of national interests. Second, the Act provided that trade agreements no longer needed a 'super majority' of two-thirds of Senate. In future, all that was needed was a simple majority to renew the RTAA every three years. Senators could no longer make log-rolling deals as in 1930. The change in the success rate of trade agreements was striking. Between 1844 and 1909, when authority was not delegated to the president, a total of 21 trade agreements were proposed to Senate, and only three were accepted. By contrast, a total of 27 trade agreements were successfully negotiated between 1934 and 1946, and another 24 in 1947–1948. Third, the RTAA established the principle of reciprocity. In the past, tariffs were set unilaterally by the USA without negotiating with other countries. This procedure gave more power to protectionists, for support for an increase in the import duty on a specific commodity was heavily concentrated in particular firms and locations which gave them more political voice. By contrast, supporters of lower tariffs had less voice, for the impact of higher costs fell on consumers who were less active, more diffuse and more difficult to mobilise. Furthermore, reciprocity changed the balance between protectionists and free traders within American domestic politics. An increase in American tariffs would now immediately lead to higher duties on American goods, and the only way for exporters to secure better overseas markets was to support lower American import duties. Negotiations followed the principle of the most favoured nation—that is, the signatories to a trade

agreement are committed to treat each other as well as they treat a third party. Hence, if countries A and B negotiate an agreement, any concession made in a later agreement between A and C would be extended to B—and any agreement between B and D would be extended to A and C. By this means, no country would be treated worse than the country that is treated best in any bilateral agreement. The concern that such unconditional most favoured nation agreements gave ‘something for nothing’ was removed by the ‘principal supplier’ rule. America would offer concessions only to the country that supplied the largest proportion of imports of a particular commodity. Thus, tariffs were reduced on coarse and medium wool in the trade agreements with Argentina and Uruguay in 1935, but not on fine wool that came from Australia. A concession on all wool would have given Australia an unreciprocated benefit. This approach meant that industries facing competition from several countries were still sheltered, striking a balance between the most favoured nation principle and the expansion of trade on the one side, with protection of domestic interests on the other. The RTAA marked a major shift in the dynamics of trade policy and in its essentials continued after the Second World War.

Of course, Republicans could always reverse the RTAA at some future date when it came up for renewal, by increasing the influence of Congress, inserting various loopholes or completely rejecting renewal. The danger grew as Republican numbers in Congress increased. Survival of institutional ‘lock-in’ depended on a number of other developments. By giving more power to the executive—and especially the State Department—the RTAA created more expertise and administrative capacity that could counter congressional lobbying. Reciprocity gave more incentives to export sectors to mobilise in favour of trade liberalisation, and the recovery of world trade meant that they became a larger sector in the American economy—though never so large as in Britain. Republicans started to change their position, moving from opposition to the RTAA to greater support in the renewals of 1943 and 1946. When the Act was passed in 1934, 53 Democrat Senators voted for the measure and five against; by contrast, six Republicans voted for and 30 against. When the vote on renewal was taken in 1945, Democrat Senators split 45 to 7 but now 15 Republicans supported renewal as against 21 opponents. Although the Republicans won control of Congress in 1946, the RTAA survived. In 1948, 98% of Republicans in the House and Senate voted to renew the measure, though only for one year and on condition that ‘peril points’ were introduced—that is, the point at which a reduction in duties would cause serious harm to an American industry. In 1949, with a return of a Democratic majority, the RTAA was renewed for three years

without peril points and with the support of 57% of Republicans in the House and 45% in the Senate (Bailey et al. 1997; Irwin and Kroszner 1999; Haggard 1988).

The RTAA was periodically renewed to give the president authority to negotiate trade ‘rounds’ under the General Agreement on Tariffs and Trade (GATT)—which bring us to the second institutional reason for the growth and survival of multilateralism: a bargaining process that allowed agreements and rules that limited a return to protectionism. The GATT was an interim agreement between 23 countries in October 1947, pending the creation of an International Trade Organization that did not come into existence—a blessing in disguise, for it was far too unwieldy and all-encompassing. The initiative emerged from the ‘Proposals for consideration by an international conference of trade and employment’ published by the USA in December 1945 which immediately exposed the differences of opinion. Hull’s concern was with freer trade, and the addition of employment arose from pressure from other countries—and above all Australia—for full employment of the resources of the world in order to resolve the difficulties of low prices for primary products (Macintyre 2015). The proposals remarked that ‘achieving fairness and equity in economic relations between states’ rested on ‘the attainment of approximately full employment by the major industrial and trading nations’ which was ‘essential to the expansion of international trade on which the full prosperity of these and other nations depends’ (Proposals 1945). Such sentiments appealed to the more radical ideas of former vice-president Henry Wallace in the USA and to the post-war Labour government in Britain which was precisely the problem: the approach was redolent of planning and socialism that was anathema to many Americans. Would full employment not follow from the creation of freer trade rather than the other way round? Would a free market economy be subverted by state intervention in order to create full employment? (Daunton 2010, pp. 60–65).

These issues were compounded by the growing voice of the less developed countries, as Australia’s representation of primary producers was taken over by India and above all Latin America which inserted demands for economic development and changing the balance between industrial and primary producing countries. Merely creating free trade would not solve their fundamental problems without a structural shift in the terms of trade between the two groups of countries. The Americans decided that voting should differ from the weighted system used by the IMF, where they and other advanced industrial countries could dominate. Instead, it was decided to adopt one country one vote in order to secure support from as many countries as possible,

in the mistaken belief that they would be grateful. The outcome at the conference in Havana in 1947 and 1948 was that a draft charter was agreed which had no chance of being accepted in Washington. The American negotiators were playing a two-level game, making concessions in Havana that secured support from the less developed countries on issues, but at the expense of support on Capitol Hill. The charter was too all-encompassing and riven by fundamental differences of approach, and in 1950, President Truman simply announced he would not seek ratification (Daunton 2010, pp. 72–76).

The interim GATT survived—just that, an agreement rather than an organisation. It was able to negotiate a series of trade deals or ‘rounds’ that led to reductions in trade barriers. The limited scope of the GATT was more realistic than the Charter of the ITO with its conflicting and unrealistic ambitions. The failure of the ITO and survival of GATT could carry forward trade liberalisation because it had a clear focus, and rested on the commitment of members to achieve a deal through negotiating a consensus (Anderson and Hoekman 2002, p. 221; Narlikar 2005). GATT was much more palatable to Congress and to business. It did not have an executive board or secretariat and was only informally connected with the UN. It was merely an agreement between the contracting parties who would meet to discuss trade on an ad hoc basis. Dean Acheson realised that GATT was much more realistic than the ITO and would ‘help to float the program (renewal of the RTAA) over the shoals of the opposition of individual protectionist groups’ (Zeiler 1999, p. 161).

Of course, the less developed countries criticised GATT as a club of rich countries that, in common with the IMF, failed to address their concern—and they pressed their own demands through the Economic and Social Council of the United Nations, the Bandung Conference of Asian and African countries in 1955, and eventually the United Nations Conference on Trade and Development. In 1961, a resolution from less developed countries proposed a conference on world trade, and the Soviets saw an opportunity. In May 1962, Khrushchev denounced the Common Market as a form of neo-colonialism and called for an international trade conference and an increase in the average price of raw materials. The Americans realised that opposing a conference would confirm Soviet criticisms of America and the EEC, and it was agreed to call a United Nations Conference on Trade and Development which convened at Geneva in 1964 (Cordovez 1967; Toye and Toye 2004, Chapter 8; Rubinstein 1964, pp. 170–171). The secretary general was Raúl Prebisch, an Argentinian who had joined the United Nations Commission on Latin America. Prebisch moved away from the Latin American policy of

import substituting industrialisation that emerged in the 1930s, and realised that excessive industrialisation could actually harm welfare. The small size of national markets 'often made the cost of industries excessive and necessitated recourse to very high protective tariffs' which stifled incentives and efficiency. He argued that import substitution should be combined with exports, but 'outward-looking' industrialisation would only be possible if developed countries opened their markets on preferential terms (Toye and Toye 2004, pp. 138–139, 144–147, 158–160). Prebisch insisted that the terms of trade were detrimental to primary producers, with a need to change the structure of trade relations and not merely open markets. UNCTAD has been described as 'a twenty-year revolt against free-trade orthodoxy by economists inside the United Nations' (Toye and Toye 2004, p. 5). UNCTAD challenged the existing multilateral institutions and their ideology of free trade and comparative advantage. What was needed was fair and remunerative prices for their commodities, preferential trade deals without reciprocity and financial assistance (Joint declaration).

GATT was able to reduce trade barriers, above all on industrial commodities, through a series of 'rounds', using the principles of 1934 in a multilateral setting. The final Uruguay round started in 1986 and was completed in 1994. The interim arrangements of GATT gave way to a new international agency after the Uruguay round of trade talks. The World Trade Organization reunited the concerns for trade and development that dominated the talks at Havana in the so-called Doha Development Agenda (DDA) of 2001—an initiative that led to some of the same tensions and deadlocks as at Havana. The experience of Havana and the DDA has the same lesson: issues can be dealt with more effectively if compartmentalised rather than combined (Daunton 2010, p. 78). The Doha round has not been completed, and attention turned to regional trade deals such as Transatlantic Trade and Investment Partnership and Trans-Pacific Partnership which also faltered with a return of more nationalistic views.

The success of the WTO was in creating a set of rules and dispute settlement mechanisms which limited protectionism after the Great Recession of 2008. Barry Eichengreen and Kevin O'Rourke found that the fall in world industrial production by April 2009 was at least as severe in the nine months after the peak of April 2008 as after the peak of June 1929. Even more seriously, given its role in the Great Depression, world trade was falling faster. The world economy continued to fall for three years after 1929, and Eichengreen and O'Rourke warned policy makers that their action or inaction would determine whether the fall would continue so long after 2008. In February 2010, they reported partial success, for the world economy had

stopped its slide into the abyss and both world industrial production and trade started to recover after a year (Eichengreen and O'Rourke 2010). The WTO found that protectionist measures were largely resisted by the G20, and new restrictions imposed between October 2008 and October 2010 amounted to only 1.8% of G20 imports and 1.4% of total world imports so that trade remained more open than it had ever been, despite concerns about currency manipulation and the emergence of preferential trade agreements. Although restrictions did subsequently increase, there was nothing on the scale of the 1930s, and the WTO reported in June 2014 that 'the overall trade policy response to the 2008 crisis has been significantly more muted than expected based on previous crises. The multilateral trading system has acted as an effective backstop against protection' (WTO Report 2010). Whether it continues to do so is an open question, given the Trump administration's weakening of G20's commitment to open markets in March 2017.

Daniel Drezner argues that the institutions of global governance, for all their faults, provided a set of principles and procedures around which countries could converge, constraining domestic political pressures for protection, unlike in the 1930s when such institutions did not exist. He goes on to argue that economic changes created by globalisation strengthened economic interests committed to an open economy. Above all, effective international action was possible because economic power remained highly concentrated and, despite their differences, the leading economies of the world—the USA, EU and China—were committed to an open international economy. The Great Depression was different, for a weakened Britain could no longer provide leadership; the USA lacked the will; Nazi Germany acted as a 'spoiler'; and the Soviet Union was outside the world economy. Drezner claimed that in the Great Recession no one major power acted as a 'spoiler'. Further, the economic ideas underpinning an open global economy were not discredited as in the 1930s by alternative ideologies of Communism, fascism or economic nationalism. He was confident that the ideology of an open world economy survived (Drezner 2014, pp. 23, 25–27, 77–79, 106–108, 152–155, 175). Whether his optimism is right now remains to be seen, for Drezner had not allowed for the possibility that the 'spoiler' could be the USA itself, the main architect of the post-war multilateral system, and the economic changes created by globalisation could also strengthen opposition to an open economy.

The backlash against globalisation was not anticipated by many economists and political scientists, though Rodrik's warnings against the perils of hyper-globalisation and Frieden's worries on the differential impact of capital mobility turned out to be prophetic of demands for a restoration of national

determination. Similarly, international trade deals such as the Transatlantic Trade and Investment Partnership between the USA and the European Union created concern in many quarters that it favours corporations and erodes national autonomy. The post-war regime rested on 'shallow multilateralism', allowing politicians to concentrate on domestic social welfare and employment as global trade recovered—a trade-off threatened by a new form of 'hyper-globalization' that weakened domestic political autonomy.

5 The Labour Migration Versus Labour Protection Trade-Off: Free Movements or Collective Property Rights?

A clear case of this tension is over migration, where businesses want freedom to hire across borders or outsource labour, whereas many workers view citizenship as a collective property right controlled by the nation. The analysis of globalisation in the later nineteenth century by Kevin O'Rourke and Jeffrey Williamson sounded alarm bells for those able to hear them. As they show, the success of globalisation in the later nineteenth century contained the seeds of its own destruction. The movement of people and capital from Europe across the Atlantic meant that wages in the Old World rose, and wages in the New World were lower than they would otherwise be. Migration raised the labour force in the new world by about a third and reduced it in Europe by about an eighth between 1870 and 1914. The result was convergence of incomes between the two sides of the Atlantic. At the same time, the expansion of cultivation in the New World and a rapid fall in transport costs led to export of foodstuffs to the Old World. Consequently, land rents rose in the New World and fell in Europe. Income inequality narrowed in Europe as a result of rising wages and falling rents; meanwhile, in the USA, pressure on wages and increases in rent led to increased inequality. The result was demand for protection by landowners in continental Europe and a demand for immigration control in the New World. As they point out, 'globalization-induced inequality contributed to the deglobalization and autarkic policies that dominated between 1914 and 1950'. Hence, the previous collapse of globalisation was not an exogenous shock from war, but the result of 'a political backlash developed in response to the actual or perceived distributional effects of globalization.... Far from being destroyed by unforeseen and exogenous political events, globalization, at least in part, destroyed itself.... The record suggests that unless politicians worry about

who gains and who loses, they may be forced by the electorate to stop efforts to strengthen global economy links, and perhaps even to dismantle them' (O'Rourke and Williamson 1999, pp. 13–15, 29, 35, 40, 55, 60, 74–75, 91, 93, 105, 113, 145, 163, 166, 167, 169, 177, 181, 183, 283–287).

During the first age of globalisation, movements of labour and capital were connected: most capital exports followed migration to settler economies with scarce labour. In the later twentieth and early twenty-first centuries, capital movements and labour migration are distinct. Not only has labour migration been at a lower rate in the second age of globalisation, but it has a different relationship with capital mobility and does not act as a complementary force leading to convergence (O'Rourke and Williamson 1999, pp. 14–15, 119–120, 145, 165–166; Hatton and Williamson 1998, p. 3). International migration and adjustment of the exchange rate were, to some extent, alternatives, as is clear in Scandinavia. The level of emigration was both high and volatile, operating as 'a vulnerable margin that responded to labor market conditions with a powerful multiplier'. The countries of Scandinavia remained on gold before 1914 and traded almost entirely with other gold countries, so that they could not adjust their balance of payments by modifying the exchange rate either through domestic monetary management or through variations in exchanges with non-gold currencies. Hence, fluctuations in migration provided an alternative adjustment process: when costs were reduced or jobs lost, more people emigrated. In other countries, such as Japan and Russia, emigration was low and was not available as an adjustment mechanism. Britain was somewhere between these two poles, for trade to non-gold countries allowed a degree of exchange rate movement, and there was a reasonably high level of emigration before 1914. Lower emigration after 1914 reduced the availability of an alternative adjustment mechanism (Catao and Solomou 2005, p. 1273; Hatton and Williamson 1998, pp. 19, 67–74).

In the period before 1914, labour migration was probably the single largest factor in wage convergence in the Atlantic economy, surpassing the influence of capital mobility with which it was associated. Globalisation in the late twentieth century was related to a reduction of inequality between rich and poor countries, with lifted many of the world's poorest people out of poverty—yet at the same time, with a widening inequality within the advanced economies as those who gained from financialisation pulled away from those who lost from the decline of traditional industries or outsourcing (Bourguignon 2015). Migration from eastern Europe into Britain, or from Mexico into the USA, was blamed for these wider problems—and of course, poorer people in those countries had good reason to look for better jobs in more

prosperous countries, as before 1914. The result after the First World War was the imposition of labour controls on migration from Europe—and now the attempt to build a wall on the southern border of the USA and to reduce migration into Britain to low levels.

6 Conclusion

There is once again a very real danger that economic nationalism will threaten the global economy. The marriage between global capitalism and liberal democracy seems to be heading for the divorce courts, under the strains of inequality, suspicion at the self-interested behaviour of financial elites who created the crisis and of politicians who failed to prevent it. Increasingly, globalisation is seen as a threat to national sovereignty and identity. The solution is not a flight into economic nationalism with all the dangers that posed in the 1930s. Rather, it is to create a new balance between national democracies and the world economy, sustained by international institutions. As Rodrik remarks, 'A thin layer of international rules that leaves substantial room for maneuver by national governments is a *better* globalization' (Rodrik 2011, p. xix). In September 2016, Mario Draghi of the European Central Bank and Christine Lagarde of the IMF called for policies to help those left behind by globalisation (*Financial Times* 2016; Wolf 2016). The alternative to 'reflex internationalism', as Larry Summers points out, is 'responsible nationalism—an approach where it is understood that countries are expected to pursue their citizens' economic welfare as a primary objective but where their ability to harm the interests of citizens elsewhere is circumscribed. International agreements would be judged not by how much is harmonised or by how many barriers are torn down but whether citizens are empowered' (Summers 2016). The survival of globalisation—from which so many in the less developed countries have gained—demands policies that create a new balance with domestic welfare. The lesson of the Great Depression was that the pendulum swung too far towards economic nationalism and destroyed the international economy with devastating results. The lesson of the Great Recession is that it swung too far in the opposite direction towards hyper-globalisation. The imperative now is to prevent a swing back to economic nationalism. Reconstruction after 1945 rested on 'shallow multilateralism', allowing politicians to concentrate on domestic social welfare and employment as global trade recovered. Could that be the optimum solution? Multilateral institutions are seen by many who have lost from globalisation as agents of those who gained,

and the counternarrative that free trade is to the benefit of most people has been undermined. In Edwardian Britain, support for free trade was redefined by linking it with a policy of redistribution to benefit poorer members of society; at present, the rhetorical strategy that has succeeded has been to blame immigration or outsiders such as Chinese competition or Brussels bureaucrats. The issue, then, is how structural changes in the economy are framed rhetorically. International political economy is a complex mixture of real material interests and cultural appropriations.

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18

Political Economy of Resources, Technologies, and Rent

Alberto Quadrio-Curzio and Fausta Pellizzari

1 Introduction: The Political Economy of Resources in a Broad Perspective

This chapter focuses on the relationship between scarce resources, technical and technological progress, rents and income distribution. It also highlights the implications of this relationship for structural changes and economic dynamics. The authors worked on these issues for many years and from complementary points of view. This essay provides a synthesis of their contributions within a coherent political economy perspective.

The chapter adopts a broad definition of political economy. Looking at the history of political economy, we find that a number of scholars have been able of combining analytical rigor (with different degrees of complexity) with a strong interpretation of historical paths and effective forecasts and prescriptions. Their aim has been to understand facts and deliver both inter-

Sections 2 and 3 of this chapter are due to Alberto Quadrio-Curzio, while Sect. 4 is due to Alberto Quadrio-Curzio and Fausta Pellizzari.

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pretive paradigms and policies about economic dynamics in order to identify actions able to control negative effects and to strengthen positive ones. The classical economists are a leading example of this approach, and their contributions are fundamental not only to political economy as a field of scholarship but also to political economy as a contribution to understanding the future of the world economy.

Today, the situation is much different with more, distinct specialization on economic facts and history, on analytical models, on institutions and economic policies. This is understandable given the complexity of today's world economy, but it is useful to adopt a scheme of the classical type that combines facts and history, theory and policy with different but complementary approaches. This will be the approach adopted in the three following sections of this chapter.

Section 2 is on general concepts and historically stylized facts. Here, several key contributions are considered that are fundamental to the following argument.

Section 3 is on dynamic theories without scarcities and on quasi-stationary theories with scarcity.

Section 4 is on resources and structural dynamics, techniques and technologies, rents and income distribution. This section presents and extends a theoretical framework worked out by one author of this chapter (Alberto Quadrio-Curzio) also in collaboration with the other author (Fausta Pellizzari).

The main thesis of this chapter is that resource scarcities have so far been of the relative type due to the contribution of technical innovation. However, structural and technological transitions leading to the relaxation of scarcities are a complex process with often unforeseeable results. Moreover, since a few decades new scarcities have appeared that are increasingly complex and may be of the absolute type. Therefore, initiatives such as Agenda 2030 of the UN and COP XXI are welcome, as any other initiative leading to eco-infrastructure policies on an international scale.

2 Historically Stylized Facts, Theories, and Definitions

2.1 Overview: Main Approaches to Production, Resources, and Scarcity

This section overviews the contributions to economic dynamics, capital accumulation, and investment at the core of the approach followed in this chapter.

Stylized views. Economic dynamics and growth can be represented in terms of never-ending tension between scarcity, production, and technical progress. At least since the onset of modern economic growth, whenever scarcity produced a slowdown of growth, technical progress followed and scarcity was thereby removed. Scarcity, in a long-run perspective, has always been of “relative” type, while “absolute” scarcity never set in. But relative scarcity remains, and therefore, the adjustments, when some boundary emerges, have been and are in many cases very complex, difficult, and time-consuming. Along these lines of thought, I consider interesting the contributions of Kuznets and Leontief, being the first keener to political economy and the second to economic analysis.

Since some decades, we are also challenged by a new type of scarcity which I will not consider in depth here (but taken into account in Quadrio-Curzio and Pellizzari 2004; Quadrio-Curzio et al. 2011): that of environment and air due to the pollution and to the global warming which is very difficult to be scientifically and technically controlled from one side and politically governed from the other as it needs also worldwide political cooperation.

Classical economists (particularly Malthus and Ricardo) made important contributions analyzing the role of natural resources in growth processes concluding that the stationary state was unavoidable because technical progress would not have been sufficient to overcome resource shortages due to population growth. While this conclusion has been proved wrong until now, the classical approach provides guidelines that could still be useful in addressing current problems of natural scarcities. However, the modern formulations of this approach have disregarded this possibility since they have followed either of two directions: that of generalized scarcity and that of no scarcity.

Dynamic theories without scarcities. Since the 1930s many theories considered the problem of economic growth disregarding natural scarcities. Among these there are standard macro-growth models of the post-Keynesian type (Harrod, Kaldor, Pasinetti), models of the neoclassical type (Solow), and multi-sectoral dynamic theories (von Neumann, Leontief, Pasinetti).

Multi-sectoral quasi-stationary theory. The most important contribution here is that of Piero Sraffa (1960), who addresses natural resources and changes in techniques while considering income distribution and rents. Nevertheless, his contribution remains limited especially because many of the most important problems come out in a dynamic analysis with all changes that it implies and which have little to do with a kind of a quasi-stationary state situation. Sraffa’s theory might be considered intrinsically

dynamic, but this potentiality has not been exploited by the author. That is the reason for which I call his contribution quasi-stationary.

Resources and structural dynamics, technologies, and rents. This approach goes back to contributions by Alberto Quadrio-Curzio from 1967 onward (Quadrio-Curzio 1967, 1975, 1990), more recently extended and generalized by Quadrio-Curzio in collaboration with Fausta Pellizzari (Quadrio-Curzio and Pellizzari 1996, 1999). The historical roots of this approach lay both in economic history and in theories. From history and economic reality, we derived the conviction that the transition from one stage of scarcity to another is generally very complex and also often different from a period to another. From multi-sectoral theories mentioned above, I derived the conviction that it was very difficult to put into them natural resources without radical changes which suggest to consider the approach as a structural one. In fact, multi-sectoral approach is traditionally connected with input-output, with production of commodities by means of commodities, with a growth process characterized by circularities and regularities, while structural dynamics has much more variabilities and cases. The political economy profile of this contribution is connected to the choices and changes of techniques and technologies and to the changes in income distribution.

Structural change and dynamics. This approach includes theories without and with natural resources, different types of technical progress, various transitions from one path of growth to another. Among the many contributions in this field, let us mention Landesmann and Scazzieri (1990, 1996), Scazzieri (1982, 1993, 1998), Kurz and Salvadori (1995), Baranzini and Scazzieri (1986), and more recently, Baranzini et al. (2015).

2.2 Stylizations on Dynamic Scarcities, Technologies, Rents

2.2.1 Some Basic Definitions

Resources and scarcities: we refer mainly to natural resources but also to the broadest categories of relative and absolute scarcity, static and dynamic scarcity, technological scarcity. The widest category of scarce resources will be called non-produced (or non-reproduced) means of production (NPMP).

A *technique* is a multi-sectoral system capable to produce a positive and uniform rate of net product and therefore capable to growth accumulating its surpluses. Any technique utilizes in production a NPMP.

The *maximum scale of production* of any technique is given by the full utilization of the NPMP which it uses.

A *technology* is given by at least two techniques which are connected and which can change when the order of activation of the techniques changes.

Changes in technology are determined by at least three broad factors: those in the level of activity, those in the choice of techniques depending on prices and income distribution, and those due to technical progress that affects one or more techniques.

Technical and technological progresses (for briefness I call them often *innovations*) are very complex and cannot be defined only on the basis of the increase of the maximum rate of net product of a single technique. These innovations are due to many causes among which the antagonism–synergy between scarcity and production.

Rents and income distribution: there are much more types beyond the usual “land rent”. They can be classified as extensive and intensive rents, surplus rents, differential rents, marginal rents, quasi-rents, structural rents, and technological rents. They can play a crucial role in the choice of techniques and technologies which in turn can influence income distribution;

Economic progress: innovations usually bring with them also economic progress. The most common measure is the increase of per capita GDP, but in my analysis the criteria chosen are a combination of growth and reduction and/or substitution in the use of NPMP. In fact, if the scarcity of NPMP makes the growth of GDP lower than that of population, the increase of per capita GDP is impossible.

These basic definitions will be refined and generalized in the course of the following argument.

2.2.2 Different Types of Resources and Scarcities

The main focus of this essay is on natural resources, the raw materials derived from them and their scarcities, topics in which stylized economic history has taken often interest. Many studies have focused on quantitative scarcity and have oscillated between the conceptions of absolute and of relative scarcity. The first being unchangeable, while the second being softened or eliminated through innovations.

Natural resources can be renewable (e.g., agricultural and forestry) or non-renewable (e.g., minerals). But all may be exhausted if consumed in excess. Renewable resources, such as agroforestry products, may be renewed but sometimes only in the very long term. Amounts of non-renewable

resources may be boosted through recycling processes or extensive (new mines) or substitution processes.

During the twentieth century, there has been a change of awareness that a growing number of natural resources might be exhaustible. At the same time, more attention was given to the use of natural resources which in previous centuries were considered in industrialized countries more or less “free” like water and air. Along the decades of the twentieth century, these NPMPs became scarce both for their use in production and consumption (water) and for the pollution (water and air). This brings to evidence environmental natural resources whose scarcity may increase directly or indirectly with any process of production and consumption.

There are finally the natural resources which become scarce because of legal protection. A growing number of environmental natural resources fall in this category.

We may conclude that the chain natural resources, raw materials, production, investment, consumption, and pollution is more complex than the chain natural resources, raw materials, production, and consumption. The former may lead to scarcity of the circular type which depends also on the balance between investment and consumption, while the latter leads to scarcity of the linear type.

The following analysis deals with directly productive natural resources and raw materials both renewable and non-renewable but scarce in terms of demand that production and consumption place on them in a growth process.

2.2.3 Relative Versus Absolute Scarcity

If we look at economic history and current trends, we find continual references to the scarcity (quantitative and/or qualitative) of natural resources but also to consequent or independent innovation (Quadrio-Curzio et al. 1994, 1996, 2011).

There is no doubt that, throughout the centuries, situations of acute scarcity of natural resources and raw materials have occurred but then the choices and the progress of techniques and technologies have removed or extended the limiting boundary of scarcity. Thus, the long-term dynamics and growth of industrialized economies can be interpreted, at least in part, on the basis of the principle of antagonism-coexistence-synergy between the scarcity of natural resources and raw materials on the one hand and the producibility of goods on the other.

The scarcity of natural resources has pushed innovations transforming the antagonism between resource scarcity and the production of goods into a synergy. This transformation emerges in many ways: by the transfer of natural resources from unusable to usable areas thus increasing the endowment; by the substitution of scarce resources with other abundant and previously unusable made possible by innovations and/or through substitution with new means of production of produced type; by innovations which reduce the demand for natural resources and raw materials per unit of production.

From another perspective, I could say that, historically, innovations have increased the “distance” between natural resources and raw materials on the one hand and the demand for finished goods and the means of production on the other.

This makes the difference also between industrialized and developing economies. In fact, in today’s industrialized economies innovations have increased, albeit not continuously, the “distance” of natural resources from demand for goods and raw materials so reducing direct pressure from the latter on the former. On the contrary in developing countries, the pressure on natural resources has increased due to a combination of more and faster growth and relative technological backwardness.

The above criteria can be applied to many historical, global, and specific contexts. For example, we could consider three economic revolutions that occurred in the last five centuries: the geographical-mercantilist revolution, the industrial-technological revolution, and the scientific-technological revolution (Quadrio-Curzio 1993a).

The first, exploiting the “forces of wind and sea”, added new (in quantity and/or in quality) natural resources but did not increase the “technological distance” between natural resources and final demand.

The second revolution started exploiting the “forces of energy produced by machines” introducing a new mean of production different from that of labor force and natural agents (wind and water). The quantity and/or the quality of natural resources needed to the new production processes increased and changed. This involved also “contradictions”. In fact, while much higher productivity was extracted by old raw material (wood) and the use of “new” raw material (coal) brought significant substitutions, the total quantity of needed raw materials increased with the acceleration of economic and social growth. Industrialization brought more growth which requested more natural resources and raw materials.

The third revolution which goes on now, exploiting the “full forces of sciences and technologies”, brought on new processes and products. The “linearity” which held during the early industrial revolution (natural

resources, raw materials, production processes, consumptions and investments, scarcity of raw materials) has turned now into a more complex system. The natural resources became scarcer due to the limited quantity available and due to political–institutional constraints and legal protection of environmental and natural resources. But these scarcities induce processes of technical innovation and changes which have different time paths.

A remarkable amount of analysis has been done on these topics leading to the conclusion that in economic history there is always a stream of “innovative scarcity”—that is, a scarcity which generates innovation but which also might create new and different forms of scarcity, which, until now, have been relative. However, this cannot be guaranteed in the future.

All this suggests the continued study of scarce resources because, although innovation seems to be able to solve many problems, it may not do so in a sufficiently short time to prevent the emergence of scarcities. In addition, the translation and application of the innovations may be neither institutionally nor economically feasible or desirable.

Moreover, we can have local or global scarcities. For example, agrofood in relation to world population is not now in a macro-view “globally scarce”, but certainly it is in many places “locally scarce”. This implies problems of distribution (both of the income and of organization/logistics) but also of production and choice of techniques and technologies.

And again environmental scarcity is now more and more legally binding. It is now being realized that environmental scarcity could be extremely dangerous due to its changeable, transnational, and often less identifiable character, and it could emerge in particularly threatening ways or with uncertain reversibility (Quadrio-Curzio et al. 1994).

Since environmental resources are consumed in many ways (including direct consumption in the form of exploitation of land, forests, water, air, etc.) and indirect consumption (through waste dumping, industrial pollution, and pollution stemming from urbanization and consumption), the problems are such that it is difficult to say whether we are faced with absolute or relative scarcity. Much will depend on the dimensions of the cumulative planetary effects of resource use and pollution, demographic dynamics and their geographical distribution, concentration, the degree of political, institutional, legal, economic and civil awareness of the problem, and ongoing scientific and technological research (Quadrio-Curzio et al. 1994; Quadrio-Curzio and Zoboli 1995; Quadrio-Curzio and Fortis 1996; Quadrio-Curzio and Pellizzari 2004).

Concluding, it must be accepted that a world without natural or legal scarcity constraints does not exist.

2.2.4 Scarcity Problems and Technology Solutions

Stylized economic history tells us that scarcity of natural resources (and thanks to techno-scientific innovation) has turned out so far to be “relative scarcity”, but it is also true that there are “technological scarcities”.

Relative scarcities have at times been extremely binding, and they have often extended over long periods. Qualitative scarcities are becoming increasingly important, and a relative scarcity for a single economic system might be an absolute scarcity for the planet in its historical process. The weakening of scarcity thus depends on sciences, techniques, and technologies, while the governance of scarcities depends more and more, in these days, on laws and institutions.

The “translation” of these scientific and institutional factors of improvement into production organizations and markets while non-disrupting the stocks of natural and environmental resources is what will distinguish this historical period compared to the previous ones. However, markets may lead to solutions that are damaging natural and environmental stocks. Appropriate investments in research and techno-sciences could avoid this outcome but require a time horizon considerably longer than that of most market agents. Actions that are damaging in the longer term need to be controlled by laws and institutions, which must introduce constraints to prevent the emergence of additional irreversible scarcities. This is a crucial political economy issue.

Nevertheless, the analytical treatment adopted here does not include the role of laws and institutions. I focus on technology, choice of techniques, and technical progress. Thus, the concepts of technological scarcity, natural scarcity, and technological innovation described above constitute only a partial contribution for an analysis of past and present reality from a political economy point of view.

Humankind always had to deal with problems related to natural resources and raw materials (Quadrio-Curzio 1993a; Antonelli and Quadrio-Curzio 1988; Quadrio-Curzio and Fortis 1986; Quadrio-Curzio et al. 1991, 1994, 1996), and the historical and current aspects cannot be reduced to the criteria proposed here. However, I believe that the analysis provided here brings economic theory a little closer to stylized economic history and also to the applied economics which deal with facts.

It is also clear that the enormous complexity of economic development cannot be reduced only to the role of technological factors and of substitution of scarce natural resources with more abundant (or producible) ones.

The concept of technological scarcity encompasses both optimism and pessimism: on the one hand, it highlights the possibility of overcoming scarcity with innovation; on the other hand, it pinpoints the scarcity of innovation itself; finally, it calls attention to the economic, civil, and institutional applicability of innovation. This justifies the study of scarce natural resources in a production-oriented framework.

2.3 Historical Quasi-structural Dynamics with Relative Scarcities

The previous issues may be considered in light of the contribution of two economists who have combined in their work a theoretical framework of the post-classical type with the reconstruction of long-term historical and/or measurable dynamics.

Simon Kuznets focused on long-term dynamics and on secular dynamics. His contribution, since 1930, can be considered one of the most important theories rooted not on mathematical complexity but on data and qualitative–historical approach. He analyzed hundreds of statistical data series of quantities and prices, for the USA and other countries, which led to the identification of secular trends with the joint presence of short-term cycles, longer cycles, and “secondary secular movements”, now known as “Kuznets cycles”. Kuznets also examined the importance, in various historical phases, of the nations and the economic sectors that had led to development. He extended this historical–quantitative approach in many subsequent works devoted to the main themes in development, such as relations between demographic trends and economic development, the influence of technological innovation, structural transformation, historical income inequality trends, capital accumulation, limited international diffusion of development.

The complexity of development emerges from this historical–quantitative theory. What interests us here is the analysis on natural resources, environment, and technical progress. Let us consider four points in Kuznets’ theory that intersect with these problems: structural transformation of the economy and agriculture; capital accumulation; technological innovation and its significance in terms of energy and industrial materials; impact of innovation on the environment. Ultimately, Kuznets is optimistic about the ability of technology to respond, through the mechanisms of adaptation, to the negative effects of growth and structural change on the resources depletion and on the environment that initially they may induce.

He writes: “First [...] resources are a function of technology [...]. Second, the long time involved in major technological innovations and their novelty make it almost impossible to predict and prepare for the ultimate effects, both positive and negative [...] Third, economic growth in the past and the technological innovations that underlay it involved major deteriorations in the broader environment, which were eventually overcome even if with difficulty. [...] Fourth, we can assume from past experience that, with the knowledge and technology at our disposal, adjustments will be made to the negative effects of technological innovation in the way of depletion of resources and deterioration of environment. [...] It is the social and political obstacles that are likely to be more serious than technology at our disposal” (Kuznets 1974, pp. 206, ff.).

Kuznets’ approach is quasi-structural as it is based on the interconnections among “sectors” (technologies, industry, resources, demography, environment) which relations and proportions change over time. Moreover, it is of political economy giving a clear role also to immaterial social, legal, institutional, and political factors and to their relations with the material ones.

Wassily Leontief focused on natural resources, with an analytical–quantitative theoretical approach in the seventies (Leontief et al. 1977). His model of the world economy is based on input-output theory and reaches conclusions which support the relative scarcity of natural resources and raw materials. It is also “global” as it is composed of various input-output sub-models connected and related to the same number of “regions” in the world for which the interrelations between the production and the consumption of goods, services, and natural resources are analyzed. Leontief’s approach is a quasi-structural and may be a structural one for the following reasons which also explain why it is a political economy contribution.

- (a) As to scarcity, he considers both social and material types stating that “the principal limits to sustained economic growth and accelerated development are political, social and institutional in character rather than physical. No insurmountable physical barriers exist within the twentieth century to the accelerated development of developing regions. [...] The most pressing problem of feeding the rapidly increasing population of the developing regions can be solved by bringing under cultivation large

areas of currently unexploited arable land and by doubling and trebling land productivity” (Leontief et al. 1977, pp. 10–11).

- (b) As to resource scarcity, he considers both global (mining, energy) and regional types. Concerning the availability of these resources and, most of all, the compatibility between known reserves and global needs, Leontief predicts that the natural reserves of only two raw materials (lead and zinc), as estimated in 1970, could be depleted before the year 2000. Even according to the most cautious scenario, coal is relatively abundant, whereas the available estimate of worldwide oil reserves is a multiple of the estimated total demand for the year 2000. Prudently, nonetheless, he notes that: ‘...the adequacy of the world endowment does not necessarily ensure against regional shortages and high prices, nor does it guarantee smooth economic transitions to dependence on shale oil, gasified coal and other ‘new’ energy sources’ (ibid., p. 6). So technology plays a fundamental role but transition can be complex.
- (c) As to pollution and environment scarcities, Leontief predicts for the developed world the technical feasibility of maintaining at the current (at his time) level of the net emission of pollutants. Furthermore, the overall economic cost of the strict implementation of similar technological standards in the developing countries should not be an insurmountable obstacle to their economic growth either. Even if this seems to us a rather optimistic evaluation, it must be noted that he was writing in the seventies.

Leontief’s contribution in this field does not belong to the field of global modeling and scenario forecasting as other works of the 1970s (e.g., Meadows et al. 1972). This is because Leontief relies on economic theory, while global models are “scenarios forecasts” with little theory. Second, Leontief’s contribution can be seen as a reaction to global models, which provided pessimistic forecasts about the exhaustion of natural resources from which descended proposals to achieving a condition of ecological and economic stability, which in economic terms would have led to a kind of stationary state.

The different approaches of Meadows (1972) and Leontief, that is, of absolute scarcity and relative scarcity, have been confirmed in writings (Duchin and Lange 1994) that draw directly from “extended” resource–environmental scarcity. The different evaluation of the possible impacts of innovation and the mechanisms it generates appears to be the main factor dividing these two approaches.

3 Dynamic Theories Without Scarcities and Quasi-stationary Theories with Scarcities

3.1 Growth Without Natural Scarcities: Some Theoretical Approaches

3.1.1 Growth Models of the Classical Type

I now move on to formal-analytical economic theories that I call post-classical in a very general way. Classical theories and especially that of Ricardo were both dynamic and structural paying attention also to natural resources with much consideration to relative scarcity but ending with a Malthusian view of absolute scarcity.

From the 1930s, a wide stream of dynamic models started with two unifying elements: that of capital accumulation and that of technical progress. But more or less all models underestimated or disregarded the role of scarcity of natural resources.

The models built on the classical heritage fall into two broad categories. One originated with Roy Harrod's macroeconomic theory (1939, 1948). The other has the multi-sectoral approach as its unifying element. In the latter category, the seminal contributions are those by John von Neumann and Wassily Leontief. Von Neumann constructed a multi-sectoral mathematical model (1937) in order to identify the conditions for maximum growth. Leontief outlined a multi-sectoral empirical system in order to highlight the interindustry relationships of the US economy, first in a single-period framework (Leontief 1941) and then in a dynamic framework (Leontief 1953).

We do not aim here to analytically reexamine the above dynamic models and those built on them, as we only wish to highlight the similarity of their approach to natural resources, raw materials, and rents. All these elements were neglected or underestimated.

In this short and selective "survey", we will stop at the beginning of the 1960s as at that time Sraffa's work came out.

3.1.2 Macro-dynamic Models: Harrod

Roy Harrod, after summarizing Ricardo, wrote: "The [Classical] dynamic theory was crude, in part untenable as universal law, and in part untenable

altogether. [It] had two aspects. There was (1) the theory of motive power, and (2) the theory of progressive redistribution... accumulation was the motive power... In this approach there are two propositions in the Classical system which can be tentatively discarded. One is the population doctrine... changes in it may be regarded as exogenous changes. Secondly, I propose to discard the law of diminishing returns from the land as one of the primary determinants in a progressive economy... I discard it only because in our particular context it appears that its influence may be quantitatively unimportant” (Harrod 1948, pp. 18, ff.). So Harrod, albeit with a degree of caution, excludes scarce natural resources, the role of which he limits to diminishing returns, on the rather questionable basis that they have a negligible quantitative impact. Another important analysis being a “prototype” in itself also for its Keynesian flavor is that of Kaldor (1955–1956), who also analyzes the income distribution but saying nothing about scarce resources and rent.

Generally speaking, our conclusion is that underestimation of natural resources and rents, or more generally scarce resources and rents, in the macro-models of growth is generalized until the half of 1960s as shown by the classical survey of the theories of growth by Hahn and Matthews (1965).

3.1.3 Multi-sectoral Growth Models: Von Neumann and Leontief

Von Neumann elaborated a fundamental multi-sectoral mathematical growth model which for some can be connected to the classical approach while for other is much more close to a Walrasian approach. Anyhow he wrote: “Goods are produced not only from ‘natural factors of production’, but in the first place from each other. These processes of production may be circular” (von Neumann 1937 [1945–1946], p. 1); “In order to avoid further complications we assume: that there are constant returns to scale; that the natural factors of production, including labour, can be expanded in unlimited quantities” (ibid., p. 2).

Therefore, he excludes the existence of scale constraints on natural factors of production, although he does recognize that they play an important role in the production process.

Leontief (1941, 1953), who follows a physiocratic-classical approach, is much more cautious. While his theory takes account of all the sectors that transform primary commodities, he does not examine the scale constraints that natural resources impose upon the production system. However,

Leontief acknowledges the role of natural resources in determining the comparative advantage of economic systems: “Invisible in all these tables but ever present as a third factor or rather as a whole additional set of factors determining [US] productive capacity and, in particular, its comparative advantage vis-à-vis the rest of the world, are natural resources: agricultural land, forests, rivers, and our rich mineral deposits. Absence of systematic quantitative information, similar to that which has been collected, [...] with respect to capital and labor, prevents us as yet from introducing this important element explicitly into this preliminary analysis” (Leontief 1953, p. 96).

This statement is grounded on an empirical consideration and not on a theoretical one. Furthermore, in the mentioned contribution of 1977, Leontief explicitly introduced natural resources and raw materials.

3.1.4 Pasinetti’s Theory: Macro- and Multi-sectoral Growth

The only author we want to mention is Luigi Pasinetti who has given fundamental contributions both to the macro-theory of growth and of income distribution and to the multi-sectoral theory of growth and choice of techniques (1965, 1977, 1980, 1981, 1993). His theories are very innovative inside the modern classical and Keynesian developments combining the two approaches and staying also within a political economy approach. Nevertheless, as for the previous authors, we limit ourselves to Pasinetti’s position as to natural resources.

Let us consider two Pasinetti’s statements:

In the first, he states that his theory is “... a theoretical model for an industrial economic system... [of] pure production [in which] all commodities considered are produced, and can be made in practically whatever quantity may be wanted, provided that they are devoted that amount of effort they technically require.

To *avoid unnecessary complications*, [added emphasis] scarce resources will not be considered. This does not imply any disregard of the problems of rationality. [...] [Furthermore] the procedure does not mean that natural resources are assumed to be homogeneous and non-scarce [...] [but that] the basic theory will be developed *independently* of the problems of optimum allocation of the scarce resources” (Pasinetti 1981, pp. 23–24).

In the second statement commenting Sraffa’s theory, he writes:

“Sraffa has shown that lands, or more generally natural resources of various types, by entering the production process though not themselves being produced, play, in reverse, a role similar to that of non-basic commodities

which are produced, but do not enter the process of production. They *do not affect the rest of the analysis* [added emphasis], and can therefore be left aside, to begin with. They may, of course, be introduced later on, and when they are introduced they bring with them the required necessary information about their rents and prices. [...] This gives a powerful analytical justification to the approach which is taken here [i.e., the approach does not consider natural resources]. It means effectively that the model, though not explicitly dealing with the problems concerning the scarce resources, will be kept open to their introduction” (Pasinetti 1981, pp. 24–25).

This statement virtually excludes the role of natural resources in a growth model assuming that technical progress is powerful enough to overcome any scarcity in the long run. However, the two following considerations are in order:

- (i) Scarce resources are not an unnecessary complication as their introduction in a multi-sectoral model deeply transforms the dynamics of the economy.
- (ii) Scarce resources cannot only be considered from an optimal allocation point of view. In a modern structural perspective, scarce resources are closely connected to income distribution and the choice of techniques, in both a static and dynamic context, and their consideration changes the overall multi-sectoral system.

3.1.5 Two Different Points of View on Scarcity

So none of the contributions mentioned before consider theoretically the problems of the relative scarcities of natural resources in relation to the choice of techniques and of technical progress. The modern classical or post-classical school overemphasizes the technical progress which brings to absolute producibility.

A situation which is very different from the marginalistic and neoclassical theories in which all economic problems should be formulated in term of optimal allocation of scarce resources.

But we must be careful with superficial classifications dealing with scarcity. Let us compare for instance two sentences of Hicks, who is considered close to “neoclassical school”, and Pasinetti, who is a considered a post-classical.

Hicks wrote “Growth equilibrium [...] has other difficulties to face which are quite as serious. One, it is very well known, is the matter of land; it is only when land is in abundant supply that an economy can maintain itself

in growth equilibrium with an unchanged technology. If one overrides this objection, one is following Smith, not Ricardo; to go back to a state of innocence before diminishing returns is not a thing which one feels comfortable in doing. Nevertheless, for the time being, that is what we shall do here” (Hicks 1965, p. 133, ff.).

Pasinetti wrote “The economists who have taken the production approach to economic reality have always claimed that production can in fact be investigated independently of the problems concerning the scarce resources. This claim goes back to Ricardo, who ‘eliminated’ land from his analysis of value and distribution by referring his arguments to the ‘marginal’ land (that piece of land that yields no rent)” (1981, p. 24).

Hicks, pointing out that scarcity modifies growth equilibrium and changes of technology, is close to Ricardo even if he does not deepen his statement. On the contrary, Pasinetti (who leans also on Sraffa) after having said that the Ricardian prices determination depends on the production conditions in the less fertile land (which Sraffa does not qualify as “marginal” in the extensive case) deducts that land is eliminated from the theory of value and distribution, which is not true in the model that will be presented in Sect. 4 of this essay.

In the next sections, we will consider how modern classical theory can be widened introducing in it the natural scarce resources and the raw materials.

3.2 Land and Rents in a Modern Classical Stationary Approach

As said none of the theoretical-analytical post-classical treatments presented above include a general analysis of production, income distribution and technical change focused on scarce resources and rents. In some way, the same is paradoxically true also for the seminal post-classical contribution published in 1960 by Piero Sraffa (1960). In this work, Sraffa goes back to the Ricardian approach to natural resources (land) and rents but does not go far on enough. In what follows, we shall briefly consider Sraffa’s contribution (the interested reader may consult the large literature on this author, and in particular Roncaglia 1978, 2005; Kurz and Salvadori 1995).

3.2.1 Land and Natural Resources

Sraffa’s theory deals with the circularity of production processes which create surpluses. The context is, in our evaluation, that of a single-period

situation or that of a quasi-stationary situation characterized by the complete consumption of the surpluses and of fixed production coefficients like in Leontief. In Chapter XI of his book, Sraffa deals with “land”, which is a synonymous of a particular type of natural resource, including it in a multi-sectoral and circular representation of a production system.

This inclusion appeared to various economists incompatible with the principle of the production circularity, and therefore, many considered Sraffa's chapter on *Land* either secondary or incoherent with his theory. These opinions are appropriate considering the stage at which Sraffa brought his analysis on land. This is demonstrated also by the symmetry that he stated between non-produced means of production and non-basic goods (i.e., goods which do not enter in the production) both being excluded from the “standard commodity” which is the crucial numeraire in Sraffa's theory in order to find out an unambiguous (i.e., not modified by prices movement) relation between the rate of profit and the unitary wage. And in fact the process of production which matters for the determination of prices and income distribution is that on the least “productive” land which is not scarce and has zero rent.

From this statement on the standard commodity, Pasinetti (1981, pp. 24–25) draws the conclusion that the introduction of natural resources does not change the Sraffa's theory of prices and income distribution but gives all information on rents. This is true under the assumption of fixed production coefficients and of the invariability in the process with zero rent.

3.2.2 Rents

For Sraffa, scarcity is important not because it is connected with the technological structure and with growth but because its presence can influence prices and distribution. Rent arises when economic structure and the level of production entail at least two processes that use land and produce the same raw material. This leads to differential rent which is earned by more “productive” land in the extensive case being zero on the less “productive” land. The least no-rent “productive” process enters, with the other processes which do not use land, into the multi-sectoral system which determines the prices of commodities and the distributive variable, either the profit rate or the unit wage, which is not exogenously fixed.

According to Sraffa: “if n different qualities of land are used, they will give rise to an equal number of different methods of producing corn [...] There will therefore be n production-equations, to which must be added the condition that one of the lands pays no rent” (Sraffa 1960, p. 74).

Sraffa deals also with the intensive rent when two processes are simultaneously activated on the same land.

One final aspect of interest in Sraffa's theory is that of quasi-rents which open up the possibility of applying the theory to all non-reproduced and scarce means of production compared to the scale of activity and operating alongside other means of production included in processes with different efficiencies.

3.2.3 The Unsolved Problems

A final aspect, which is crucial to us, regards the problem of the order of fertility of various types of land. Sraffa points out that a natural order of the fertility of lands does not exist. This is true with many consequences that nevertheless Sraffa does not clarify. Let us consider a case of extensive cultivation which involves various processes using different qualities of land producing the same commodity and others that do not use land and each one produces a different commodity. The fertility of each piece of land could be unambiguously identified in physical terms only if the production processes could be ordered in physical terms of inputs and outputs. This is absolutely unrealistic and so Sraffa is right saying that: "The order of fertility [...] is not defined independently of the rents [and therefore of prices of inputs]; that order [...] may vary with the variation of r and w [profit rates and unit wages]" (Sraffa 1960, p. 75).

With these propositions, Sraffa uncovers the problem of the non-existence of a natural "order of fertility" and the problem of changes in the order of processes that use "land". But he does not solve it as he does not take into account or does not clarify (see Quadrio-Curzio and Pellizzari 1999, Chapter I, p. 30) the following problems:

- the analytical distinction between fertility of lands and efficiency of the methods of production that make use of them. Such efficiency depends on the technology of the whole economic system;
- the distinction between the order of efficiency that should be followed while activating lands and the order of rents;
- the effects that quantitative variations of commodities' production exercise upon rents;
- the effects that variations in the exogenous distributive variables (unit wage or rate of profit) have upon the order of efficiency of land-based processes and rents;
- the effects of accumulation and technological change on quantities, prices, distribution, and above all on rents.

To conclude, Sraffa's contribution to the role of natural resources and rents is important but incomplete. Even so it might be considered the starting point of some modern classical theory of rent.

4 Resources and Rents, Scarcities and Technologies, Structural Dynamics

4.1 A New Approach to Scarcity and Rent

In what follows we shall outline the principal elements of a theory of scarcities and rents on which one author of this chapter has worked since the 1960s (Quadrio-Curzio 1967, 1975, 1980, 1986, 1987, 1993a, 1996, 1997, 1998a, b, 2003, 2011). This theory is framed in terms of a multi-sectoral system in which productions are bounded by some scarcities. Subsequent contributions, originated by collaborative research with the other author of this chapter (Fausta Pellizzari, see Quadrio-Curzio and Pellizzari 1991, 1996, 1999, 2004), have generalized the theory including not only land but all non-produced or non-reproduced means of production (NPMP) necessary to produce, directly or indirectly, all goods. Each one of these NPMPs is limited in quantity and different in quality from the others.

The following sections outline a theoretical framework that presents the main results of the above line of research. The theoretical framework presented below is a contribution to the political economy of resources in its capacity to pay attention to two different and intertwined aspects of historical dynamics: scarcity (especially of land), which often brought about the fear of a quasi-stationary state, and technical progress, which plays a fundamental role in overcoming scarcity also through changes in the structure of the economic system.

4.2 The Basic Structural Systems: Quantities, Distributions, Prices

4.2.1 The Structural System: Quantities

Starting from Sraffa's scheme (1960) but having in mind a wider perspective, we define the structural economic system (SES) as made by two subsystems of productive processes which cannot be activated independently for producing $m+1$ basic commodities which are also needed as means of production.

The two subsystems have a maximum potential production as each one utilizes a NPMP of given and different quality and quantity.

The first subsystem is made by a number of processes, which can go from 1 to k , to produce commodity 1 which is basic. Each of these processes utilizes a NPMP of different quality and quantity. In a Ricardian terminology, this commodity would be “corn” and NPMP would be “land”. The k independent processes, each one able to produce commodity 1, are represented as follows:

$$[\mathbf{a}_1(h); l_1(h); \tau_1(h)], \quad h = 1, 2, \dots, k; \tag{1}$$

Being (the bold letters are either matrix or vectors) $\mathbf{a}_1(h)$, the vector of the input technical coefficients of the $m + 1$ commodities employed to produce commodity 1, $l_1(h)$ the labor technical coefficients, and $\tau_1(h)$ the technical coefficients of NPMP of type h which is necessary for production.

The quantity of commodity 1 produced by process h is subject to the constraint:

$$q_1(h)\tau_1(h) \leq T(h)^*, \tag{2}$$

where $T(h)^*$ is the availability of NPMP of type h .

The second subsystem, composed by m processes producing the j commodities (which don't require directly NPMP's input), is represented as follows:

$$[\mathbf{a}_j; l_j], \quad j = 2, \dots, m + 1, \tag{3}$$

In order to produce the $m + 1$ basic commodities, all these m processes must be in activity together with at least one process producing commodity 1.

All the technical coefficients include a given necessary consumption. The system of production is given by $m + 1$ processes. Being k the maximum number of processes which can produce commodity 1, it is possible to distinguish k structural systems of production each one made by $m + 1$ processes that are at least capable to reintegrate all produced means of production (i.e., viable such that each matrix $\mathbf{A}(h)$ is non-negative, viable, and indecomposable with a maximum eigenvalue which is real, positive, non-repeated, less than 1). It is possible to identify k distinct structural systems (named also techniques) as follows:

$$\begin{aligned} \mathbf{A}(h) &= [\mathbf{a}_1(h); \mathbf{a}_2; \dots; \mathbf{a}_{m+1}] \geq 0, \\ \mathbf{I}'(h) &= [l_1(h); l_2; \dots; l_{m+1}] \geq 0. \end{aligned} \tag{4}$$

Each technique, constrained by the availability of NPMP of type h , utilizes a different NPMP and differs from the others for the process producing commodity 1. Given the scale constraints, which might depend on a great variety of natural, technical, and institutional elements, the growth of the production requires to activate an increasing number of processes of the NPMP subsystem producing the primary commodity.

We assume that:

$$\mathbf{q}(h) - \mathbf{A}(h)\mathbf{q}(h) = \mathbf{s}(h) > \mathbf{0} \tag{5}$$

and therefore, that each process of production has a surplus (even if a weaker condition that some surpluses might be zero does not change the conclusions);

$$\mathbf{l}'(h)\mathbf{q}(h) \leq \bar{L} \tag{6}$$

and therefore, the available labor force is enough to produce $\mathbf{q}(h)$; finally, the condition (2), rewritten as:

$$q_1(h) \leq T(h)^*/\tau_1(h) \tag{7}$$

holds, meaning that the quantity $q_1(h)$ and therefore $\mathbf{q}(h)$ are bounded by the quantity of NPMP of type h .

When the maximum production of $\mathbf{q}(h)$ is reached, in order to increase \mathbf{q} another NPMP must be utilized and therefore another process of subsystem (1).

Supposing that the sequence is that of (1) with $h=1$, the new process to produce commodity 1 will be

$$[\mathbf{a}_1(2); l_1(2); \tau_1(2)], \text{ with } q_1(2) \leq T(2)^*/\tau_1(2) \tag{8}$$

and so on for $h=3, \dots, k$.

The activation of the k processes should follow an “order of efficiency” which is a rather complicated issue as outlined in Sect. 3.2.3. To compare different orders of efficiency, it is necessary to consider also the structural technical system in its “dual” setting on distribution and prices.

4.2.2 The Structural System: Rents, Distribution, Prices

The structural system based on prices and income distribution between profits and wages is expressed by

$$[1 + \pi(h^*)]\mathbf{A}(h^*)'\mathbf{p}(h^*) + \mathbf{l}(h^*)w(h^*) = \mathbf{p}(h^*), \tag{9}$$

which includes $m + 1$ production processes and commodities and where the NPMP(h^*) is not scarce and therefore has zero rent:

$$\rho(h^*) = 0, \tag{10}$$

being $\mathbf{p}(h)$ the price vector, $\pi(h)$ the rate of profit, $w(h)$ the wage per unit of labor, $\rho(h)$ the rent per unit of NPMP (“land”) of type h as shown in (14). Equation (9) expresses a determinate structural system of prices and distribution if we suppose that w or π is exogenously given as follows:

$$w(\max) \geq \bar{w}(h^*) \geq 0, \tag{11}$$

where $w(\max)$ is the maximum unit wage corresponding to $\pi = 0$;

$$\pi(\max) \geq \bar{\pi}(h^*) \geq 0, \tag{12}$$

where $\pi(\max)$ is the maximum rate of profit corresponding to $w = 0$.

Finally, the system needs a numeraire for which we choose the good 1 produced directly by the NPMP

$$p_1(h) = 1 \tag{13}$$

as this makes simpler the construction.

The unknowns of the structural system (9)–(13) can be easily determined given the said properties of matrix $\mathbf{A}(h^*)$.

Subsequently, k systems of type (9) can be constructed assuming for each $\rho(h) = 0$.

Each of these is a usual linear price-distribution system.

When more than one process of type (1) is activated, it means that some NPMP is scarce and therefore rent arises on it. Being this the novelty on which we will build the following analysis, the title that we choose is the structural system: rents, distribution, prices.

For the h processes which have positive rents, the equation on which rent can be determined is

$$\mathbf{a}_1(h)' \mathbf{p}(h) [1 + \pi(h)] + l_1(h)w(h) + \tau_1(h)\rho(h) = p_1(h), \tag{14}$$

$h = 1, 2, \dots, k$,

being $h \neq h^*$, where h^* is the process with zero rent on which \mathbf{p} , w , and π are determined.

Now the structural system is given by Eqs. 9 to 14 where (9) can now be called subsystem ($p-w-\pi$) which variables can be find out if it is known the NPMP which has $\rho(h^*) = 0$. This raises the problem of finding out the process h^* which can depend also on the solutions of Eq. 14 that, for simplicity, we call “rents subsystem”:

$$\rho(h; h^*) = [p_1(h^*) - \mathbf{a}_1(h)' \mathbf{p}(h)(1 + \pi(h^*)) - l_1(h)w(h^*)] [\tau_1(h)]^{-1} \quad (15)$$

having find out $\pi(h^*)$, $w(h^*)$, $\mathbf{p}(h^*)$ solving system (9) for h different from h^* .

4.3 The Different Orders of Efficiency

4.3.1 Degrees of Exogenous Choices and “Efficiency Orders”: The Role of “Political Economy”

We have stated in Sect. 3.2.3 that it is impossible to find an invariable order of fertility. In fact, there are many possible “orders of efficiency” among the k NPMPs which depend on the combinations of the structural systems of quantities and of rents for any given level of the exogenous variable.

At this point, the role of “political economy” should become clearer going back to the definition given in Sect. 2 and remembering that only “analyzing” the different effects of the manifold exogenous choices it is possible to qualify also as “political” what is usually considered as purely “economics”. In fact, economic analysis clarifies the effects of choices providing the decision makers with the knowledge that would enable them to make more informed choices.

In what follows, we will see that the consequences change widely if the choices are made by different decision makers: the seekers of profits or wages or rents; the seekers of growth of production or employment; the seekers of technical and technological progresses.

4.3.2 The Order of Rentability as Order of Efficiency

The order to follow in activating the k processes each one utilizing a NPMP can be found out independently from the quantities \mathbf{q} to be produced. Let us settle as exogenously fixed w starting from

$$w = 0 \quad (16)$$

which is meaningful being the necessary wages included into the coefficients of \mathbf{A} . The k subsystem $p-w-\pi$ (9) can be ordered as follows

$$\begin{aligned} \max \pi(1) &> \max \pi(2) > \dots > \max \pi(k) \\ \mathbf{p}(1) &\geq \mathbf{p}(2) \geq \dots \geq \mathbf{p}(k), \end{aligned} \quad (17)$$

having done an appropriate permutation of the h indices, which were initially randomly attributed, and taking into account that the only equality across the various $\mathbf{p}(h)$ is $p_1 = 1$.

The order of efficiency (OE) established on the basis of the maximum profit rate is equal to that established on the basis of the vector of prices. This is so because the difference between the vectors of prices is determined only by the h^* process which utilizes a different NPMP. The production cost of commodity 1 grows as the activation of the processes with NPMP follows the order (17) and the prices of the other commodities decrease in terms of commodity 1, which is the *numeraire*.

In this case, the order of efficiency is given by the order of rentability of the k processes with NPMP. Let us consider the rents subsystem (15). When $h^* = 1$, namely $\rho(1) = 0$, it follows that we have $\max \mathbf{p}(1)$ and $\max \pi(1)$. Introducing in (15) these maximum values as exogenously given to determine $\rho(h; 1)$ for $h = 2, \dots, k$, these rents are necessarily negative because $\mathbf{p}(1)$ and $\max \pi(1)$ are greater than those values that would equal them to zero.

In raising the activity from one to k processes with NPMP, it can never occur that an already active process becomes non-economic that is yielding negative rent. Therefore, when two or more processes with NPMP are activated, it follows that

$$\begin{aligned} \rho(h; h^*) > 0 & \quad \text{for } h < h^*; \rho(h^*; h^*) = 0; \\ \rho(h; h^*) < 0 & \quad \text{for } h > h^*. \end{aligned} \quad (18)$$

Finally, when $h^* = k$ it follows that

$$\rho(h; h^*) > 0 \quad \text{for } h < h^* = k. \quad (19)$$

Deepening and widening this analysis, it is possible to demonstrate that

- (i) When the number of processes with NPMPs activated grows, it is possible that the order of positive rents among processes already activated changes owing to the different effects of the changes of \mathbf{p} and π . So it is better to distinguish among the order of rentability (which does not change with the number of processes activated being fixed exogenously $w = 0$) and the order of rents.
- (ii) If the exogenous w grows, respecting condition (11), the order of efficiency and/or rentability can change, and therefore, the number and the type of NPMPs utilized for any given scale of production. The cases might be many with a decline of efficiency of the processes with a high

intensity of labor. Some might become totally inefficient having a negative rent and being no more activated.

- (iii) It follows that the changes in income distribution can have consequences on the NPMPs used and therefore on the system of produced quantities.
- (iv) When π is chosen as the exogenous variable, all the previous reasoning can be repeated considering that when π grows and w declines the processes less labor intensive become more efficient from the point of view of the order of rentability.

From a political economy point of view, the consequences on income distribution, on the utilization of factors of production, and on production depend heavily on which stakeholder or shareholder has the highest decision and/or contractual power, and on what is the role of the “State”. Everything is complicated by the fact that along time the power of decision makers can change.

4.3.3 The Order of Surpluses as Order of Efficiency

Going back to relations (1)–(7) and supposing that each technical structural system (5) has a uniform rate of surplus or net product, it follows that

$$[(1 + s(h)) \mathbf{A}(h) - \mathbf{I}] \mathbf{q}(h) = \mathbf{0}, \tag{20}$$

$$q_1(h) \leq T(h)^* / \tau_1(h) = \bar{q}_1(h), \tag{21}$$

$$\mathbf{l}(h)' \mathbf{q}(h) \leq \bar{L}, \tag{22}$$

$h = 1, 2, \dots, k$.

Having done an appropriate permutation of the h indices, which were initially randomly attributed, it can be established an OE among the k processes or system with one NPMP as follows

$$s(1) > s(2) > \dots > s(k). \tag{23}$$

Among the many properties which follow from this OE, we point out immediately one. If the OE (23) is followed in activating the k processes, it is necessary to have compatibility with the OE as order of rentability. Therefore, being the sequence of the h processes in (23) equal to the sequence in (17), any activation of processes along (23) is possible only if w

is zero, and therefore, the techniques are chosen following the order of the declining $\max \pi(h)$.

4.3.4 Toward Complex and Interdependent Structural Technological Systems

Confining ourselves into static or comparative static analysis, we have identified the orders of efficiency of processes that use various scarce resources: one is that of rentability and the other is that of surpluses. We have also identified the effects of autonomous variations in income distribution and those induced by changes in the levels of activity on these orders. It is clear now that the role of rent in distribution and that of scarcities in production become central.

Some concepts have to be summed up and stressed now.

The first is the distinction between techniques and technologies. A technique considered alone is given by (20)–(22), while a technology is the set of many techniques which operate together due to the scale limits of each NPMP.

The second is that when more than one structural technical system (20) is active, we have to deal with a structural technological system made by many subsystems (20). This requires the formal analysis of these complex structural technological systems and of the subsystems which belong to them. The complexity rises more and more for the many possible technical and technological surpluses and rents combinations.

The third is that the previous analysis identified the OE among processes with NPMP. That is the order to observe in activating the k processes that produce the primary commodity. Thus, we have k different “technologies” with 1, 2, ..., k active processes employing NPMP. Obviously, all the k technologies and the related general system of price-distribution are “potential”. The choice of technology and the adoption of an “effective” technology will depend on the actual level of economic activity and its interaction with the price-distribution systems.

The fourth is that the surpluses are a measure of the potential capital accumulation and this brings us into the dynamic analysis which has been up to now avoided.

In the following sections, some of these problems are identified, obviously with no pretense to provide a simplified re-explanation of the treatment which, among other things, involves a complex analytical apparatus enriched

by a series of numerical simulations. Those interested in deepening the topics are referred to some of Quadrio-Curzio's previous works and especially to Quadrio-Curzio and Pellizzari's works, which on the one hand sum up and generalize the previous results and on the other hand enlarge the concept of scarce natural resources to that of technological scarcity and technological rent.

4.4 Toward a Dynamic Analysis with Technological Scarcities, Changes, and Progress

4.4.1 Different Technologies and Different Rents

In the following analysis, we will consider two representations of the technological systems in order to analyze the level of activity from two different points of view when there are scarce NPMPs.

The first is quasi-dynamic and is based on "global technologies" that include many processes to produce the same commodity, as well as processes that produce distinct commodities. This enables the examination of variations in a technology's efficiency, structure, and scale, based on constraints stemming from the gradual utilization of scarce resources to increase production levels.

The second is fully dynamic and is based on "compound technologies" temporally connected to other technologies in the process of accumulation. The dynamics emerges at variable rates depending on the complex problems of structural compatibility between techniques which are included in a technology.

Thus, new concepts of scarcity and rent emerge.

The "technological scarcity" emerges when there is scarcity not only of resources but also of techniques and technologies capable to overcome the NPMP's scarcities. The changes in technologies, which are not necessarily due to innovations and progress, can have many effects in order to weaken the scarcities of NPMP, also speeding up growth because of a different sequence of techniques which make up a technology.

The "technological rent" follows from the previous and other changes which in turn influence the price-distribution system. So the analysis moves from the "surplus rent" (which stems just from the different land fertility in use) to the "structural rent" (which derives also from the order of efficiency chosen when at least two processes are activated simultaneously to produce the same commodity) to the "technological rent" that accounts for the broader aspects of a technology and its changes based on the effects of

scarcity factors on the growth of production, on income distribution, and on the orders of efficiency among processes using scarce resources. We will come back to this problem in Sect. 4.7.

4.4.2 Global Technologies and Quasi-dynamic Paths

A global technology includes in the same matrix all the processes producing the primary commodity sequentially activated together with the processes producing the other commodities.

When only one technique including the most efficient (according to any-order) of the k processes with NPMN is activated, we have an economic system on which a uniform rate of net product can be determined.

When two processes with NPMP are used, in addition to the other m processes, the global technology can be represented as follows:

$$\mathbf{A}_\alpha(1, 2) = \begin{bmatrix} a_{11}(1) & 0 & \alpha_{12}(1) \cdot \alpha_{1,m+1}(1) \\ 0 & a_{11}(2) & \alpha_{12}(2) \cdot \alpha_{1,m+1}(2) \\ a_{21}(1) & a_{21}(2) & a_{22} \cdot a_{2,m+1} \\ \vdots & \vdots & \vdots \cdot \vdots \\ \vdots & \vdots & \vdots \cdot \vdots \\ a_{m+1,1}(1) & a_{m+1,1}(2) & a_{m+1,2} \cdot a_{m+1,m+1} \end{bmatrix} \quad (24)$$

where the two processes $\mathbf{a}_1(1)$ and $\mathbf{a}_1(2)$ are joined in the production of the primary commodity required by the whole system and the splitting coefficients α represent the supply of commodity 1 respectively by process 1 and 2 to the other processes. The physical system with two techniques is given by:

$$[(\mathbf{1} + \mathbf{s}_\alpha(\mathbf{1}, \mathbf{2})) \mathbf{A}_\alpha(\mathbf{1}, \mathbf{2}) - \mathbf{I}] \mathbf{q}_\alpha(\mathbf{1}, \mathbf{2}) = \mathbf{0}, \quad (25)$$

$$\alpha_{1j}(1) + \alpha_{1j}(2) = a_{1j}; \quad \alpha_{1j}(1) > 0, \quad \alpha_{1j}(2) > 0, \quad (26)$$

$$q_1(1) = \bar{q}_1(1) = T(1)^* / \tau_1(1), \quad (27)$$

$$q_1(2) \leq \bar{q}_1(2) = T(2)^* / \tau_1(2), \quad (28)$$

$$\mathbf{l}(1, 2)' \mathbf{q}_\alpha(1, 2) = L \leq \bar{L}, \quad (29)$$

$$\mathbf{l}(1, 2)' = [l_1(1), l_1(2), l_2, \dots, l_{m+1}], \quad (30)$$

$$\mathbf{q}_\alpha(1, 2)' = [q_1(1), q_1(2), q_2, \dots, q_{m+1}] \quad (31)$$

The global technology includes in the same matrix all the processes producing the primary commodity sequentially activated together with the processes producing the other commodities.

The smallest economic system includes only the most efficient (according to any chosen order) of the k processes with NPMP, and its uniform rate of net product is also the maximum rate of accumulation and growth in a dynamic situation. When this system reaches the full utilization of its NPMP, another process with a different NPMP is activated within the global technology $\mathbf{A}_\alpha(1, 2)$. This raises two problems.

One is the accumulation of surpluses of technique $\mathbf{A}(1)$ into technology $\mathbf{A}_\alpha(1, 2)$ and the continuous accumulation while this last changes as α grows.

The other is the explanatory capacity of the global technological structural system (24)–(31). Here, we only consider this problem, and therefore, we call this model “quasi–dynamic”. It is possible to show that the production processes of the economy based on a global technology can be structured so as to generate a uniform rate of net product which changes with α which in turn grows with the process of accumulation and use of the second NPMP.

If it is chosen the OE given by the rates of surpluses, $s_\alpha(1, 2)$ declines when α grows as the weight of the technique with $s(2) < s(1)$ increases. Both $s_\alpha(1, 2)$ and $s(1)$ are measures of the efficiency of the economic system but, while $s(1)$ represents also the maximum uniform and constant growth rate of productions with technique 1, the rate $s_\alpha(1, 2)$ is not necessarily the growth rate of productions with technology $\mathbf{A}_\alpha(1, 2)$, and moreover, it is not constant.

The model with global technologies is quite different from the Leontief and von Neumann models. In fact, the growth of the activity levels, obtained by increasing the weight α of the last activated process with NPMP, always affects the uniform rate of net product even if the number of processes with NPMP does not change. And if an OE with growing $s(b)$ is chosen, also $s_\alpha(1, 2)$ will grow. All these properties can be demonstrated also when k processes with NPMP are activated and in which a global technological structural system will be expressed by a matrix with $k + m$ processes. This case is analytically rather complicated being necessary to deal with problems of aggregation and disaggregation.

4.4.3 Compound Technologies and Dynamic Paths

Dynamics and accumulation are the phenomena that make scarcity emerge when technical progress is absent or weak bringing to a point in which the economic system becomes stationary and scarcity absolute until some

innovation removes or weakens the boundary of NPMP. Among the many cases which can be constructed, it seems useful to distinguish at least two: the first is dynamics without technical progress which in turn can be without or with technological change or progress; the second is dynamics with technical progress without or with technological change or progress.

The many combinations with or without technical and technological changes/progresses are many and can be fully cleared up with a wide analysis and gradual removal of simplifying assumption.

A “compound technology”, as said, includes many techniques with fixed coefficient, each one characterized by a NPMP, temporally connected to other techniques in the process of accumulation. The dynamics which emerges is at variable rates depending also on the complex problems of structural compatibility between techniques from which derive the residuals of accumulation or non-cumulative net products.

Now, the significance of “technological scarcity” emerges as clearer. It is the scarcity not only due to the scale constraints of NPMP but also due to the structure of the techniques which matters for the combination with the already activated techniques which use scarce resources.

To clarify these concepts, let us start from the simplest case of accumulation without technical and technological progresses. Assuming the OE given by the rate of surplus, the sequence of techniques $\mathbf{A}(h)$ is given by that of declining $s(h)$. Any activation of another $\mathbf{A}(h)$ and NPMP(h) allows an increase in the quantities of produced commodities changing also the efficiency of the technology made by many $\mathbf{A}(h)$. Therefore, $s_{\alpha}(1, 2 \dots h)$ declines considering the global technology in which the weight of the less efficient $\mathbf{A}(h)$ grows.

But there are many other factors to be kept into account. One possible effect in activating a new technique $\mathbf{A}(h)$ is the change of the technology structure which raises the problem of the accumulation of net products into new techniques whose structure differs from that in which the net products themselves have been created. Changes of technology—even in the absence of technical progress—raise the problem of residual net products which cannot be (immediately) accumulated.

The dynamics of the economic system thus depends on the size of the net products of the already active techniques, the structure of the new active techniques, the dimension of the residuals, the levels of net products of these new techniques.

It follows that new OE can be pointed out among processes with NPMP that produce the same commodity raw material.

To those previously explained, it can be added the following OE: physical dynamic; value dynamic; price-distribution dynamic. Each of these OE may

become crucial, under different conditions of growth and accumulation, for the decision about the sequencing of the processes with NPMP.

It can also happen that during the process of growth and accumulation the OE changes according to the chosen time horizon and the decision maker who has the power to choose.

More generally, the various alternative dynamic paths depend on time horizons, on residuals of non-cumulative net products, on gaps in each technique's internal growth rates. The multiplicity of cases makes impossible to identify analytically them all. It is clear in any case that the golden age of the von Neumann growth path at constant rate cannot hold with compound technologies.

4.5 Compound Technologies and Structural Dynamics

In order to examine the problems raised by compound technologies, we start from the simplest economic system in which $[A(1); I(1); \tau_1(1)]$ is the only active technique and where the production structure is associated with the uniform rate of net product $s(1)$. This economic system, accumulating the whole surplus, grows at this rate until the constraint given by the endowment $T(1)$ will become effective. Once the level $\bar{q}_1(1)$ will be attained, the production system based on $A(1)$ enters in a stationary state and from that period onward generates net products that cannot be accumulated into itself. These net products can be utilized as means of production for activating another technique $[A(2); I(2); \tau_1(2)]$ whose production structure and maximum rate of accumulation are given by $s(2) < s(1)$. With the activation of a new technique, the compound technology of the economic system becomes

$$[A(1), A(2); I(1), I(2); \tau_1(1), \tau_1(2)] \tag{32}$$

$$q_1(1) = \bar{q}_1(1); q_1(2) \leq \bar{q}_1(2) \tag{33}$$

If technique 1 has a different structure of technique 2, the surpluses of the first cannot be fully accumulated in the second and this gives rise to "residuals". Each technique 2, after being started, can grow at the rate $s(2)$ accumulating all its surpluses, while the surpluses of technique 1 in each period can be invested in technique 2 until the NPMP(2) allows it. The best way to show how the dimension of the compound technology grows is to consider that in each period a new technique 2 starts using as initial means of production the surpluses of technique 1. Therefore, being $t_1(\max)$ the period in which technique 1 reaches its maximum production and $t_1(\max) + 1$ the

period in which the new technique 2 starts, the enlargement of the compound technology along time will be

$$\begin{aligned}
 & t_1(\text{max}): \mathbf{A}(1) \\
 & t_1(\text{max}) + 1: \mathbf{A}(1), \mathbf{A}(2) \\
 & \dots\dots \\
 & t_1(\text{max}) + m: \mathbf{A}(1), \mathbf{A}(2), \dots, \mathbf{A}(2)
 \end{aligned}
 \tag{34}$$

At time $t_1(\text{max}) + m$, the compound technology is given by one $\mathbf{A}(1)$ and by m techniques $\mathbf{A}(2)$ each one growing at the rate $s(2)$ by internal accumulation after having started with the investment of the surpluses of technique $\mathbf{A}(1)$. This growth goes on until the NPMP(2) is fully utilized. Owing to these changes, the dynamics of the economic system depends on the size of the net products of the already active techniques, on the structure of the sequentially activated techniques, on the dimension of residual net products which cannot be accumulated, on the size of the net products of the new activated techniques.

The time sequence (34) changes the structure of the compound technology even if the techniques do not change. Moreover, the changes in the structure are revealed also by the continuous changes of the growth rates of productions and net products due to accumulation.

The growth rates of production of any commodity i in the period $t > t_1(\text{max})$ indicated by $\beta_i(1, 2; t)$ depend on the internal growth rate of $\mathbf{A}(1)$ and $\mathbf{A}(2)$ and of the net products of the technique $\mathbf{A}(1)$ that can be accumulated in $\mathbf{A}(2)$. At least for one commodity called i^* , the entire net product can be accumulated, and therefore, there is no residual. It follows that for this commodity

$$\beta_{i^*}(1, 2; t) > \beta_i(1, 2; t),
 \tag{35}$$

due to the residuals of commodities $i \neq i^*$;

$$s(1) > \beta_{i^*}(1, 2; t) > s(2),
 \tag{36}$$

due to the lower efficiency of technique $\mathbf{A}(2)$ compared with $\mathbf{A}(1)$ but also to the efficiency effect that $\mathbf{A}(1)$ has on $\beta_{i^*}(1, 2; t)$.

$$\beta_i(1, 2; t) > s(2), \beta_i(1, 2; t) = s(2), \beta_i(1, 2; t) < s(2)
 \tag{37}$$

depending on the entity of residuals.

The growth rates of net products, indicated by $\mu_i(1, 2; t)$, are

$$\mu_{i^*}(1, 2; t) = s(2),
 \tag{38}$$

$$\mu_{i^*}(1, 2; t) > \mu_i(1, 2; t), \quad (39)$$

therefore, they do not grow along an equiproportional path since the growth rate of the net products of the commodities with residual is lower than $s(2)$.

It is also possible to demonstrate that

$$\beta_i(1, 2; t) > \mu_i(1, 2; t), \quad (40)$$

and

$$\beta_{i^*}(1, 2; t) > \mu_{i^*}(1, 2; t), \quad (41)$$

These rates of growth change continuously over time and converge to $s(2)$ supposing that NPMP(2) is unlimited and that t tends to infinity. The reason is that the weight of $\mathbf{A}(1)$ and that of residuals decline continuously and the set of $\mathbf{A}(2)$ in activity will overcome that of $\mathbf{A}(1)$ which is in stationary state.

4.6 Techniques and Technologies: Changes and Progress

The described production system differs deeply from the standard dynamic multi-sectoral model in which there is equiproportional growth at a rate equal to the net product rate, to the production growth rate, to the net product growth rate. On the contrary, the growth of the economic system that uses NPMP depends on a great variety of factors that are neglected in well-known multi-sectoral models.

The sequence chosen for activating the $\mathbf{A}(h)$ with declining $s(h)$ shows that the rates of net product, the production growth rates, and the net product growth rates do not coincide and can be different among the commodities. Moreover, these rates change over time, and therefore, the internal growth rate of a single technique loses its central economic role for the dynamics of the system constructed on compound technologies.

The dynamic process analyzed here shows continuous technological change, even in the absence of technical or technological progress.

In fact, technological change comes about when a new NPMP and another technique, already known, are introduced. The technology changes both in qualitative and in quantitative terms depending on the type of the additional technique and the residuals which affect all the growth rates of the technology.

Given these changes, the problem of the choice of techniques and therefore of technologies becomes much more complicated as, if the rationale of the choices is the maximum growth, this is not guaranteed by the sequence of declining $s(h)$ depending also by:

- (i) the residuals due to which a technique $h+n$ with $s(h+n) < s(h)$ can be preferred to h if its residuals are lower in a measure such that the growth rates of the technology are higher;
- (ii) the quantity of each new NPMP and therefore the time horizon within which its full utilization is reached;
- (iii) the possible destination of residuals which in a closed economy becomes storage which in turn can be accumulated when they reach the suitable proportion of the “second” technique in activity;
- (iv) the inter-temporal choices and comparisons become crucial as the OE and the sequence of $\mathbf{A}(h)$ cannot be determined by the simplest sequence $s(h)$.

The conclusion is that technical and technological progresses introduce manifold analytical complications, which suggest a distinction between different types of progress: structural, natural, linear, absolute, relative (Quadrio-Curzio and Pellizzari 1999). These complications cannot be fully discussed here. The easiest way to state a “progress” in a model centered on NPMPs is to check if there is a lessening of the constraints imposed by them. This does not necessarily imply an increase of NPMP even if to make this concept operationally applicable is rather complicated as can be shown with some rather simple cases.

A *structural progress* refers to one or many techniques $\mathbf{A}(h)$ and has consequences on the technologies. It might bring an increase of $s(h)$ with or without changes in the structure of $\mathbf{A}(h)$ and therefore with or without consequences on residuals. If the increase of $s(h)$ is due to a decrease of the coefficients $\mathbf{a}_1(h)$, the productivity of raw commodity 1 in term of other commodities increases, and therefore, remaining constant $q_1(h)$ and NPMP(h), the production of greater quantities of all other commodities is possible. If $s(h)$ does not change but the structure of $\mathbf{A}(h)$ changes eliminating the residuals of production, there is no technical progress but the rate of growth of the technology increases and this can be considered a technological progress. Nevertheless, if $\mathbf{a}_1(h)$ does not decrease, $q_1(h)$ remains constant, and therefore, the total quantities produced by the technologies do not change because of the boundary of NPMP(h). Many other

cases can be examined. Let us consider the choice between two techniques which utilize the same NPMP: $\mathbf{A}(1a)$ and $\mathbf{A}(1b)$ with $s(1a) > s(1b)$, with $\mathbf{I}(1a) = \mathbf{I}(1b)$ and $\tau_1(1a) = \tau_1(1b)$. It follows that $\mathbf{A}(1a)$ should be chosen. But if $\mathbf{a}_1(1a) > \mathbf{a}_1(1b)$ the intensity of utilization of NPMP(1) is greater in $\mathbf{A}(1a)$ than in $\mathbf{A}(1b)$. Therefore, it can happen that the total quantities produced by $\mathbf{A}(1b)$ are bigger than those produced by $\mathbf{A}(1a)$. But if $\mathbf{q}(1a)$ and $\mathbf{q}(1b)$ have a different structure, the comparison is impossible, and therefore, the choice between them can be done only on the basis of the price-distribution system.

A *linear progress* is given by reductions in the labor coefficients of one or many techniques. The OE given by $s(h)$ does not change directly and also the scale limitation given by NPMP(h). But consequences might follow on the system of price and distribution, on the OE which depends on such system and finally on the order of activation of NPMPs with consequences on the scale limits. Moreover, a decline of labor intensity for an abundant NPMP might bring it into production so lessening scarcity.

A *natural progress* refers to changes in the quantity and/or quality of NPMP(h) through either an increase of $T(h)$ or a reduction of the coefficient $\tau_1(h)$. These technical progresses can be intensive and/or extensive and both allow for production expansion for the technique $\mathbf{A}(h)$ to which they refer.

A *systemic technical and technological progress* refers to the decrease of $\mathbf{a}_1(h)$ and other coefficients of $\mathbf{A}(h)$, of the labor coefficients, and of the land coefficient. In this case, $s(h)$ increases and the factors labor and NPMP per unit of product decrease thus lessening the boundary of scarcity. The only problem which might rise is the change in the structure of $\mathbf{A}(h)$ for the consequences on residuals.

Two general observations are useful at this point.

The first is that, even if it is impossible to deepen all the cases of technical and technological progresses, we can state that technical progress usually generates technological progress. If this does not happen, at a certain point the economic system reaches a stationary state in which there are remarkable surpluses. Therefore, there is a glut which can be consumed and/or invested in education and scientific research which do not produce new surpluses but new techniques and technologies and new NPMPs or substitutes of those now in activity.

The second observation is that all mentioned progresses can have consequences on the price-distribution system which in turn might have consequences on the OE chosen and therefore on technologies. In other words,

the choices of techniques and technologies on the basis of the physical system are more often impossible unless we define our preferences among which the most convincing is that of minimizing the utilization of NPMP.

4.7 Rents and Income Distribution in a Dynamic System

4.7.1 Decision Makers, Dynamics, and Income Distribution

In Sect. 4.4, we have privileged the physical order of efficiency among techniques and therefore the choice of technologies which should maximize growth. This problem requires to take also into account the system of incomes and prices existing an interdependence between the physical system of production and the value system. This entails many problems among which we point out four.

The first is to ascertain the compatibility between the dynamic orders of efficiency that ensure maximum growth and the price-distribution system and its dynamics.

The second is to ascertain if the dynamic price-distribution order of efficiency which produces maximum growth is effectively chosen by the decision makers.

The third is the analysis of the effects of accumulation and dynamics on income distribution between wages, profits, and rents in terms of units, of total magnitudes, and of shares.

The fourth is the effects of technical and technological progresses on prices and income distribution both directly and indirectly through changes in productions.

All these problems have some relations with the macro-decision makers (MDM) who are at least four: the institutional MDM who can influence by policies all the economic system; the entrepreneurial MDM who earn profits and have a certain control on accumulation and choice of techniques; the labor unions MDM who earn wages and have a certain control on wages and employment and therefore on the choice of techniques; the MDM owners of NPMP who earn rents and can exert a certain control on quantities and qualities of NPMPs put into activity and therefore on the choice of techniques.

None of these MDMs can choose alone but each one has an influence on some decision, and during the process of growth, the interests of

the different operators can either coincide or clash. This uneven swinging of interests occurs also as the result of technical or technological progress which is a characterizing phenomenon in the long run. Some MDMs take advantage from the different forms of technical and technological progresses, while the potential losers can try to exert an opposition to the actual implementation of the changes.

Some interesting novelties emerge here in terms of depicting various coincidences or conflicts of interest between the respective operators (MDM) who “control” a production factor and receive an income from it. In particular, this analysis enables us to assess the effects of growth on various categories of income recipients.

Here again the analysis shows that the features peculiar to the physical-technological system connected to scarcities are crucial also for income distribution. The most innovative aspect is rent, which profoundly changes the distribution, throwing light on the complex interests of the operators (MDM) in the process of accumulation.

Furthermore, changes in prices and income distribution, owing to technical and technological progresses, allow to identify additional categories of rent connected to various types of progress and therefore to evaluate the interests of the various MDMs. Moreover, according to which distributive variable is chosen as exogenous (rate of profit or unitary wage), there might be in the long run antagonism between profits and rents or between rents and wages.

All these phenomena contribute to stress the nature of “political economy” of the problems analyzed here. In fact, political economy deals with what can happen and which are the consequences on the different MDMs and their reactions.

4.7.2 Technical and Technological Progresses, Scarcities, Income Distribution

We consider now more closely the effects of “tech-progress” (technical or technological or both) not only as the main factor which lessens the scarcity of NPMP but also as a powerful element influencing income distribution. The complex interplay of NPMPs and tech-progresses rules out the possibility of determining the evolution of many variables without a numerical analysis. Among the possible cases to be considered, it is useful for simplicity to point out those which are mainly related to the least efficient technique in activity considering:

- (i) the case in which tech-progress affects one or more techniques but does not affect the least efficient active technique which remains also the last activated. Thus, $\mathbf{p-w-\pi}$ do not change but the rents subsystem changes and the total W, P, R also;
- (ii) the case in which tech-progress expels the previous least efficient technique from production; $\mathbf{p-w-\pi}$ change and with them also the rents subsystem and the total distributive variables;
- (iii) the case in which tech-progress affects the least efficient active technique which nevertheless remains in the bottom position. Its rent remains zero but the changes of $\mathbf{p-w-\pi}$ change the rents subsystem and the total W, P, R ;
- (iv) the case in which the tech-progress increasing the efficiency of the least technique moves it upward from the bottom position determining a change of all distributive variables.

Within all these cases, it would be useful to consider if the tech-progress is structural and/or linear and/or natural making the analysis very wide indeed. In all these cases, the interplay between quantity and price-distribution can change and increase the complications.

4.7.3 Rent from Technological Scarcity and Technological Progress: A Simplified Case

In order to examine some effects of tech-progress on rents, we consider the simplest case in which there are only two techniques, $\mathbf{A}(1)$ and $\mathbf{A}(2)$, and two commodities. In this case, the rent from structural or linear technical progress is determined by the following equations, assuming that technical progress occurs in $\mathbf{A}(1)$, which then becomes $\mathbf{A}(1n)$

$$\begin{aligned}
 & [a_{11}(1n)p_1(2) + a_{21}(1n)p_2(2)][1 + \pi(2)] \\
 & \quad + l_1(1n)w(2) + r(1n; 2) + r_{1tp}(1n; 2) = p_1(2) \\
 & [a_{12}(1n)p_1(2) + a_{22}(1n)p_2(2)][1 + \pi(2)] \\
 & \quad + l_2(1n)w(2) + r_{2tp}(1n; 2) = p_2(2),
 \end{aligned} \tag{42}$$

where $r(1n; 2)$ represents the rent per unit of commodity 1 derived from the utilization of NPMP, $r_{1tp}(1n; 2)$ and $r_{2tp}(1n; 2)$ represent the rent per unit of respectively commodities 1 and 2 connected to the linear and/or structural technical progress in the two processes—i.e., process 1 for the former and process 2 for the latter.

From (42), it follows

$$\begin{aligned}
 r_{1tp}(1n; 2) &= p_1(2) - [a_{11}(1n)p_1(2) + a_{21}(1n)p_2(2)][1 + \pi(2)] \\
 &\quad - l_1(1n)w(2) - r(1n; 2) \\
 r_{2tp}(1n; 2) &= p_2(2) - [a_{12}(1n)p_1(2) + a_{22}(1n)p_2(2)] \\
 &\quad [1 + \pi(2)] - l_2(1n)w(2)
 \end{aligned} \tag{43}$$

Given exogenously w , the price-distribution system associated with $\mathbf{A}(2)$ determines $\mathbf{p}(2)$ and $\pi(2)$. Therefore, from (43) we may find out the rent arisen from linear or structural technical progress in the two production processes of technique $\mathbf{A}(1n)$.

A reasonable doubt comes from the use of our terminology. Can we justify the name of rent given to $r_{1tp}(1n; 2)$ and $r_{2tp}(1n; 2)$? The answer, in our opinion, is positive because the necessary condition for the existence of these rents is the scarcity of NPMP of type 1. Without this scarcity, technique $\mathbf{A}(2)$ would not be employed, and hence, there would be no rent. When the processes that do not make use of NPMP are identical for all techniques, the category of rent will benefit only that process which directly utilizes NPMP. However, the scarcity of NPMP has an effect also on those processes that do not directly utilize NPMP because the technical progress makes them more efficient than the parallel processes of the least efficient active technique.

In conclusion, we can distinguish two types of rent according to the following definitions: $r(1n; 2)$ is a form of rent from technological scarcity because it is determined from the scarcity of NPMP of type 1 even if a greater efficiency is assumed from the process utilizing this NPMP in technique $\mathbf{A}(1)$ than the corresponding process in technique $\mathbf{A}(2)$; $r_{1tp}(1n; 2)$ and $r_{2tp}(1n; 2)$ are rents from technical or technological progress, even though we assume some scarcity of NPMP of type 1.

If natural technical progress were able to eliminate the technological scarcity of NPMP of type 1, the rent from technological scarcity and consequently the rent from technological progress would not exist.

In Eq. 43, we have not distinguished between linear and structural technical progresses, but the impact of these two types of progresses on the economic system is different.

In case of a linear technical progress regarding labor coefficients of technique $\mathbf{A}(1)$, from (43) it follows that rents grow.

In case of a structural technical progress, the net product rate $s(1n)$ grows, the productions of techniques $\mathbf{A}(1n)$ may grow, but the production of the primary commodity might not change, being constrained by the availability of NPMP(1). Without knowing the effective changes in technical

coefficients of $\mathbf{A}(1)$, it is impossible to establish the impact of structural progress on employment and also on the accumulation process since it may affect the structural differences between the techniques subsequently activated in the compound technology and therefore the residuals.

4.7.4 Rent from Technological Scarcity and Technological Progress: The General Case

Let us now take into account a more general case in which the active techniques are h^* , each producing $m+1$ commodities. We suppose that the technique affected by technical progress is not the last one in activity. The technique, named $\mathbf{A}(h^* - i)$ before being affected by technical progress and $\mathbf{A}(h^* - i, n)$ after the progress, shows a maximum of $m+1$ rents—some of them obviously could have null values.

These rents are determined by the following system

$$\begin{aligned}
 [1 + \pi(h^*)] \mathbf{A}(h^* - i, n)' \mathbf{p}(h^*) + \mathbf{I}(h^* - i, n)w(h^*) \\
 + \mathbf{r}(h^* - i; h^*) + \mathbf{r}_{tp}(h^* - i; h^*) = \mathbf{p}(h^*), \tag{44}
 \end{aligned}$$

where $\mathbf{r}(h^* - i; h^*)$ is the vector of the rents due to the technological scarcity of NPMP of type $h^* - i$. These rents are relative to that process which utilizes NPMP, that is, to process 1. The first element of vector $\mathbf{r}(h^* - i; h^*)$ is the rent from technological scarcity per unit of commodity 1. This value remains unchanged by the technical progress and can be determined as follows:

$$\begin{aligned}
 r(h^* - i; h^*) = [1 - (1 + \pi(h^*))a_{11}(h^* - i, n)]p_1(h^*) - (1 + \pi(h^*)) \\
 \mathbf{a}_{j1}(h^* - i, n)' \mathbf{p}_j(h^*) - l_1(h^* - i, n)w(h^*) - r_{1tp}(h^* - i; h^*). \tag{45}
 \end{aligned}$$

The other m elements of the vector are null, because the other m processes do not utilize NPMP. Therefore, we have

$$\mathbf{r}(h^* - i; h^*) = \begin{bmatrix} r(h^* - 1; h^*) \\ 0 \\ \vdots \\ 0 \end{bmatrix}$$

In turn, $\mathbf{r}_{tp}(h^* - i; h^*)$ is the vector of rents due to structural or linear technical progress—rents that can occur in each production process. Therefore, we have

$$\mathbf{r}_{tp}(h^* - i; h^*) = \begin{bmatrix} r_{1tp}(h^* - i; h^*) \\ r_{2tp}(h^* - i; h^*) \\ \vdots \\ r_{m+1tp}(h^* - i; h^*) \end{bmatrix}$$

The rents deriving from linear or structural technical progress which take place as a result of the decrease of the coefficients in $\mathbf{A}(h^* - i)$ or in $\mathbf{l}(h^* - i)$ can be determined by means of system (45) in the following way

$$\mathbf{r}_{tp}(h^* - i; h^*) = \{\mathbf{I} - [1 + \pi(h^*)]\mathbf{A}(h^* - i, n)'\} \mathbf{p}(h^*) - \mathbf{l}(h^* - i, n)w(h^*) - \mathbf{r}(h^* - i; h^*),$$

where $\mathbf{p}(h^*)$, $\pi(h^*)$, $w(h^*)$, and $\mathbf{r}(h^* - i; h^*)$ remain unchanged, because they are determined by the least efficient technique in activity which is kept, *ex hypothesis*, constant.

5 Some Conclusions

The structural theory presented in Sect. 4 of this essay is based on a much more extensive analytical work of ours that has developed a new approach to NPMPs and rent dealing with a variety of scarcities that had not been adequately considered in economic theory. Here we drew on parts of the analytical and conceptual construction of our previous works (Quadrio-Curzio and Pellizzari 1999) with many simplifications but also with some innovations. The key distinctive features of our approach are summarized below:

- (i) We started presenting a structural system of production which requires NPMPs whose availability puts a constraint on the production of each technique $\mathbf{A}(h)$ utilizing a NPMP(h). The scarcity of a NPMP fully utilized in production implies the employment of another or many other different types of NPMPs to make a continuous growth of production possible.
- (ii) NPMPs affect the change of technology, that is, the set of techniques that must be activated due to the scale limits introduced by each one of them. When more than one NPMP are in activity, the most efficient ones will cause a rent to arise. The increase in the number of techniques in use and the changes of technologies that make use of NPMPs, also modify profits and wages.

- (iii) These problems are analyzed in a quasi-dynamic and in a dynamic context by means of two different models:
- one based on *global technologies*, in which the matrix of technical coefficients includes the sequentially activated processes producing the primary commodity, that is, the commodity directly employing a NPMP, together with the processes producing the other commodities;
 - the other based on *compound technologies*, in which techniques, which differ for the production process of the primary commodity, are linked over time since the activation of a new technique occurs when the net products of the techniques already in use cannot be accumulated in those techniques owing to scale constraints introduced by the NPMP.
- (iv) This analysis shows the central role of NPMPs, not only on the quantity system but also for the determination of prices and income distribution, and the existence of interdependence between production and distribution. The presence of NPMPs deeply modifies the relations between wages and profits because of rent. Compared to the usual linear models of production and distribution, our analysis reveals a set of important new features concerning in particular the role of rent and the rentability order among processes with NPMPs. At any given efficiency order, the rentability order among such processes could change with the increase of activity levels. These aspects are equally important with reference to changes of the exogenous distributive variable. Such changes may modify the order of price-distribution efficiency, and they may involve the activation of processes previously out of use or, vice versa, make no longer viable previously active processes. Accumulation and growth, when NPMPs are employed, affect the distribution of income among wages, profits, and rents—in terms of individual units, aggregate magnitudes, and relative shares—and some interesting scenarios emerge of either collusion or conflict of interest between the macro-decision makers who control the different factors of production and, respectively, earn wages, profits, and rents.
- (v) The presence of NPMPs raises the complex problem of identifying the sequence to be followed in the activation of techniques in the growth process since many different sequences can be followed between processes and techniques employing NPMPs for the production of a primary commodity, and these sequences may change due to a change in the distributive variable exogenously determined and/or in the level of

activity. According to the different conditions of production, growth, and accumulation, any one of the different efficiency orders may become crucial in deciding the activation sequence of processes with non-produced means of production.

- (vi) Dynamics and accumulation lead to scarcity boundaries but technical and technological progress may weaken the scarcity constraints. In our complete analyses (Quadrio-Curzio and Pellizzari 1999), we distinguish between *technical progress*, i.e., progress increasing the efficiency of a single technique, and *technological progress*, i.e., progress increasing the efficiency of a complete technology, and the many factors that may generate these types of progress. The existence of NPMPs gives rise to several complex categories of technical progress: structural, natural, linear, absolute, and relative. These are complex categories because technical and technological progress can be classified only by referring to several variables. Technical and technological progress affect the economic system in its capacity of accumulation and growth and in its ability to overcome the constraints due to NPMPs. Technical and technological progress, furthermore, generate changes in prices and income distribution and give rise to some new types of rent connected to various types of progress, affecting the interests that macro-decision makers and particular social groups may have in promoting, hindering, or retarding the introduction of the various types of progress.
- (vii) In the previous analysis, we identified different categories of macro-decision makers (MDM): the institutional MDM, the labor unions, the entrepreneurs, the owners of NPMPs. Each one presents a particular interest and exercises a different control on politics, income distribution, employment, accumulation, choice of technique, and NPMPs. The emergence of scarcities in the process of growth may change the interests of the different MDMs and influence their macro-decisions underlying the role of NPMPs.
- (viii) In our analysis, rent as an income category can highlight a wide variety of scarcities: (a) scarcities referred to NPMPs but also to techniques and technologies constrained not only in scale but also in structure by the scarce resource that gives rise to a structural and technological rent; and (b) scarcities that may be associated to technical and technological change and progress and that give rise to new types of rent.
- (ix) Finally, in our view modern economic theory did not fully investigate NPMP, scarcity, and rent in all their significance. The aim of our contribution is to highlight that scarce resources, scarce technologies,

and the different types of rent associated with those scarcities play a crucial role affecting productions, choice of technique and technology, accumulation, growth, and income distribution. What ultimately emerges from our theoretical framework is that well-established results of multi-sectoral production theory undergo profound changes when non-produced means of production are explicitly considered.

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Political Economy of Structural Change

Michael Landesmann

1 Introduction: Concepts and Definitions

This chapter reviews the contributions on structural economic dynamics and extracts from these to which extent one can use them to understand what we might subsume under the political economy of structural change. Let us start with a few definitions:

1.1 Structural Change and Structural Change Analysis

By structural change, we mean two things:

- (i) changes in the composition of aggregates (industrial output, employment, consumption, exports, etc.)
- (ii) structural shifts in behavioural relationships (this is often tested in econometric research).

Let us shortly explore these two types of structural change and look at their impacts on each other: compositional change takes place because either different components of an aggregate (such as different households, firms and

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employees) are exposed to different degrees to specific shocks or forces of change (as in Baumol 1967, or Pasinetti 1981, 1993).¹ Or, given the nature of these units, they might react in a differentiated manner even to the same type of shock or force of change (such as different households showing different responses in their savings behaviour to an inflation increase, or different firms responding differently to the opportunities opened up by IT). Given differentiated behaviour of subcomponents of an aggregate, the aggregate itself will show a change of behaviour as the composition (weights of the components in the aggregate) changes. Such a change can occur even without any change in behavioural specifications (i.e. the way how behaviour responds to a specific set of determinants) of the individual subcomponents of an aggregate. On the other hand, structural shifts in aggregate behaviour could be due to individual units of an aggregate changing their behaviour (e.g. households becoming more aware of the impact of inflation on their wealth positions and thus changing their spending–savings behaviour). Thus, aggregate behaviour might also change even when all individual units' behaviour is characterised by the same functional relationships and all individual units change their behaviour in the same way. In this very particular case, an aggregate model can indeed be represented by a representative agent as very often done in standard macroeconomic analysis. Structural shifts can then be analysed within such a framework based on micro-foundations of a 'representative agent' (econometric studies adopting this approach are common, such as Stock and Watson 1996; Peron 1997; Hansen 2001).

1.2 Relative Structural Invariance and Organisational Change

There is an additional element we shall emphasise in structural change analysis, namely that one can associate with structures a certain degree of resistance to change. The analysis of structural change thereby emphasises that structural change involves overcoming such resistances (see also Landesmann and Scazzieri 1990; Scazzieri 2009, where the authors develop the concept of 'relative structural invariance'). We consider the analysis of structural rigidities and the real-time pattern of overcoming these to be an integral part of the analysis of structural change.

¹We shall use the notion of 'forces of change' to characterise variables (such as technical progress and demographic changes) that impact an economic system in a continuous manner (although often with varying strengths) over a longer period, while 'shocks' (or 'impulses') refer to more sudden impacts that act over a specific and shorter period.

Structural rigidities can be characterised as bounded sets of behavioural responses to shocks or forces of change in that—given the characteristics and strength of that shock or persistent force—behavioural units show specific reactions within bounds (think about employment-level decisions by employers in the wake of a downturn in demand or the willingness of employees or employee representatives to accept wage cuts in the face of higher levels of unemployment). As different decision-making units are characterised by narrower or wider boundaries of such behavioural responses over specific time frames, the impact of a shock or force will lead to elastic responses by these different units (i.e. more or less substantial deviations from their historical behaviour). These differentiated reaction patterns of subunits (or ‘sub-systems’—see below under (iii))—give rise to a structured evolution of patterns of structural change in historical (i.e. ‘real’) time (as in Quadrio Curzio 1986).

Of course, structural change does not only occur in response to external shocks as change can also be initiated by the different units themselves, i.e. behavioural change can—and often does—occur because of learning processes or innovations that take place within or are initiated by these units. This brings us to the topic of organisations and organisational change and makes us ask why are organisations relevant for structural change analysis? Organisations are entities in which a tighter and more routinised pattern of interaction occurs between decision-making units than would be the case with entities outside the realm of any given organisation. There is, furthermore, more durability of ‘within-organisation’ interactions than of interactions of an organisation with the external environment (that includes of course interactions with other organisations). This durability also affects how an organisation reacts to external shocks or ‘forces of change’ and how it generates internal impulses of change. The study of organisational forms and of behavioural patterns of organisations are an important aspect of structural change analysis as the relative persistence of behavioural patterns within an organisation is one of the aspects to be considered when one attempts to analyse real-time reactions to external shocks or forces of change (Landesmann and Scazzieri 1996a, b). Returning to the issue of boundedness of behavioural responses by individual decision-making units to shocks or forces of change, we should therefore recognise that such individual decision-making units are embedded in organisational structures. Furthermore, their behaviour is regulated by a variety of institutional and legal constraints. This is an important feature of why we can speak of ‘relative structural invariance’ in the ways how political-economic systems respond to shocks or forces of change.

1.3 Structural Interdependencies, Decomposition and Structural Change

When we think of structure, we also think of structural interdependence, and many economic contributions to structural change analysis (multi-sectoral, multi-process and input-output analysis) emphasised the pattern of interrelationships between different sectors, activities, processes as well as between institutional entities (such as households, corporate sector, banks, government in national income accounting). The pattern of interrelationships can be described within a notional period (an accounting year such as in static input-output analysis) or could be tracked over time (e.g. stock-flow models of national accounting, dynamic input-output or von Neumann type models, traverse analysis).

An important further feature that characterises the way how economic analysis has captured patterns of interrelationships is to take account of decomposability, i.e. the different levels of intensity by which different parts of an economic system are related to each other. Important contributors to this analysis (see, e.g. Simon and Ando 1961; Simon 1962) have also emphasised that the intensity of interrelationships between subcomponents also has implications for the dynamic pattern by which systems react to shocks or forces of change. Authors such as Simon and Ando (1961) (but see also the contributions in the field of 'synergetics', as discussed in Haken 1984) would deduce from the differentiated intensities of interrelationships that the fastest interactions occur amongst units that are most strongly interrelated, to be followed by further rounds of interactions between units that are less strongly interrelated and so on. Simon gives the example of how heat disseminates in a house: first across rooms in a flat, then across flats on the same level, then across levels and so on.

At a more systemic level, we can think of an economy being made up of several subsystems. Each of the subsystems shows certain patterns of interrelationships amongst units of different degrees of intensity. Such economic systems might be completely decomposable (as in the case of economies consisting of the 'vertically integrated sectors' introduced in Pasinetti 1973) in that there are no overlaps amongst subsystems (with units only belonging to one or the other subsystem), or there might be overlaps (so that the same units belong to different subsystems even if the nature and the intensity of interrelationships would differ across subsystems). The dynamic of responses to shocks or forces of change (e.g. the diffusion of IT across enterprises within a sector and then across sectors) would be strongly affected by the differentiated nature of interrelationships within and across subsystems.

1.4 Structural Economic Dynamics

All the above is relevant for structural change analysis, but when we speak of ‘structural economic dynamics’ we would suggest that the term be reserved to investigate the role of structural change for the dynamics of the overall economic system. This means to examine cases in which, for example, a change in sectoral composition affects the aggregate growth dynamics of an economy (as in Baumol 1967), or structural rigidities affect the time-phased pattern of structural adjustment in an economic system (as in the contributions by Hicks 1973; Lowe 1976; Amendola and Gaffard 1998, which investigate the transitional paths, or ‘traverses’, from one dynamic trajectory to another). This link to aggregate economic dynamics demarcates—in our view—the analytical contributions in the field of structural economic dynamics.

Why can structural change be of fundamental importance to macrodynamic analysis? Firstly, changes in the composition of macroaggregates can be important to understand how aggregate variables develop dynamically. Secondly, the analysis of structural adjustment processes in the sense of overcoming relative structural invariance might again be an essential component to understand the movements in macroaggregates. Both these issues can also affect aggregate behavioural relationships (i.e. functional specifications and estimated parameter values) as outlined earlier on. Thus, without explicitly examining the structural change dimension we would not be able in such instances to understand the behaviour of macroaggregates. Thus, in a model in which a set of aggregate behavioural relationships represent the dynamic behaviour of an economy, both compositional changes and structural shifts (or structural breaks) in behavioural patterns could affect significantly the dynamic behaviour of the aggregate economy.

1.5 The Units of Analysis: Interrelatedness and Complexity

Structural change analysis usually occupies a meso-place between micro- and macro-economic analyses. It chooses certain aggregates as units of analysis but does not move all the way towards the aggregates that characterise much of macroeconomic analysis. How are aggregates chosen in structural change analysis that lead to ‘classifications’ in which individual observations (regarding, e.g. firms, households, employees with different skills, products, technologies) are grouped for theoretical or empirical research?

Well known are sector or industry classifications where the analysis of production activity is the focus of analysis. Also here there are different options: the focus could be on process technologies where sectors might be defined by the similarities in production technologies or techniques of production, or on the product basket produced by individual sectors or industries. Furthermore, the emphasis might be on an ‘Austrian’ perspective of describing production activity from its starting point of using primary factors of production (such as labour and natural resources) up to the production of the final product. Alternatively, the focus could be on analysing the interdependencies across production activity where different industries supply each other with intermediate inputs and capital goods and where the flow of production through the different stages of fabrication is pushed somewhat into the background (See the inter-industry emphasis of Piero Sraffa’s (1960) *Production of Commodities by Means of Commodities* and the contributions in Baranzini et al. (2015), who highlight the distinction between ‘horizontal’ and ‘vertical’ integration).

However, there are many other classifications that might be useful to analyse the impact of our two notions of structural change (i.e. compositional and behavioural changes). For example, there could be a classification of households in terms of income or wealth classes, or by lifestyles (similarity of consumption patterns) or by age and gender composition; or, there could be analysis of the population by skill groups, employment status, age groups, etc.

If we find that there are behavioural differences across these different groups as they react to shocks or forces of change, or evolve differently in terms of innovative behavioural patterns, a classification of such units into distinct groups makes sense as there will be implications for the macro-behaviour of an economy. Overall, one can say that the choice of unit of analysis and therefore how one differentiates the aggregates in an economy into different groupings will be a function of what the focus of the analysis is (e.g. whether the focus is the impact of technological change, increasing international integration, business cycle dynamics, or changing lifestyles). In this chapter, we shall give examples of classifications adopted by different authors in their structural change analysis that were particularly useful or adequate for the questions they tried to address.

1.6 Political Economy of Structural Change

The ‘political’ in the expression ‘political economy’ means we are interested in structural change affecting the positions of social groupings (through

real incomes, income distribution, employment patterns, other aspects of welfare, their bargaining strength, etc.). This impact can in turn affect the political dynamic and the evolution of policies as political interventions of social groups (i) can influence the pattern of structural change and economic growth and this (ii) again affects the position of social groupings.

Political economy of structural change thus analyses, firstly, the positions of social groupings (the classics would often have spoken of 'classes') in the structural set-up of an economy; secondly, how these positions are affected by patterns of structural change; and thirdly, how social groupings through their actions intervene in the structural dynamic of an economy.

In classical writings, the position of social groupings in the structural set-up of an economy refers to their involvement in different sectors of the economy (in sectors such as agriculture, manufacture and trade as workers, owners of capital or of land, traders) and as receivers of certain types of incomes (wages, profits, rents, trade margins). The analysis then extends to the types of roles social groups play in and for different sectors of the economy (as workers, investors, consumers of different goods and services) and how they thereby shape the sectoral dynamic of the economy and thus also its sectoral composition. Lastly, the dynamic at sectoral level and the dynamic of the economy as a whole in turn affect the positions of social groups, and social groups might respond in one way or the other to the trajectories of structural change and the overall dynamic of the economy.

The following text will do the following. Firstly, we shall trace the various strands of structural economic dynamic analysis back to the classical economists and point to their political economy dimension. Secondly, we shall give an overview of more recent contributions to structural economic dynamics and attempt to analyse their political economy implications and how these could be further developed. Lastly, I shall make a bridge to current work by Ivano Cardinale and myself under the heading of 'structural political economy' (SPE) (see also his essay in this Handbook).

2 Political Economy of Structural Change in the Classical Economists

The interesting thing about the classical political economists' approaches to structural change is that they attempted to integrate two aspects of an economic and social system:

- (i) The sectoral dimension which showed the position of different sectors in an economy, their interdependencies (horizontal and/or vertical) and their relative roles in the overall dynamic of the economy; and
- (ii) The social dimension which attempted to look at different groups in society—defined in different ways by the different classical authors—in terms of their roles in social and economic reproduction.

Social and economic analysis was thus combined in the writings of the classical authors and this lent itself both to positive and to normative types of analyses.

A particularly central position in the sectoral/social structural analysis of the classical authors was occupied by the analysis of the ‘viability’ of an economic system. This meant investigating whether the sectoral and social interdependencies resulted in an economy that could expand, i.e. grow, or whether an economy was threatened by stagnation or even contraction that could lead to a serious social and political crisis. Furthermore, they examined which aspects contributed towards growth-propelling or growth-retarding features.

The assessment of the roles of sectors in productive activity and hence for the potential growth dynamics of an economic system differed across classical authors, and we shall explore this below. In the centre of attention of all authors in this respect were the contributions of productive sectors to the surplus (net product) that allowed an economy potentially to grow, that is, to generate investible resources that would contribute to the growth of productive capacity of an economy.

Classical authors made significant contributions to analysing the distinct production conditions in different sectors of the economy. Adam Smith analysed the scope for increasing returns in manufacturing (Smith 1976 [1776]); David Ricardo (1815) and Robert Malthus (1815) the phenomenon of decreasing returns in agriculture; Charles Babbage (1832) and Karl Marx (1867, 1978 [1885]) the additional productivity boost that would emerge from the shift from ‘manu-facture’ to ‘machino-facture’. These insights led to assessing the differentiated contributions of different sectors of the economy towards productivity growth of the economy (measured in terms of the ratio of the ‘net product’ to total production). Furthermore, the analysis of sectoral interrelationships—either in a circular or in a stages-of-production manner—showed the impact that bottlenecks, resource

Economic structure and dynamics:

Sectors Sector Interdependencies Dynamics of the Economy

Circular flow and expanded reproduction:

Production conditions Formation of 'net product' Net additions to productive Expenditure

Social classes and circular flow:

Ownership status Income flows Expenditure patterns

Fig. 1 Sectoral-social structural analysis in the classical economists

and infrastructural constraints,² on the one hand, and differential sectoral productivity growth, on the other hand, could have on the dynamics of the economic system as a whole.

The positions of social groups were introduced in terms of their roles in the production process (as workers or owners of means of production), as recipients of income flows from productive activity and as groups determining through their spending behaviour the level and composition of expenditure in the economy. Social groups thus played their roles at each stage of the 'circular flow', i.e. in production, as receivers of income, and in expenditure.

While ownership status (of land and natural resources, of 'capital', i.e. means of production) was important as it determined the appropriation of the value of an economy's output by different social groupings, it was their pattern of expenditure that decided what went into investment (i.e. adding to productive capacity) and what went into final consumption (Fig. 1).

Appropriation of the economy's net output took the form of income distributional variables, such as wages, profits, rents and trade margins, and the expenditure from these income flows had, furthermore, implications for the sectoral composition of an economy. Production conditions in the different sectors, as well as the involvement of different groups in production activity, led furthermore to productivity-enhancing technological and organisational change. This in turn affected the growth dynamic of an economy.

Thus, the analysis in the classical writings was full of examples of why structural analysis was central to an understanding of macroeconomic

²Thus, both Francois Quesnay and Adam Smith pointed to the importance of building canals and other transport infrastructure to connect markets and thus widen the scope of production and market interrelationships within a country.

dynamics. In the following, we give some examples for this focus of their analysis:

2.1 Ranking of Sectors in Terms of 'Productiveness' and Economic Development

In the eighteenth century, several classical authors focused on successful and less successful development processes in the form of a stages theory of economic development (see Smith 1976 [1776]; Turgot 1769–1770; Ferguson 1767).³ In these contributions, as already in the theories of the French Physiocrats (Quesnay 1758), an analysis of the 'relative productiveness' of different sectors (i.e. their ability to contribute to the economy's '*produit net*') played an important role. The authors suggested a hierarchy of sectors in terms of their contributions to an economy's level and rate of change of productivity, and hence their policy recommendation for a successful economic development policy was based on a sequential emphasis on different sectors of the economy as an economy progresses through development stages.

Thus, Adam Smith (1776, Book II, Chapter 5 and Book IV of the *Wealth of Nations*) suggested that the 'natural' sequencing of sectoral development should emphasise in initial stages of economic development (i.e. when the economy is still relatively poor) the development of agriculture. Why is this? There are various reasons for this: for one, agriculture produces the bulk of what is necessary for basic subsistence, food and the raw material for clothing and textile production. The other reason pertains to what Adam Smith thought was the high level of 'productiveness' in that sector. Smith employed in this part of his analysis a concept of 'productiveness' which amounted to an employment multiplier. He defined sectoral 'productiveness' as the amount of 'productive labourers' that a unit of investment could 'put into motion' (Smith, *Wealth of Nations*, 1776; 1976 edition, p. 362). By 'productive labour', Smith referred to work done that contributed to the production in an economy of a 'surplus'.

...The profits of the farmer, of the manufacturer, of the merchant, and retailer, are all drawn from the price of the goods which the first two produce, and the two last buy and sell. Equal capitals, however, employed in each of those four

³The analysis of stages of economic development in classical political economy is a case in point (see e.g. Smith 1776, Book III 'Of the different Progress of Opulence in different Nations').

different ways, will immediately put into motion very different quantities of productive labour, and augment too in very different proportions the value of the annual produce of the land and labour of the society to which they belong. (Smith, *Wealth of Nations*, 1776; 1976 edition, p. 362)

From this concept of 'productiveness', A. Smith suggested the following hierarchy of sectors:

Agriculture → Manufacturing → Wholesale and retail trade → Domestic transport → International transport (such as shipping)

To avoid too lengthy quotations, we single out the position of the merchants, manufacturers and farmers in complex inter-sectoral relationships, leading to the direct and indirect support of activities in other sectors as well as to the differential employment of 'productive' labour:

The capital of the wholesale merchant replaces, together with their profits, the capitals of the farmers and manufacturers of whom he purchases the rude and manufactured produce which he deals in, and thereby enables them to continue their respective trades. It is by this service chiefly that he contributes indirectly to support the productive labour of the society, and to increase the value of its annual produce. His capital employs too the sailors and carriers who transport his goods from one place to another, and it augments the price of those goods by the value, not only of his profits, but of their wages. This is all the productive labour which it immediately puts into motion, and all the value which it immediately adds to the annual produce. Its operation in both these respects is a good deal superior to that of the capital of the retailer.

Part of the capital of the master manufacturer is employed as a fixed capital in the instruments of trade, and replaces, together with its profits, that of some other artificer of whom he purchases them. Part of his circulating capital is employed in purchasing materials, and replaces, with their profits, the capitals of the farmers and miners of whom he purchases them. But a greater part of it is always, either annually, or in a much shorter period, distributed among the different workmen whom he employs. It augments the value of those materials by their wages, and by their [masters'] profits upon the whole stock of wages, materials and instruments of trade employed in the business. It puts immediately into motion, therefore, a much greater quantity of productive labour, and adds much greater value to the annual produce of the land and labour of the society, than an equal capital in the hands of any wholesale merchant.

No equal capital puts into motion a greater quantity of productive labour than that of the farmer... In agriculture too nature labour along with man; and though her labour costs no expense, its produce has its value, as well as that of the most expensive workmen... The capital employed in agriculture, therefore, not only puts into motion a greater quantity of productive labour

than any equal capital employed in manufactures, but in proportion too to the quantity of productive labour which it employs, it adds a much greater value to the annual produce of the land and labour of the country, to the real wealth and revenue of its inhabitants. (Smith, *Wealth of Nations*, 1776; 1976 edition, pp. 362–363).

Thus, when Smith distinguishes three types of employing capital, i.e. to cultivate land, process raw materials in manufacturing and transport and distribute the produced goods, he clearly suggests such a priority in sector development stemming from such a hierarchy in terms of ‘productiveness’⁴:

When the capital of any country is not sufficient for all those three purposes, in proportion as a greater share of it is employed in agriculture, the greater will be the quantity of productive labour which it puts into motion within the country; as will likewise be the value which its employment adds to the annual produce of the land and labour of the society. After agriculture, the capital employed in manufactures puts into motion the greatest quantity of productive labour, and adds the greatest value to the annual produce. That which is employed in the trade of exportation has the least effect of any of the three. (Smith, *Wealth of Nations*, 1776; 1976 edition, p. 366).

Francois Quesnay who took a more radical stance than Adam Smith on the relative ‘productiveness’ of different sectors talked similarly of a ‘natural order’ (*ordre naturel*) that ranked sectors according to their relative contributions towards the production of a net surplus in an economy. Such rankings and the detailed examination of the positions of different sectors in a scheme of inter-sectoral interdependence thus played an important role in a normative theory of prioritising sectors at different stages of economic development. The relative allocation of investible resources towards different sectors—while taking account of interdependencies between sectors—was crucial for the results an economy reaps in terms of overall economic growth. Ignoring the ‘natural order’ of differential sectoral patterns of development would lead to a lack of ‘take-off’ of growth or to non-sustainable patterns of economic and social development. Remarkable examples for the latter are the developments of the Northern German Hanse cities or some of

⁴See, however, Landesmann (1991) where a contradiction of two different concepts of ‘productiveness’ in Adam Smith, i.e. that of the employment multiplier and that of the more traditional productivity notion—output relative to inputs used—is explored.

the Northern Italian cities (Venice, Florence) that neglected the importance of development of the agricultural hinterland and moved too fast in their emphasis on international trade and building up large shipping fleets for international transport (see Smith 1776; 1976 edition, Books III and IV).

2.2 Production Conditions in Individual Sectors and Their Impact on Overall Dynamics

The detailed analysis of production conditions, pointing out the qualitatively different situation with respect to the scope for productivity growth in different sectors of the economy, was another feature of the classical multi-sectoral economic analysis. Thus, Adam Smith's analysis of the scope for division of labour in manufacturing in his example of the pin factory pointed to the increased potential for learning processes and the speeding up of throughput when production processes could be subdivided and workmen could concentrate on more narrowly defined tasks. There was saving of time compared to the old craftsman's workshop in which tasks had to be executed in sequence by the same workman, picking up alternative tools until the same unit of the product was completed. In such pre-industrial forms of production organisation, production could not proceed in a continuous flow but rather in batches. It required the higher scale of demand in the wake of the industrial revolution that provided the basis for dramatic increases in the scope for productivity improvements by exploring and installing new forms of production organisation (for a detailed account of different forms of production organisation, see Scazzieri 1993; Landesmann and Scazzieri 1996a).

The analysis by Adam Smith and other classical authors of productivity benefits that could be reaped from scale-dependent processes of learning and specialisation is an example of how the detailed assessment of the conditions of production in specific sectors—in this case manufacturing—could make an important contribution towards assessing the potential for growth in an economy and thus for macroeconomic dynamics. Charles Babbage and Karl Marx proceeded further in analysing the scope for productivity increases when the 'factory system' could reap additional economies of scale through an arrangement of fixed capital equipment in such a way that allowed a further massive increase in the throughput of material in an uninterrupted manner through its various fabrication stages (see Nicholas Georgescu-Roegen 1970, 1976; Landesmann 1986; Scazzieri 1993; Landesmann and Scazzieri 1996a, for an analytical treatment of the modern factory system).

David Ricardo and Thomas Robert Malthus made another famous contribution towards the detailed analysis of the conditions in another sector vital for the dynamics of the economic system, namely in agriculture and in other natural resource-based industries (such as mining). It was their well-known analysis of decreasing returns in sectors that faced a ‘natural grading’ of production facilities where nature imposed the constraint of the limited availability of different essential production inputs (such as lands of different soil quality or ease of cultivation). The insights gained by these authors in their analysis of intensive and extensive rents (see Ricardo 1815; Malthus 1815) was again of extreme importance for analysing the potential impact of production conditions specific to particular sectors for the dynamics of the economy. In fact, David Ricardo warned of the prospects of a zero-growth stationary state resulting from this sector-specific constraint in agriculture, a sector that was considered vital for producing the main food staple for the population as well as the raw materials to be processed and distributed by the other sectors of the economy.

We should not complete this section without mentioning that the classics also explored the nature of technological progress in relation to the specific conditions in productive sectors. An example is Francois Quesnay’s analysis of the shift in agriculture from ‘*petite*’ to ‘*grande culture*’, i.e. the possibility of shifting from one ploughing technique to another when land gets consolidated in larger land holdings (allowing ploughs to be pulled by horses rather than cattle). Linked to this analysis was an identification of the incentives of different social groups—in Quesnay’s case the ‘*metayer*’, the tenants of agricultural plots, to invest part of their surplus into new agricultural techniques. We shall return to the role of social groups in the innovative process as part of the analysis of the ‘political economy of structural change’ in Sect. 3.4.

The classical economists developed also analytical techniques to study—what in modern parlance is called—‘transitory dynamics’, i.e. how a system adjusts to an ‘external shock’ or ‘impulse’ and moves from one equilibrated state to another equilibrated state. This type of analysis in which the structural features of an economic system changes (be it a shift in techniques of production or in expenditure structures) is an important part of structural change analysis. For example, David Ricardo’s analysis of the big shift towards more mechanised techniques of production (see the chapter ‘On Machinery’ in his *Principles*; Ricardo 1817, third edition 1821) is an early precursor of traverse analysis. In this analysis, important shifts in production go along with equally important shifts in the macro-distribution of income (a decline in the ‘wage fund’ out of which the employed labour

force is being paid) and different phases of adjustment to a more capital-intensive form of production are carefully distinguished. Ricardo's analysis was also the starting point of later studies on 'technological unemployment' (see Neisser 1931, 1942; Lederer 1931).

2.3 Sectoral Interdependencies: Production and Expenditure Structures

As mentioned earlier, classical analysis was characterised by a rich description of the 'circular flow', i.e. not only of the production activity of an economy, but also how the value of production was distributed in the form of various income flows across social groups giving rise to a structure of expenditures which then in turn affected the composition of production. Marx's analysis of the 'schemes of expanded reproduction' (vol. 2 of *Das Kapital*; Marx 1867, 1978 [1885]) built on Francois Quesnay's *Tableau économique* (Quesnay 1758) by carefully examining the fulfilment of 'viability' conditions of an economy. This implied the importance of synchronising input-output production requirements across sectors with the expenditure patterns of different social groups given their income distributional claims. Thus, investment activity and the production levels in the investment goods-producing sector were directly determined by the propensity of 'capitalists' to invest part of their income that derived from profit flows. On the other hand, the production of consumption goods was determined by workers' demand emanating from their wage income and from capitalists' demand for consumption goods financed from the part of their income that is not invested. Hence, the structure of expenditures emerged from 'class-based' income flows and these in turn were determined by bargaining positions of different groups in production (Marx used the notion of a 'rate of exploitation' to characterise this bargaining situation). For income distribution to be such as to lead to exactly that expenditure structure that allows a balanced evolution of production structures to emerge without the emergence of excess capacities or unsold output was the focus of the analysis of 'viability' in Marx's analysis of expanded reproduction in a capitalist economy.

Francois Quesnay undertook many exercises of comparative dynamic analysis in the context of his *Tableau économique* (see also Eltis 2000). The position of different social groups (aristocracy—landowners; farmers—'capitalists'; landless labourers) played a crucial role in the context of national income generation and economic growth. Quesnay analysed how

different policy contexts (such as different forms of taxation; different legal contracts in tenancy agreements) might affect income flows and expenditure patterns and thus the growth trajectory of an economy. For example, we may ask whether a lengthening of tenancy contracts would lead to a growth in profits of farmers who could then increase their investment and thus move from '*petite culture*' to '*grande culture*', thus increasing the productivity levels in agriculture and giving the economy a growth stimulus? Or, would the improvement in transport infrastructure or a reduction in intra-country regional tariffs lead to greater competition on markets, thus reducing the income flows to regional landowners but provide cheaper food and other commodities to the population and thus raise real incomes and/or reduce the costs of labour? We can see in these examples that classical political economy employed the tools of structural change analysis combining insights into inter-sectoral relationships and economic growth with an astute analysis of positions of power and of social behavioural characteristics of the dominant social structure at the time.

2.4 Economic Fluctuations and Structural Theories of the Business Cycle

Another aspect of economic dynamics that can also be related to structural change is the analysis of economic fluctuations, i.e. of business cycles. Already in K. Marx's analysis, the possibility of failures to satisfy the viability conditions for balanced expanded reproduction led to the analysis of the possibility of crisis, i.e. situations in which various proportions were mismatched. Such a mismatch could occur between the composition of production capacity and the composition of expenditure such that situations of overcapacity and/or underconsumption could occur. The mismatch between production (capacity) and expenditure could furthermore be traced back to developments in income shares of different social groups as these determined behaviours with respect to the levels and structures of expenditure. In the tradition of Marx's analysis, authors such as Mikhail Tugan-Baranowsky (1913 [1894]) and Rosa Luxemburg (1951 [1913]) emphasised the possible mismatch in the composition of productive capacity in different sectors of the economy and levels and composition of expenditure. These contributions also considered shifts in technology (such as the shifts towards more capital-intensive techniques of production) and how a system would adjust to these.

In various non-Marxist theories of economic fluctuations (see, e.g. Aftalion 1913; Bouniatian 1922), other analytical representations of the productive system were chosen, such as what later was considered a 'time-structure of production' representation which gained prominence in the Austrian capital and business cycle theory (von Böhm-Bawerk 1889; von Hayek 1941). In such a context, the time horizons of investment processes, production lags in the delivery of investment goods and expectations formation (later also the inter-temporal analysis of consumption–savings behaviour) were considered. In this line of research, economic fluctuations emerged because of expectations-driven investment cycles due to the characteristics of expectations formation processes. These would lead to a malfunctioning of the inter-temporal price system (as a signalling mechanism) that would result in distortions in and mismatches between sectoral production and expenditure structures. At some point, such distortions had to be corrected and this would occur through sectoral and income distributional adjustment processes resulting in the periodic recurrence of economic fluctuations.

Let us summarise the core components of classical political economy of structural change analysis and lessons to be learnt from these.

Sectoral decomposition and sectoral interdependencies: we have seen that the authors of classical political economy employed in their analytical and historical analyses schemes of sectoral decomposition that they regarded as fundamental to the investigation of principal features of production activity and for analysing its dynamic evolution. Sectoral interdependencies (both of a horizontal and a vertical variety) were carefully considered and formed part of analysing potential growth paths of an economy. Attention was given to detect the characteristics of production sectors as being growth-enhancing or growth-retarding for the economy. Here, the classics developed rather sophisticated tools of production analysis to identify why sectors might fall into one or the other of these two categories (economies of scale, division of labour, learning processes; decreasing returns and resource constraints). Their analysis included the investigation of the scope for and the characteristics of technical and organisational change in the different sectors.

The role of 'classes' or 'social groupings': the identification of social strata was undertaken partly because of their links to sectors of the economy and partly based on the types of income they received, which in turn relied on property relationships. Both these aspects anchored the social groups in structural features of an economy in terms of production sectors, income and expenditure patterns. Finally, the classical economists developed a

variety of analytical methods that also became central in later contributions to structural dynamic analysis such as multi-sectoral growth analysis, stock-flow analysis in national income accounts and traverse analysis.

3 More Recent Analytical Approaches

3.1 Political Economy of Multi-sectoral Modelling

The classical economists introduced multi-sectoral analysis because they wanted to analyse specific features of different sectors in the economy and their roles in overall economic growth of the economy. In the previous section, we pointed to the importance in the classical writings of identifying certain sectors as ‘growth-propelling’ and others as ‘growth-retarding’. These features were in turn traced back to a detailed analysis of the sources of productivity growth or productivity decline in these sectors (e.g. increasing returns in manufacturing, decreasing returns in agriculture and other natural resource-dependent sectors).

In the technically more developed models of multi-sector or multi-activity analysis developed post-WWII, these principal preoccupations of the classical economists faded away. The analytical representation of sectors lost their specific characteristics as the mathematical representation required a rather uniform treatment. There was no explicit analysis why changes in input coefficients (representing the technology used in a sector) should follow specific characteristics derived from production conditions (or from different scope for and directions of technological change) in specific sectors. The concerns of multi-sector modelling moved towards the identification of steady-state growth paths along which all sectors grew at the same long-term rate. On such a steady-state growth path, no natural resource constraints are encountered, no differential scale dependencies emerged as sectors changed their production levels, and no specific differences in the potential for productivity advances (including technological progress) were identified across sectors. Nonetheless, important results emerged from this type of analysis, for the nature of general inter-sectoral interdependencies imposed constraints on the maximal growth paths of the economy. This was a result arrived at already in the von Neumann growth model (von Neumann 1935–1937). Further, important dualities in the determination of price and cost structures, on the one hand, and quantities (both output composition and input structures reflecting the choice of techniques), on the other hand, were extracted from the analysis. In this respect, the technical analysis went far

beyond what the Classics had achieved. Nonetheless, many of the insights into the specific nature of the structural economic dynamic of capitalist economies gained by the Classics disappeared. This referred particularly to the important roles that ‘growth propelling’ sectors, on the one hand, and ‘growth restraining’ sectors, on the other hand, played in determining the overall dynamics of an economic system.

The deficit with regard to the obtained insights by the Classics was even more apparent regarding the ‘political economy’ side of structural economic analysis: the identification of social groupings (or ‘classes’) was not followed up in the modern approaches to structural economic dynamics. The ‘social’ aspects were limited to the introduction of basically two macroeconomic income distributional variables, the wage rate and the rate of return on capital. These two variables had a role to play as an important determinant of the price system and through it for the choice of techniques. The full circular flow in which incomes determine the expenditure patterns of different social groups and thus the output composition of the economy was rarely examined.

However, an interesting result was obtained—in line with some of the classical analysis: one of the important variables of income distribution—the rate of profit or return on assets—was linked to the rate of expansion of the economic system. And here, the notion of the ‘productiveness’ of an economy in terms of its ability to produce a surplus over and above its reproduction requirements at a given scale emerged clearly and in a technically well-specified way in the von Neumann model (von Neumann 1935–1937). Furthermore, the maximal expansion rate of the economy and thus the rate of profit were jointly determined with the choice of techniques in each of the sectors (where such choice exists) as well as the use of different pieces of capital equipment. This also implied the ‘endogenous’ determination of rates of scrapping of capital equipment (see, e.g. Schefold 1978; Baldone 1996; Pasinetti 1973; Kurz and Salvadori 1995).

Theoretical developments in the classical tradition showed that it is not easy to represent unbalanced growth, i.e. the evolution of sectors at different rates of growth, in an analytical model. This was possible in the open economy version of the Leontief model where differentiated developments of the components of final demand (consumption demand, investment, net exports, government expenditure) could be specified in a way that allowed unbalanced growth. But once the economy—and thus the ‘circular flow’—was ‘closed’, it was not easy to analytically represent the phenomenon of uneven sectoral growth. In fact, in both the dynamic Leontief model (see Petri 1972) and in the von Neumann model, one ended up with balanced

and steady-state growth models; otherwise, major problems of stability were encountered. The combination of linearity (fixed input-output coefficients) and general interdependence did not allow unbalanced or disproportional growth. However, it is important to conceive of uneven or 'disproportional growth' not as a long-run persistence of the same structural dynamic, as this would lead in the long term to the complete dominance of one sector in the economy as a whole—and this is obviously unrealistic. It is better to think of it in terms of phases in which specific patterns of disproportional growth take place followed by other phases in which other patterns of disproportional growth take place. Models of 'product cycles' or 'industry cycles' (see e.g. Segerstrom et al. 1990; Helpman and Trajtenberg 1998) are examples or such circumscribed phases in which industries or technologies go through growth phases followed by other phases in which other industries and technologies take over in terms of their growth phases which then peter out. It is much more appropriate to think of disproportional growth models in such terms where the composition of more dynamic and more stagnating industries, activities and technologies changes over different periods of economic development, rather than extrapolating the same pattern of uneven growth ad infinitum.

The development of multi-activity and multi-product industry models provided the possibility to move from 'square' to 'rectangular' representations of structural interdependencies, and thus to cover issues such as multi-process industries, choice of techniques and the analysis of industries' multi-product output. The latter also allowed an analytical representation of fixed capital in production as a 'joint product' (see e.g. von Neumann 1937; Schefold 1978; Baldone 1980). However, the models moved quite quickly to an analysis of 'optimal' (i.e. cost-minimising) choice of techniques and no further development in the analysis of changing product composition of industrial production (i.e. within industries) was pursued. With several mathematical techniques (Hawkins–Simon in the case of square matrices; fixed point theorems in the case of von Neumann), one also attempted to find the maximal growth rate for the economy. The pattern of inter-industry (cross-process) interdependencies showed the constraints that an economy is facing. Only later was the impact of 'natural resource constraints' reintroduced that had already concerned the classical economists (see earlier on Ricardo and Malthus). The analytical investigations of such constraints in the work of Quadrio Curzio (Quadrio Curzio 1986, 1996; Quadrio Curzio and Pellizzari 1999) made substantial progress in this respect (see also Quadrio Curzio and Pellizzari in this Handbook; see further also Sect. 3.2 on this).

f_1	f_2	f_3	f_4
$[A_1]$	$[A_2]$	$[A_3]$	$[A_4]$
$[l_1]$	$[l_2]$	$[l_3]$	$[l_4]$

Fig. 2 Pasinetti's decomposition into backwardly linked vertically integrated sectors

Regarding the introduction of changing consumption patterns, the work by Richard Stone and his group (Stone and Brown 1962a, b) was followed by the theoretical contributions by Luigi Pasinetti (1981, 1993). These authors made use of the well-formulated analysis of consumer expenditure patterns attributing an important role to differing income elasticities with regard to the products supplied by different sectors of the economy. Further, through the impact of differences in long-run productivity and cost developments in different sectors changes in relative prices act via substitution effects on expenditure structures.⁵ Hence, consumer expenditure systems became an important ingredient to the modelling of structural change in final demand thus affecting the production structures of an economy. It is an example where the insight of neoclassical analysis of consumer behaviour (see the early contributions by Allen and Hicks 1934) made an important contribution to structural change analysis that went beyond that provided in the classical writings.

We may now examine in which way the contributions of multi-sectoral/multi-activity analysis lend themselves to an analysis of the political economy of structural change. Let us start with Luigi Pasinetti's contribution. In this case, structural change analysis is based on the representation of the economic system as a collection of backwardly linked 'vertically integrated sectors' constructed behind any one of the final consumption goods (Fig. 2):

where f_i refers to the final consumption good being produced; $[A_i]$ refers to the i th column of the Leontief inverse, i.e. to the inputs required directly and indirectly to produce one unit of the final consumption good f_i , tracing these input requirements through the entire chain of input-output (or inter-industry) relationships; and $[l_i]$ refers to the labour required directly and indirectly to produce one unit of the final consumption good f_i .

The simplest version of Pasinetti's model examines disproportional growth of these different vertically integrated sectors of an economy (each vertically

⁵The analysis of consumer expenditure patterns was a very active area of theoretical and empirical research, starting with R. Stone's early work on the linear consumer expenditure system (Stone 1954), see also Deaton and Muellbauer (1980).

integrated sector represented by a specific $\{[A_i]; [l_i]\}$ tuple). Pasinetti's analytical construct of 'vertically integrated sectors' decomposes a system of inter-related production relationships into one that completely separates the input requirements required directly and indirectly to produce a final consumption good and hence works with a fully decomposed model of n differentiated subsystems. However, at any point one could return to an examination of the horizontal interdependencies amongst the different industries of the economy under consideration. Pasinetti is keen to identify key forces of change that generate disproportional growth across the different vertically integrated sectors. One force of change comes from the demand side, i.e. the fact that—given a structure of relative prices across final commodities—consumers will change their pattern of expenditure across products as their incomes rise (this is the well-known Engel curve effect that identifies how the structure of expenditure changes with rising incomes). The other force comes from the production side and refers to the uneven incidence of productivity increases, identified in Pasinetti's simple model with falling labour input coefficients $[l_i]$ at different rates across the different vertically integrated sectors.⁶ In an important part of Pasinetti's analysis of disproportional growth, he points to the fact that changes in 'consumption coefficients', i.e. the shares of different consumption goods in a household's expenditure, depend on that household's real income. The combined productivity developments across all vertically integrated sectors then feed into changes in relative (cost or production) prices and determine through their impact on real income growth also changing consumption patterns.⁷ The dynamics on the production side (uneven productivity growth across sectors) thus determines the changing pattern of consumption both through their impact on real incomes and their impact on relative (cost or production) prices.

We may ask what the significance of Pasinetti's analysis is for the political economy of structural change. Pasinetti's model shows that certain patterns of coherence of different sectors depend differentially on two different

⁶Pasinetti uses in his model an assumption that falls in labour input coefficients and thus inversely increases in labour productivity take place at differential but constant rates in different subsystems. This is of course a gross oversimplification, as the labour input coefficients of each vertically integrated sector are—any point in time—a linear combination of labour productivity levels in the original sectors of production. The growth rate of the labour input coefficient of the vertically integrated sector would therefore change as a function of the growth rates of the different original sectors, but also because of changing weights of these original sectors in the vertically integrated sector.

⁷In a further piece of analysis—which Pasinetti does not undertake—one could also introduce uneven productivity developments into the input coefficient matrices $[A_i]$, which would also affect cost developments and thus relative prices. In turn, changes in relative prices may also introduce substitution effects as determinants into consumers' expenditure systems.

types of forces: the demand side forces changing consumption patterns and the supply-side forces changing productivity levels in backwardly linked production activities. Since a sector's position in the overall productive system depends on these two forces, this highlights the likelihood of cross-sectoral interests. For example, firms located originally in different industries will have 'joint interests' with regard to demand and supply-side developments that link them to specific vertically integrated sectors. Looking at this issue from a policy angle, economic interest groups linked to one another via their involvement in the same vertically integrated sector would find it in their interest to support policies that shift final consumption expenditure in their direction even if such groups are involved only in backwardly linked stages to the production of a specific final consumption good. On the other hand, those interest groups are also linked to one another through productivity developments in all the backwardly linked stages of production as these stages affect the cost conditions under which they produce. Finally, in an imperfectly competitive setting, there could also be conflicts of interest within the *same* vertically integrated sector as productivity advances in one stage might not (or not fully) be passed on through price reductions to the forwardly linked stages, which leads to conflicts of interest along the different stages of production.

3.2 Traverse Trajectories

An interesting strand of structural change analysis is represented by the analysis of transitional paths (traverse analysis) (see Hicks 1973; Lowe 1976; Hagemann 1990; Magnan de Bornier 1990; Belloc 1996; Gehrke and Hagemann 1996; Hagemann and Scazzieri 2009; Scazzieri 2009). We have seen that in the classical economists, an important contribution was the analysis of a 'traverse' where an economy shifts from one structural set-up to another as technology changes thereby affecting the overall growth path of an economy and also impacting distributional relationships. Examples are Ricardo's analysis of shifts towards more mechanised methods of production and his analysis of the impact of decreasing returns in agriculture upon the growth path of the economy (Ricardo 1817, 1821 edition).

In later contributions, 'traverse analysis' used both the 'Austrian' representation of production (as in Hicks 1973) and the departmental scheme of inter-industry relationships (see Lowe 1976). These analytical representations were already prevalent in the late nineteenth and early twentieth century (see Tugan Baranovsky 1913 [1894], on the one hand, and

Albert Aftalion 1913, on the other hand) and then continued in the writings of the interwar period (von Hayek 1941; Luxemburg 1951 [1913]). The main interest of traverse analysis is to follow the structural adjustment process of an economic system when it is exposed to an 'impulse' or 'shock'. We have emphasised throughout that such a structural adjustment process is a core concern of 'structural change' analysis. It emphasises that there are reasons why adjustment does not take place instantaneously. Recent traverse analysis is limited mostly to the characteristics of fixed capital using economies. The main reason for a structural adjustment process not being instantaneous is that fixed capital takes time to produce and is durable. Hence, when an 'impulse' (such as the emergence of a new technique of production that requires a different combination of capital equipment or a fall in the level of demand either at the aggregate or sectoral level) hits an economic system, the economic system takes time to adjust its structure of fixed capital. This type of analysis could be extended to deal with the adjustment of 'skills' that are 'embodied' in the labour force that also take time to adjust (see also Amendola and Gaffard 1998).

Alberto Quadrio Curzio combines his analysis of multi-sectoral growth with traverse analysis and thus deserves a mention also in this section on traverse analysis. Quadrio Curzio (1986; Quadrio Curzio and Pellizzari, this Handbook) examines the topic addressed by David Ricardo regarding the structural shifts that an economy experiences when it adjusts to natural resource constraints while its population and thus its economy are growing. A growing economy will require additional raw materials to be available and, with a growing population, an increased amount of food to be produced. The latter requires more extensive or intensive cultivation of land and here is where the principle of 'decreasing returns' applies. In the extensive case, land of worse quality must be taken into operation and this requires an increased amount of labour, more ploughing and fertiliser to be spent on it to extract the same amount of output. The same would be true if one attempts to produce more output through intensive cultivation on the same piece of land (or, in the case of mining, on the same extraction site). The 'decreasing returns' phenomenon can be technically represented by an increase in some of the input coefficients (the amount of an input to be used to produce a unit of output) that characterise the technique of production used in a particular industry. Quadrio Curzio represents the decreasing returns phenomenon by showing that, as some input coefficients in one or more industries rise (reflecting the decreasing returns phenomenon), the maximal growth rate g^* of that productive system falls (using the

Hawkins–Simon theorem in the case of a quadratic matrix representation of the productive system):

Thus $g^*(A(II)) < g^*(A(I))$, where the output level produced with $A(I)$ is smaller than with $A(II)$, i.e.

$$\mathbf{x}(I) < \mathbf{x}(II)$$

Hence, as output levels increase in an economy to feed a growing population, but also a range of other raw materials must be supplied at an increased scale, the economy ‘traverses’ across productive systems $A(I) \rightarrow A(II) \rightarrow A(III) \rightarrow \dots$ With each of these productive systems, a maximal growth rate is associated such that with an increased scale of production a fall in the maximal growth rate will set in. This is the formalisation of Ricardo’s principle of decreasing returns.

Quadrio Curzio also emphasises that old and new productive systems operate alongside each other (i.e. more and less fertile lands are cultivated) and hence, the overall (or global) maximal growth rate will be a linear combination of the maximal growth rates of different subsystems, i.e. one subsystem that is based on the use of the most fertile pieces of land and the other subsystems on less fertile plots of land. The weights in this linear combination are changing continuously as the scale of production increases, and less fertile pieces of land are brought into cultivation to increase the overall output of food.

The ‘global technology’ is thus a linear combination of the different productive subsystems operating alongside each other:

$$A_{\text{global}} = \lambda_I(A(I)) + \lambda_{II}(A(II)) + \lambda_{III}(A(III)) + \dots \text{ where} \\ \sum \lambda_i = 1 \text{ and } i = I, II, III, \dots$$

The maximal growth rate of the global technology will—with a continuously rising level of output of the economy as a whole—thus decline in a gradual manner as increased amounts of output must be produced on inferior lands. As Ricardo suggested, at some point the situation might arise when the maximal growth rate of the economic system will approach zero, i.e. the stationary state. If one were to attempt to increase output levels even more, the economy would no longer be able to produce a positive net output vector, i.e. the system would go into contraction. The reason is that the inputs required to produce this increased level of output would outstrip the outputs to be produced, i.e. such an increased scale of production will not be ‘viable’.

Quadrio Curzio mentions several other issues that could be general features of traverse analysis:

- (i) a possible mismatch between the composition of output produced by one subsystem to be used by another subsystem; Quadrio Curzio uses the concept of ‘residuals’ to characterise such a mismatch;
- (ii) the appearance of residuals opens up the possibility that such residuals might lead to the temporary use of further ‘sub-systems’;
- (iii) there could be responses by the economic system to the incidence of decreasing returns leading to *induced technological change* responses, i.e. inventions/innovations that would bring new technological ‘sub-systems’ into play. Such subsystems might develop in the sectors in which the natural resource constraints are directly felt (e.g. better extraction methods in the case of mining or technological improvements in agricultural methods) or in other sectors that might compensate through technological or organisational innovations of their own the effect of the decreasing return phenomenon in the natural resource-based sectors on the growth rate of the economy as a whole;
- (iv) there are multiple income distributional implications of traverses: in particular—just as David Ricardo pointed out—as different ‘sub-systems’ characterised by different levels of productivity (i.e. ratios of net outputs to inputs used) operate alongside each other, this gives scope for ‘rents’ to emerge. Such ‘rents’ reflect the relative ‘productiveness’ of different subsystems and the question in the classics emerged as to who receives such rents. In Ricardo, these were the owners of the ‘scarce’ input used in production, in his case land of particular fertility. Such differences in ‘fertility’ in turn lead to different techniques of production being used on different lands, i.e. worse lands require more intensive ploughing and more fertiliser. Hence, we get a different picture of ‘vertically integrated sub-systems’ in this framework, i.e. those based on the uses of different types of ‘non-produced means of production’ (NPMP) (Fig. 3).

We should mention over here that the ‘rent’ concept developed in this context, re-emerged later when the use of different techniques of production (or different technologies)—again characterised by different levels of productivity—alongside each other in the same industry was analysed by people such as Alfred Marshall (Marshall 1893) or Joseph Schumpeter (Schumpeter 1934). Marshall used the term ‘quasi-rents’ to describe such a situation, and Schumpeter spoke simply of profits (or ‘super-normal profits’) as he thought that in a stationary system in which no differentiation of technologies exist

$g^*[A(I),I(I)]$	$g^*[A(II),I(II)]$	$g^*[A(III),I(III)] \dots$
$[A(I),I(I)]$	$[A(II),I(II)]$	$[A(III),I(III)] \dots$
NPMP(I)	NPMP(II)	NPMP(III) ...

Fig. 3 Quadrio-Curzio's decomposition into forwardly linked vertically integrated subsystems

in the same line of business, 'profits' would no longer emerge (just the general rate of return on invested capital). We shall return to a discussion of these different rent concepts in Sect. 3.4.

We now move towards a discussion of the political economy dimension of transitional dynamics. As shown above, Quadrio Curzio's analysis points to the existence of 'forwardly integrated sub-systems', as productive systems A(I), A(II), A(III), ..., are linked to a differentiated natural resource base. The 'forwardly integrated sub-system' is based on the use of a specific raw material base [NPMP(i)] and the 'subsystems' of techniques of production that have to be used on these. This provides all producers that are 'forwardly linked' to these different primary resource bases a 'commonality of interest'. For example, they are bound by the 'high'- or 'low'-cost structures linked to the methods of cultivation or extraction of this primary resource, or they are interested in progress made in finding less costly methods of cultivation or extraction on 'less fertile' lands or high-cost extraction mines. Such commonality of interest will, on the one hand, activate their specific interest in distributional or price issues (such as the price of fertiliser or the costs of labourers or miners) and their willingness to invest into finding better methods of production (e.g. for deep-sea drilling) and, on the other hand, will also mobilise their interests in political lobbying, e.g. for public investment into R&D in the specific areas that affects them.

This concept to commonalities of sectoral interests can be extended to some other essential inputs, be they a skill base or infrastructure. The dependence of sector or firm interests upon a given essential input—either directly or indirectly—allows one to identify a fundamental ingredient of the political economy of interest formation. We shall return to this issue in Sect. 4 of this paper.

A common feature of traverse analysis modelling is the concentration of attention on physical *constraints on the adjustment of production structures* to the exclusion of other reasons why structural adjustment takes time. We mentioned in Sect. 1 of this chapter the importance of organisations in structural change analysis and defined organisations through the *persistence*

of behavioural patterns within an organisation and the degree of intensity of behavioural interdependencies within an organisation. Both these two features should make organisations a central focus of structural adjustment processes. Once we have identified adjustment processes as being complex and taking time within organisations, we can automatically infer that such persistence of behavioural patterns within organisations will also affect adjustment processes of relationships between organisations, as the patterns of adjustment within organisations will set boundaries on the way organisations will relate to each other in a phase of 'structural adjustment'. Hence, resistances to change within organisations will also affect relationships between organisations (see also Olson 1965, 1982). It will also allow entry of new types of organisations that are not affected by the historically grown patterns of behaviour within existing organisations.

There is another dimension in which traverse analysis is more directly associated with a 'political economy' approach, and this refers to the positions of the *relative power* of different groups in a process of structural adjustment. Traverse analysis points to a core issue of political dynamics that accompany structural change: during processes of structural adjustment, positions of different social groups and organisational structures get weakened and others get strengthened. Hence, there are forces whose interest lies in changing the patterns of structural interdependencies and forces whose interests (at least in the short- or medium-term) lie in resisting such patterns of structural change. The same is true of changing organisational structures that affect historically formed (or contracted) patterns of behaviour and interrelationships within an organisation and between organisations. There are costs and benefits of such changes to different groups, and these costs and benefits will be distributed in a differentiated manner. Furthermore, during a 'traverse', i.e. during a changeover from one longer-term pattern of organisational arrangements and structural interdependencies to another, the positions of different groups and their bargaining strengths will themselves change dynamically. In the fixed capital setting of traditional traverse analysis, the different vintages of fixed capital equipment embodying different technologies will be differentially affected by the 'creative destruction' effect of the emergence and introduction of a new technology (some of these vintages will be scrapped, others might survive and might even provide complementary services to the new vintages). The same applies to vintage structures of skills embodied in different segments of the labour force or of firms embodying different organisational structures and technologies. This political dynamic of interest articulation and the analysis of 'winners' and 'losers' are well known from international trade analysis where its impact on the

Matrix of interdependencies	Vector of eigenvalues	Associated eigensectors
Irreducible, non-negative, square matrix $X = \{x_{ij}\}$ of sectoral interdependencies	$\lambda_1, \lambda_2, \lambda_3, \dots, \lambda_n$ n distinct eigenvalues some may be negative or complex; one the Frobenius root	$e_1, e_2, e_3, \dots, e_n$, these are separable sub-systems following their own 'dynamic modes'

Fig. 4 Goodwin's decomposition into eigensectors with distinct dynamic modes

political economy of protectionism has been analysed (see, e.g. Grossman and Helpman 2002). This suggests an interesting way forward to the investigation of the political economy of transitional paths.

3.3 Economics of Fluctuating Growth

Richard Goodwin's analysis of combinations of linear and nonlinear models opened up the vision that even simple disaggregated models can exhibit complex dynamics (Goodwin 1974, 1983; Goodwin and Landesmann 1996). Goodwin highlights that fluctuating dynamics is what characterises capitalist economies and, hence, one should examine quite carefully the different potential 'dynamical modes' inherent in any disaggregated but interdependent economic system. Thus—if one starts off with a linear disaggregated system—a simple focus on the steady-state dynamic (associated with the maximum eigenvalue; using the Hawkins–Simon theorem⁸) might not be sufficient for examining the complex dynamics that such a system could exhibit. Even if the maximum eigenvalue might dominate in the long run, the other dynamic modes (such as oscillations of various amplitudes and lengths) also matter as transitory dynamics. To make these different dynamic modes transparent, Goodwin also suggests a method of decomposition, by identifying the so-called eigensectors each associated with the different 'eigenvalues' of a disaggregated (n-dimensional) linear system (see Goodwin 1974). Each of these 'eigensectors' then responds to an 'impulse' with its own dynamical mode even though the eigenvector associated with the maximum eigenvalue will exhibit a steady-state, proportional growth path that will in the long run dominate the dynamics of the other eigensectors (Fig. 4).

⁸See e.g. Hawkins et al. (1949).

The basic insight of Goodwin's model for the political economy of structural change is that his decomposition highlights that structures are potentially exposed to a multitude of dynamical shocks, which they must accommodate. Different entities within such structures might have a wider or narrower range of ability to adapt to the differentiated dynamical modes of an economic system. From a political economy perspective, Goodwin's decomposition shows to which extent different sectors are exposed to different dynamical modes (each 'eigensector' is a linear combination of the original sectors in an input-output matrix). This leads to various 'coherences' across economic sectors, in this case in relation to the dynamical patterns that are inherent in a system of interrelationships. Hence, Goodwin's analysis points to the very demanding nature of an economy as a complex dynamical system (see also Anderson et al. 1988; Arthur et al. 1991). When impulses (shocks) impinge upon an economic system, various dynamical responses get initiated and then reverberate across an economic system (growth trends, but also cycles of various amplitudes, and these interrelate giving rise to irregular cyclical and trend patterns). The decomposition that Goodwin adopts isolates in the first place the different dynamical modes, and it shows through the construction of 'eigensectors' to which extent the different original sectors of an economy are affected by each one of these modes. When we return to original sectors, the formerly isolated individual dynamical modes then combine and generate irregular dynamical patterns, just as the ones we see in actual economic systems. Finally, although Goodwin makes through this decomposition distinct dynamical modes transparent, he also points to relationships that establish coherence across eigensectors by introducing various macroeconomic relationships that affect them all, such as economy-wide wage bargaining or the full employment constraint that imposes a 'ceiling' to output expansion across the aggregate economy.

3.4 Technological and Organisational Change

An important aspect of structural change and dynamic analysis in general is the study of 'innovation'. Innovation means that something 'new' is introduced in an economic (or social) system that had not been known and/or implemented before. Innovation thus has intrinsically something to do with new knowledge being generated either about new technologies, product development or organisational forms or about the feasibility and nature of their implementation in an economic (and social) system.

What are the 'structural' aspects of innovation analysis and, furthermore, what are the 'political economy' aspects of a 'structural approach' to innovation analysis?

One thing that one can say from a 'structural' point of view is that anything new is most likely going to be generated from some components that already exist. Josef Schumpeter spoke of innovation being 'new combinations'. But we can go beyond that and analyse in a systematic manner how 'innovation' might be shaped by existing 'structures', i.e. patterns of interrelationships and behavioural patterns. Thus, for example, R&D organisations have particular set-ups that are designed to lead to new ideas regarding technology or organisational improvements. In fact, any part of an organisation usually has some incentive to think up some new ideas regarding its 'mode of operation' and implementing such ideas in one way or another. The interplay of innovative ideas and initiatives within an existing organisational arrangement then shape the actual generation and implementation of innovations in an organisation.

However, there is an additional important ingredient that includes a 'political economy' dimension to a 'structural view' of the innovation process: any change in the 'mode of operation' in any sub-area (or 'module') of an organisation will change positions of existing members and teams (task allocations, power positions in decision-making, etc.) and will thus encounter '*resistances to change*', but also mobilise '*advocates of change*' that are likely to lose or gain from such changes. The evaluation of the relative strengths of these two forces and their changes in the processes of organisational change will be a central concern of 'structural analysis' of innovation (and diffusion) processes.

The 'structural' analysis of organisational change thus has to deal with: (i) an evaluation of the characteristics of 'technological' and 'organisational' change in terms of changes in task allocations, how these affect the flow of production, etc., within an organisation as well as the relationships to other entities (other organisations, government, etc.) and (ii) analyse the 'political force-field' that determines the nature of the change itself, i.e. the resistances that have to be overcome, the compromises with regard to changes that have to be struck, the nature of adjustments and sequence of adjustments with regard to the 'blueprint of change' that was originally envisaged.

Let us turn to another aspect of the economic analysis of innovation: Josef Schumpeter was keen to show that innovation initiates changes in market structures. Innovators hold a (temporary) advantage over their competitors and thus acquire additional market power. This led him to think of quite a different use of the 'rent' concept as compared to the one we encountered in the classical writings of David Ricardo and Robert Malthus. Both in the classical context and in Schumpeter, the emergence of 'rents' reflects 'heter-

ogeneity' in production structures. However, in the classics such heterogeneity stems from the constraints that limited availability of 'scarce resources' have on an economic system. In Schumpeter, however, 'rents' emerge as a reward for 'innovations' that lead to better (more cost-effective) practices in production or to improved and more market-adequate products. Hence, in Schumpeter as in Ricardo, 'rents' emerge as long as heterogeneity in production structures persists, i.e. as long as 'better' or 'worse' techniques of production (or products) coexist in the same lines of business and are not (yet) 'weeded out' by competition (or a diffusion process) leading to only the 'best practice' techniques to survive. Furthermore, it is the reward of a 'rent' ('quasi-rent' in Marshall or 'super-normal profits' in Schumpeter) that acts as an incentive to put resources into investments that might lead to innovations and taking on the risky business of being a pioneer in implementing such innovations.⁹

Let us further discuss the pricing mechanisms that accompany innovation and diffusion processes, as 'rent' after all is a price (rewarding the differential between 'actual' technique used and the 'worst' technique still employed in a 'particular line of business'). As expectations of 'rents' also act as the incentive mechanism to 'innovators', the price mechanism giving rise to rents is of additional interest as it influences the speed and direction of innovations and the changeovers in productive (and one might add—organisational) structures. In the classics (as very well formalised in Quadrio-Curzio's model), the pricing mechanism is straightforward: price of output (in a particular 'line of business') is determined by the least cost-efficient technique or productive system still in operation. This productive system only earns—what the classics called—a 'production (or cost) price', i.e. a price that covers unit costs plus a uniform rate of return on invested inputs. Given this price, all the other producers operating with 'better' (i.e. more cost-efficient) techniques earn a rent as the difference between that price and their unit costs. As mentioned above, Marshall called this a 'quasi-rent' and in the Schumpeterian framework, this represented 'super-normal profits'.

In conclusion, when we speak of a 'structural' approach to innovation we mean basically three things:

- (i) the emergence of innovations from existing 'structures' that impact on the nature and likely direction in which innovations evolve in an economic (and social) system;

⁹See Landesmann (2015) where the two different concepts of 'rent' in the classics, on the one hand, and in Marshall and Schumpeter, on the other hand, are explored.

- (ii) the impact of innovations on production and market structures that also leads to all kinds of ‘transitory dynamics’ that will also be reflected in cost, price and rent dynamics; and
- (iii) the ‘political economy’ aspect of ‘innovation’ analysis: we pointed here to the incentives and resistances by different social groups that shape and impact on the speed and direction of innovations and their implementation within specific organisational arrangements and in an inter-organisational context.

4 Structural Interdependencies and the Political Economy of Structural Change

What the analysis in Sect. 3 has demonstrated is that detecting patterns of structural interdependencies is vital for analysing congruence and conflicts of interest across different actors in an economy. Already in von Neumann’s model, the viability condition (i.e. the ability of the economic system to produce a positive net output vector and thus grow) presupposes a fundamental congruence of interests across all sectors in the economy. Secondly, both in the classical and in more recent contributions there is a recognition that sectors with low levels of productivity constrain the growth path of the economy. Thirdly, the choice of techniques in any sector is a function of the price system faced by the producers in all sectors of the economy and this in turn results from a simultaneous choice of minimum cost techniques in all activities in an interdependent system; hence, the price system affecting the distribution of value added across sectors results from such interdependencies. Fourthly, innovations and changes in organisational arrangements in any part of the economy affect in turn cost conditions and market structures throughout an interdependent system. Let us review some of these issues and draw out the political economy implications:

The lessons from Pasinetti’s, Quadrio Curzio’s and Goodwin’s models are that various methods of decomposition allow one to identify specific and differentiated dependencies amongst sets of actors located in different sectors in an interdependent system. Thus, in Pasinetti’s system forward linkages of actors in different sectors leading to the supply of specific final consumption goods create one type of differential link across actors in the economy. The linkage backwards to productivity developments in the sectors that supply directly or indirectly inputs is another such link. In Quadrio Curzio’s analysis, the differentiated backward linkages towards different raw material bases are the source of a differentiation of interests in an interdependent economic

system. Finally, Goodwin's decomposition allows one to trace the complex dynamics that different sectors exhibit distinct 'dynamical modes' that can be identified through the construction of 'eigensectors'. The dynamics of the original sectors then follow a particular linear combination of the dynamics of the eigensectors. Decomposition techniques thus allow in all these cases to identify distinct features that determine the specific characteristics of the positions of different sectors and actors located in these sectors in an economy as well as the nature of interdependencies in an economic system. Once the system is exposed to 'forces of change' or 'shocks', these patterns of interdependencies then characterise differential dynamical responses of different parts of an economy.

In the context of—what we called—'structural analysis of innovation' as well, authors have investigated important interdependencies across sectors and technology fields. Thus, Nathan Rosenberg (1976) has pointed to interdependent sequences of innovations and implementations of such innovations across sectors of an economy. These give rise to technological trajectories as pointed out by Giovanni Dosi (1982) and also to cyclical patterns of waves of innovation, technology development and implementation as discussed in 'long wave theories' of Joseph Schumpeter and Simon Kuznets, but also by more recent authors who investigated the concept of 'Generalised Process Technologies' (GPT) (see, e.g., Helpman and Trajtenberg 1998).

Decomposition techniques thus allow us to analyse the formation and articulation of conflicts of interest emerging from the disaggregation of the economy into subsystems. First of all, decomposition of an economy into sectors or 'sub-systems' defines a sector's position in an overall economic system and thus defines 'sectoral interest' (more on this in the concluding Sect. 5). However, there are also cross-cutting issues across an economy characterised by interdependencies of sectors or subsystems. Thus, already in von Neumann's model the basic conflict between the costs of subsistence of workers and the maximum rate of expansion of the economic system is clearly developed. While these are cross-cutting conflicts of income distribution across sectors of the economy, they also affect sectors to different degrees (e.g. labour-intensive sectors where wage increases play a bigger role). Cross-cutting conflicts of interest also appear in Quadrio Curzio's analysis of the relationship between wages, profits and the differentiated emergence of rents along the growth trajectory of an economic system that is subject to natural or technological scarcities. Again, while these emerge from an economic dynamic at the aggregate economic level (i.e. increase in the overall scale of production), the impact on income distribution

(e.g. between profits and rents) will differ across sectors. Also, Goodwin's analysis of the different 'dynamic modes' shows that these manifest themselves in different linear combinations across sectors of an economy thus giving rise to differentiated dynamics across sectors. Furthermore, both Goodwin and Pasinetti highlight that sectoral differentiation of interests coexists with requirements for coherence through certain macroeconomic behavioural relationships (economy-wide wage-profit dynamic) and constraints (such as the overall availability of a given labour force).

We may also detect congruence and conflicts of interests in the time pattern of structural adaptation to an economic 'impulse' in the traverse analyses of the Hicks type and Lowe type. For example, the transition speed when introducing a more capital-intensive production technique may be constrained by available 'loanable funds' and the costs of such funds. In this case, all actors interested in the introduction of more capital-intensive techniques would have an interest in facilitating liquidity conditions leading to a quick and low-cost transition to these new techniques. However, the dependence on liquidity provision will be different across sectors of an economy as techniques and thus the nature of sectoral switchovers will differ.

Finally, we pointed in the context of the 'structural approach to innovation' analysis to two important aspects: (i) the importance of 'forces of resistance' and of 'advocates of change' and (ii) the core concept of 'rents'. Both of these play a major role in influencing the speed and direction of innovation and diffusion processes in an economic system and they will, by their very nature, be differentiated across sectors (and firms within sectors).

5 Conclusions

In conclusion, we want to summarise some of the main features of a 'structural approach' to the political economy of economic and social change.

Structures and structural change: political economy refers to the relationships of social groups to each other, the dependencies, common purposes, tensions and conflicts that characterise such relationships. In this essay, we have tried to use the notions of 'structure' and 'structural change' to point towards those features that lead to 'persistence' not only in those relationships but also to other 'structures' (physical, legal, organisational) in which such relationships are 'embedded' or which impose a certain context in which such relationships exist.

By 'structures' is not meant a unique pattern of behaviour, but the demarcation of 'bands' of behavioural patterns that have certain bounda-

ries. Behavioural patterns within such boundaries would not be considered 'structural change' even when variations of behavioural interactions could be observed. But once such 'boundaries' are crossed, one can speak of 'structural change'. Of course, the definition of 'boundaries' seems to introduce a certain degree of arbitrariness. On what grounds are certain variations of behavioural patterns seen as belonging to a particular 'structure', while persistent transgressions of these boundaries would lead to a switch of structure?

It is the prerogative of the analyst or theorist to define, within his or her theoretical framework, where such boundaries lie. The analyst will define 'structure' and therefore 'structural change' in a way that he/she thinks contributes towards an understanding of the behaviour and dynamics of an economic and social system, thereby focussing on the main forces of 'persistence' of behavioural patterns as well as the strains and stresses, 'shocks' and innovative forces that lead to overcoming such established patterns of behaviour and organisational forms, thus paving the way towards 'new structures'. These in turn initiate new patterns of behavioural persistence and define new 'boundaries' within which social interaction takes place. Thus, the analytical device of defining 'boundaries' within which behavioural patterns define a given 'structure' has the purpose to put into focus 'forces of persistence' and 'resistances to change' that provide the stability of 'structures'. These can also act as 'rigidities' that affect and shape patterns of adjustment to 'shocks' or 'forces of change'. As such 'rigidities' are overcome, 'structural change' can take place which implies a qualitative move towards establishing new types of sectoral set-ups (changes in techniques of production, in organisational forms, numbers and types of agents in these sectors) as well as of sectoral interdependencies. This 'new structure' will, most likely, also bring about a new dynamic of the economic system as a whole.

Political economy of structural change: we emphasised in Sect. 3 that many of the recent models of structural change focussed on the analysis of production conditions in different sectors of the economy and their interrelationships. This allowed us to identify the roles different sectors play (directly and indirectly through their relationships with other sectors) in the overall growth process. We pointed out that as production conditions are different in different sectors this would also differentiate the ways how technological and organisational change would take place in them. We also emphasised that an important ingredient in structural change analysis is to identify not only what constitutes the 'forces of change' but also the characteristics of 'resistances to change'. This is where—in our opinion—the political economy of structural change analysis has to come in.

Some ‘resistances to change’ can be deduced from physical conditions of production—such as the use of fixed capital equipment or the rigidities involved in skills embodied in the labour force. The use of existing installations of equipment and the set of available skills constrain the organisational options in terms of the sets of tasks and arrangements of tasks that can be executed. All of these we consider ‘physical’ constraints to organisational options and thus define one dimension of ‘structural rigidities’. But there are other ‘forces of change’ and ‘resistances to change’ that require a political economic analysis:

The ‘political economy’ dimension is one that brings in the behaviour of social groups into the analysis of change and resistance to change. What leads to a certain behaviour of such groups to articulate themselves as either forces of change or resistances to change and what are the characteristics and directions of such behaviour?

One of the reasons why ‘resistances to change’ arise is that existing behavioural patterns are the result of having solved, over time, complex ‘coordination problems’ of interactions in a social system. Once a particular *pattern of coordination* has evolved in an organisation, behavioural patterns become attuned to each other. While they provide scope—as mentioned above—to a range of responses to ‘impulses’ or ‘forces of change’, there are also boundaries with respect to such responses.

But the establishment of certain patterns of coordination and their manifestation in organisational forms is only one aspect by which social patterns of behaviour determine ‘structures’. The other are *power relations*, which imply that the relationships between social groupings involve ‘asymmetries’ in mutual dependencies. That is, the degrees of behavioural freedom which one group has in relation to another group are ‘asymmetric’, i.e. constrains one group more than another. Furthermore, power relationships go further as one group can influence and constrain the behavioural options of the other group. This gives rise to another dimension of ‘resistance to change’ in that certain groups want to maintain those power relationships and even strengthen them—which could imply maintaining certain organisational arrangements or changing them—while other groups might want to widen their behavioural options and thus might push towards different organisational arrangements.

Let us turn in this context to report on new work recently initiated on political economic aspects of structural change that goes under the heading of ‘Structural Political Economy’ (SPE). We refer here to recent papers by Cardinale (2017), Cardinale and Coffman (2014), Cardinale et al. (2017) and Cardinale and Landesmann (2017). What are the features of this approach and how does it relate to what has been covered in this paper?

We might summarise the approach in the following way: the choice of a particular system of decomposition defines the ‘units’ of analysis (be they ‘sectors’ or ‘social groupings’). Such units are in relationships with each other in an interdependent system. These interdependences lead to certain ‘system-wide’ behaviour and reaction patterns when they are exposed to ‘impulses’ or ‘forces of change’. The ‘impulses’ or ‘forces of change’ might be exogenous to the system or endogenous. Examples of the latter might be ‘innovations’ emerging from the units themselves and from their pattern of interactions.

Structural Political Economy (SPE) emphasises that, while sectoral interests are ‘partial’ (i.e. articulate themselves without full insight into or responsibility for general interdependencies in an economy), these interdependencies nonetheless generate a systemic ‘coherence’ of sectoral interests that determines the overall workings of the economy as a whole.

Cardinale and Landesmann (2017, 2018) have applied an SPE approach to the analysis of international interdependencies and stresses and strains that such interdependencies produce. It thus goes beyond the structural political economy approaches pioneered by Francois Quesnay, David Ricardo and Karl Marx that confined their analysis largely to the interdependencies of social groups within a nationally confined economy. The SPE framework in a setting of international economic interdependence (think of the European Union) would look something like the following:

In Fig. 5, we can see that the SPE approach adopted by Cardinale and Landesmann (2018) preserves the features of the classical approach to structural political economy in that it locates social groupings in sectoral schemes, traces sectoral interdependencies, looks at income distributional implications and analyses the impact of all of these on the dynamics of the economic system as a whole. But it adds further dimensions to the analy-

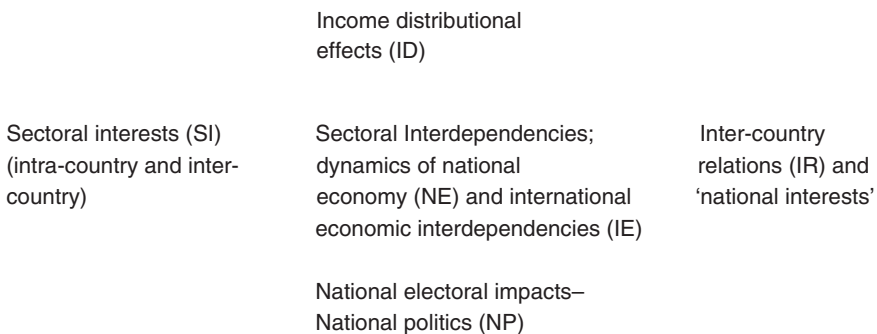


Fig. 5 Extended Structural Political Economy (SPE) Approach—diamond of systemic relationships

sis: it tracks sector definitions and sectoral interdependencies at the international level and also analyses how international interdependencies impact on the dynamics of aggregate economies. Thus, the dynamics of different national economies is seen as interdependent.

Furthermore, the income distributional analysis is introduced not simply in terms of affecting the dynamics of economies through their impact on expenditure patterns and thus on output structure and overall economic growth, but social groupings do also react politically to income distributional outcomes and to the overall dynamics of an economic system (such as fluctuating employment levels, changes in the functional or personal distribution of incomes, the provision of public goods, the incidence of negative externalities, etc.) These political reactions feed into political processes in manifold ways: into national electoral processes, into the platforms and programmes of political parties, into coalition formations, etc. The political dimension is further explored in that political responses to evolving structural interdependencies and economic dynamics do not stop at national levels. Interdependencies of the dynamics of national economies (such as through balance-of-payments disequilibria and evolving debt and creditor positions of countries) impact on international relations (IR), at times putting these under strain and leading to—often asymmetric—adjustment processes. We have seen such dynamics during the recent crisis in the Eurozone and the strains and stresses it has put on relations between debtor and creditor countries (for details, see Cardinale and Landesmann 2017). Such crises in international relations can bring about changes in ‘coordination mechanisms’ that might also get their institutional expressions (such as the ESM and the ‘Banking Union’ that emerged during the recent EMU crisis).

The above shows that ‘structural political economy’ (SPE) has a lot of scope to be further developed, linking the analytical schemes and insights developed by classical political economists to the complex circumstances of the current regional and global environments.

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20

Political Economy of Social Transformation: China's Road in a Global Perspective

Wang Hui

1 Introduction

This chapter addresses the issue of social transformation in view of the debate on China's road and the 'Chinese model'. The chapter first analyses the background of the concept of 'Beijing consensus' and of 'post-Washington consensus consensus', and points out that those two concepts are trying to distil the direction of change from the Chinese experience towards new liberalism. The chapter argues that the Chinese road is different from the roads followed by the former socialist countries in Eastern Europe, and from the paths followed by other East Asian countries. The difference lies primarily in the independent national character of the Chinese experience, in the peasant mobilization achieved through the long Chinese Revolution, the popular diffusion of the new education system, the long historical tradition of China, the role of the leading political party, and China's unique role in social life and economic change. However, in the new pattern of globalization, these elements are being transformed, primarily in the light of the crisis of party politics and of the dependence of China's economy on the world economy. In the end, the chapter outlines a framework aimed at bridging the gap between the political system and the social form in which it is embedded.

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2 From the 'Beijing Consensus' to the 'Chinese Model'

In a well-known paper, Joshua Cooper Ramo highlighted the role of China's experience (which he summed up as 'Beijing consensus') as a possible response to the crisis of the Washington consensus in the light of the overall situation of the global economy (Ramo 2004). In fact, the concept of 'Beijing consensus' takes China as an object or source of inference, but it cannot be a simple empirical description of China's experience. Any such description can be controversial as China's economic development shows different, and often contradictory, aspects. Ramo emphasizes the experimentation features of the Chinese experience, such as the establishment of special economic zones, China's strong defence of national interest (as in the Taiwan issue), and its accumulation of energy sources and financial tools (such as the accumulation of 400 billion of dollars of foreign exchange reserves). He also highlights China's attention to economic development combined with attention to social transformation in view of social justice and human development.

From the descriptive point of view, this generalization is ideal. However, Ramo may not be unaware of the contradictions between the actual historical course of China's development, the 'Washington Consensus', and the so-called Beijing consensus. Ramo's analysis was produced as a research paper published by the Foreign Policy Centre in London, which cited several contributions, including my book *China's New Order* (Wang 2003).

In that book, I outlined a critical analysis of China's experience in the 1990s and pointed out the relationship between China's development doctrine and neo-liberalism. However, I emphasized that neo-liberalism could not explain the whole development of China. My focus was on presenting problems, dilemmas and crises, while Ramo couldn't know the criticisms of the real process. As an observer, Ramo considers the intellectual debate and its impact on public policy as one important feature of China's experience. His goal is to theorize some of the lessons of China's reform and to provide a normative goal different from the Washington consensus. You can also say that his is a normative way of criticizing reality.

Soon after the publication of Ramo's contribution, Joseph Stiglitz gave a lecture at Tsinghua University and put forward what we may call the 'the post-Washington consensus consensus'. At the outset, he said that the Washington consensus did not really exist, because it was neither a necessary nor a sufficient condition for promoting successful growth. What he called

the 'post-Washington consensus consensus' was premised on the failure of the 'Washington Consensus', which focused on the excessive reliance on market fundamentalism. From the perspective of the global economy, Stiglitz criticized the international economic organizations for creating unfair rules of the game and imposing unsuccessful policies on developing countries as a condition for providing policy advice and financial assistance. Stiglitz distinguished the success of East Asian economies from the failures of other economies, noting that existing economic research fails to provide a consensus on economic development policies in both empirical and theoretical terms. Like Ramo, from a comparative perspective, he is sure of the performance of the Chinese economy, and there are many overlaps between his 'post-Washington consensus consensus' and the 'Beijing consensus' on the role of the government, the context-dependent formulation of policies in view of local conditions, and the encouragement of innovation and fairness. However, what we may call 'the post-Washington consensus' is not based on the performance of an actual economy. In fact, the 'Beijing consensus' and the interpretation of the 'China model' are intertwined, and many scholars might question this interpretation from the empirical point of view.

Both Ramo and Stiglitz find that China's experience highlights a development road different from the 'Washington Consensus' and that China's development is different from that of other economies, such as those of Latin America and Russia, where the relationship between the state and the market is a strategic link. The general principles of marketization, privatization and financial stabilization of the 'Washington Consensus' cannot explain China's development. In the process of China's marketization reform since 1980s, the state has always maintained its ability to intervene in the market, without taking the path of neither shock therapy nor has it experienced large-scale financial turmoil like Argentina or other countries. It should be clarified that none of them has simply defended the role of state and government, such as Stiglitz's point of failure. They are proposing flexibility and innovation in policy making, rather than constraining countries to the binary choice between market and state. As for the 'New Left', I have repeatedly mentioned that there is no such unified political position, and that intellectuals who are classified as belonging to the 'New Left' have suggested different interpretations of the Chinese experience. Perhaps we may say that the 'New Left' position can only be identified by its criticism of the market fundamentalism, because the environmental crisis, the polarization between rich and poor, agricultural self-sufficiency, social justice and monopoly are its common concerns. It may be argued that following the crisis of the socialist system in the late 1980s and early 1990s, global capitalism is also in a

systemic crisis, and that we cannot obtain peace, prosperity and a fair society by replicating the latter system in China.

In fact, while the ‘the Beijing consensus’ and the ‘post-Washington consensus consensus’ were proposed, there were authors defending neo-liberalism both within and outside the system. A former Treasury leader, Lou Jiwei, has made it clear that following the ‘Washington Consensus’ is the reason for China’s development. We may ask if this statement is justified. In the late 1990s and in the early years of the new century, China’s major decisions had a strong neo-liberal character, and the impact of those decisions is still felt today. Neo-liberalism can explain China’s housing price bubbles, the land crisis, its financial dependence on the USA, large-scale social disintegration, agricultural crisis, the disintegration of the social welfare system, ecological environment crisis, social conflicts in ethnic regions and other issues. The ability of neo-liberalism to create bubbles, divisions, conflicts and crises cannot be underestimated, while true development cannot be explained by neo-liberalism or the Washington consensus. In the book, *China’s New Order* (Wang 2003), I investigated the neo-liberalism of the 1990s, but unlike the new liberals my judgement was critical. If China’s growth cannot be explained by neo-liberalism as such, it must be explained in terms of the historical conditions created in the early stages of reform and in the long Chinese Revolution and its legacy. We should also consider the role of the resources accumulated by Chinese society since early modern times during a secular process of social transformation. In other words, China’s development, even if one wants to limit one’s attention to the economic aspects of it, must be explained by addressing its historical premises.

On these premises, I will briefly refer to the argument of my paper ‘The Dialectics of Autonomy and Opening’ (Wang 2011). First, China is deeply involved in the global economic system, but remains a sovereign economy. The strength of this sovereignty is far greater than that of a common Third World country. The relatively independent national economy and industrial system are the prerequisite of reform, and the ability of the state to control economy is closely related to this historical tradition. This can explain the success of the reform and opening-up experience, but also explain China’s performance in times of large-scale economic crisis. At the time of the Asian financial turmoil of 1997, the Asian emerging market economies, which had appeared to be relatively successful, were seriously hit, while the impact on China was comparatively small. The most important difference was the role played by the state in the two cases, in that article, I pointed out that rather than using a general framework to understand this ‘sovereignty’, it was better to define sovereignty in view of the course of China’s history in the

twentieth century, because its independent national character was the product of a complex political process.

Second, China's reforms began in rural areas, and rural reforms were relatively egalitarian. No matter what was the starting point of reform or its content, the early rural reforms have nothing to do with the neo-liberalism, as they were aimed at reducing the difference between urban and rural areas and the 'scissors' between industrial and agricultural products. The agrarian revolution is the core content of the long Chinese Revolution. There has been a problem of excessive violence in land reform and agrarian revolution, but it is undeniable that China's rural reforms have the highest level of equality in Third World countries. Since the 1990s, China's rural areas have been in a crisis, but this crisis is not due to the relative egalitarian character of land utilization, but to the deepening cleavage in urban-rural relationships. It is impossible to deny that the conditions accumulated by China during the socialist period have played a great role in the subsequent reform period.

Third, because of the diffusion of education and the tradition of agriculture, the quality of China's labour force is comparatively high. If China's success would only be because of cheap labour, why not invest in places other than China? Lin Chun published an article entitled 'What is China's comparative advantage?' in *Dushu* (Lin 2003a) to discuss what is the comparative advantage of China. There she criticizes excessive emphasis on cheap labour to the neglect of other historical elements (see also Lin 2003b).

Fourth, the role of state in the reform is unavoidable. Legitimacy of reform is a necessary condition for public support to the reform movement, and one of the key elements for achieving this legitimacy is that the state must be flexible enough to present development policies in the light of specific circumstances. The issue of the state cannot be discussed without the question of autonomy, although the latter is not limited to the national dimension. The new liberal explanation of growth only considers the consequences of market opening and neglects the original foundation of that process. There are many open economies in the world, and there are not as many economies that have achieved sustained growth. The inability to achieve 'autonomous openness' often triggers economic crises and social collapse, a problem that has been discussed in the theories of the dependency school, and is still important today. Autonomy is not the opposite of openness, it cannot be equated with closure, and an autonomous society may also be open.

In the recent past, the relative weight of the four above factors has greatly changed. Financial capital is more 'liquid' and speculative, the globalization that it drives is riskier, and in the financial system and related fields, the old

sovereignty relationship has become increasingly weak. The complex entanglement between financial capital and state is not only a road to corruption, but also the cause of failure of a series of major policies. This entanglement also means that the government's autonomy has faced major challenges, that rural areas have become increasingly dependent on the city, and that large numbers of young people have moved from the agricultural sector to the urban areas.

Today, it is necessary to explore new forms of autonomy under open conditions. Autonomy is not only external. For in the era of increasing power of capital or interest groups, it is a serious challenge whether the state can formulate its own public policies and guarantee the citizens' constitutional rights. A society without autonomy cannot produce true democracy. In some Third World countries, for example, formal democracy cannot check large-scale corruption. From one point of view, this is a crisis of national independence as the ruling party becomes subject to the influence of external interest groups, so that its policies are no longer autonomous. The relationship between excessive pursuit of GDP growth and environmental crisis, the relationship between efficiency and social differentiation, one-sided development and the widening of regional disparities and so on highlight key features of the contemporary economic crisis that have often been dealt with in the last 20 years of debate. The question of autonomy is thus of central importance.

3 The Practical Significance of the Chinese Model

Whether it is discussing the 'Beijing consensus', 'The consensus of the post-Washington consensus', the 'China Road' or the 'China model' one is inevitably involved in comparing the achievements of China's economic reforms, as compared with other countries and regions, from the perspective of world history. On the one hand, this achievement is undeniable; on the other hand, the problems, contradictions and crises arising during development must be addressed, because the development model pursued so far contains obvious unsustainable factors and hidden risks. The use of concepts such as 'road', 'experience', 'model' or 'consensus' suggests different meanings. I do not use the concept of 'model', but prefer to use concepts such as 'experience' or 'road', mainly to suggest the need of providing historical support to theoretical analysis. However, it is not possible to describe in such

simplified terms the complex Chinese experience. For sure concepts, such as 'pattern' and 'consensus' have emerged at a time of crisis and are therefore committed to providing a direction for development. The Cold War had ended with failure of the socialist system. In this context, all things related to socialism were considered in a negative light, and the result was a new ideology claiming to explain everything but marred by arbitrariness and non-historicity. In fact, the culture of serious reading and discussion never prevailed in the media debate and there never was a real 'Washington consensus', for to put forward a 'consensus' means to identify the future direction of development, so that the discussion should have revolved around what kind of future we needed to trigger.

In the West, the discussion of China's rise has been going on for thirty or forty years since the 1970s. At a forum in Hamburg on the rise of Asia, the former German Prime Minister Helmut Schmitt recalled that when he visited China in the 1970s, he had realized that the rise of China would be inevitable, and that was in the age of Mao Zedong and Zhou Enlai. His view was ignored or ridiculed by many Westerners, but who was more visionary? In this sense, to deny the original historical experience of the Chinese Revolution and socialism is untenable, and the split in the history of China that it suggests is only a myth. This myth not only cannot explain the development of China in a comprehensive way, but also conceals the many real problems and contradictions China faces today.

4 Whether the Chinese Model Can Be Replicated

The concept of 'model' is a product of modern social science, and it is easy to think of the problem of 'duplication' of a given model across different contexts. I prefer to use the concept of 'experience', for experience is always specific, historical and unique. At the same time, it can be used as reference and can have universal significance. The Chinese Revolution and China's reform are unique, but can also have universal significance. Universality is not antithetical to uniqueness, and therefore it cannot be tested by asking whether a given model can be replicated. Universality has more to do with the concept of reference and inspiration, which is always premised on autonomy and innovation, rather than replication. The inherent flaw of the concept of 'pattern' is that it presupposes 'duplication' as a condition for discussing a 'model'. However, experiences can be discussed

even if they cannot be replicated. For example, the American experience can hardly be considered a 'model' to be replicated under historical conditions different from those that gave rise to it, but it certainly is an experience whose universal meaning can be discussed. The meaning of Chinese experience is not whether it is replicable, but its uniqueness. Lin Chun's book *The Transformation of Chinese Socialism* (Lin 2006) explicitly puts forward the term 'China model'. Mainstream economists believe that China's comparative advantage is mainly cheap labour, but Lin Chun points out that China's comparative advantage is the accumulation of resources in the socialist historical experience, such as a relatively complete industrial system, a relatively high level of infrastructure construction and so on. Her use of the expression 'creation and recreation of the Chinese model' also indicates that there are different 'Chinese models', which prevailed in revolutionary times, in the socialist period and during the reform process. Because of this, she does not fully agree with today's model and suggests a critical look at China's social transformation and possible future.

Lin Chun and I have mentioned the differences between China and the Soviet and Eastern models and China's unique development path. I also mentioned the differences between China and other countries in East Asia. These differences reflect the unique historical experience of China, such as China's independent economic development, which makes it impossible to think of it as a case of dependent development.

5 The Indian Experience and the Chinese Experience

India's development model is often compared with China's experience. India experienced comprehensive colonization and eventually formed a multi-ethnic and unified state; the heritage of colonial history inevitably infiltrated its social system. China has a long tradition of unified history, never degenerated into a complete colony, and went through a major revolution in the twentieth century. The paths of the two countries are different, and their respective social and political traditions are also very different. For this reason, any comparison should avoid the teleological bias of belittling the Indian experience relative to China's growth performance, or of belittling Chinese political experience relative to India's adherence to the Western model of democracy.

There are comparable aspects of India and China. First, India had also followed a type of socialist model, the economic structure of the Soviet Union,

so that the economic reform of both China and India involved the transition from a planned economy to a market economy. Second, both China and India are Third World countries, have large-scale agriculture and their respective roads to modernization, marketization and urbanization have a certain degree of similarity. Third, both countries are ancient civilizations, India experienced the anti-colonial movement, China went through a long revolution, both have strong national pride and will to follow their unique road without replicating external models. India was influenced by the Soviet Union in the 1980s, as China was in the 1950s, and it is now getting increasingly close to the USA, but neither country is willing to accept US-Soviet guidance.

The Chinese and Indian reformers have acknowledged the fundamental difference that China's reform began with rural reform, characterized by the average distribution of rural and the adjustment of urban-rural asymmetries in the direction of equality (from price adjustment to the loosening of relations between urban and rural populations). India's reforms lacked such an egalitarian premise. This feature is not simply a result of different policy decisions, but derived from the different historical contexts of the Chinese Revolution and the Indian anti-colonial movement. Without understanding the different positions of agrarian reform in these two movements, it is impossible to understand this fundamental difference in the reform process. Many people discuss the violence in China's land reform during the period of Chinese Revolution and 1950s, but it is also important to address the liberation side of land reform. With land reform and the change in peasant status, the rural education system in China gradually developed, the literacy rate greatly improved, and there was a very significant increase of school enrolment of peasant children. Without this background, it is difficult to understand the vitality and pioneering spirit of Chinese farmers in the period of land reform. India, and the whole of South Asia, did not experience and complete agrarian reform, which is one of the root causes of the continuation of the caste system in modern Indian society. The caste system restricts social mobility, and still very few of major Indian scholars and intellectuals come from the bottom layers of society. This differs greatly from China. The state of Madhya-Pradesh (Madhya Pradesh), in central India, has one of the highest infant mortality rates in the world, due to poverty and lack of medical services. The root cause of this extreme poverty is the highly unequal land distribution; many poor people are not so much farmers as migrant workers on the land of landlords. This inequality has far-reaching political consequences. For example, the resurgence of the Maoist movement in some areas of India has been linked to the survival of the old land

relationship, as well as to the devastating blow of the new round of development to the land, water and forest resources of indigenous peoples. Armed uprising in India, Nepal and the Philippines is also closely related to the lack of agrarian reform. We may ask whether egalitarian land relationships are not an important part of democracy. The contrast between China and India is highly instructive.

After independence, India adopted the Western-style system of democracy. India's Constitution provides the cornerstone of political identity for India as a unified state, but political democracy fails to enforce the social form of equality and its effectiveness is greatly compromised. India's legal system is Western-style, but its effectiveness is problematic. The media have exposed many high-profile corruption cases, but few senior officials have been brought to justice for corruption. This contrasts with China. India's government's ability to manage and integrate society has been defective. I visited India several times and have been greatly impressed by its active social movement rather than by its multiparty politics and parliamentary democracy. In this respect, there have been many places in India that China should learn from. Grassroots activities are relatively strong, forming social protection, but because political parties monopolize parliament and government power, social movements have limited influence on public policy. This is since political parties monopolize political resources.

China and India can learn from each other. The rise and fall of civilizations is a long-period process, and it is not clear to see where we stand now. From the Western point of view, and especially from a European point of view, India is closer, and China is far more distant. This distance is not only geographical, but also cultural, linguistic and historical. For example, China has a long history of unified language, while in India there was no unified language until the colonial era, when English became a national language. This difference is important in the academic field. The use of English makes India's academic ability to connect with Western culture very strong. As for China, language difference has made intellectuals somehow anxious that they cannot connect with the West. On the other hand, because of language distance, the Chinese language is still the most important medium of communication for Chinese academia. This difference is instructive even beyond the comparison between the Chinese and the Indian experiences. Because of proficiency in English language, India's most talented people are more likely to get a chance to work in Western countries. In China, whether in technology or humanities, many first-class talents remain at home. It is difficult to say whether this is good or bad. Indian academic openness is higher, but the independence of the Chinese academic field is greater, which can be a

relative advantage, for example, India's software industry is developing at a high level, but it is largely outsourced and does not develop an independent system. On the other hand, China's internal market is very large, because of the language platform and other factors, and can gradually develop into a self-contained system. Perhaps India does not need an independent system, but a self-contained platform is crucial for China.

6 The East Asian Model Cannot Fully Explain China

China is generally regarded as an East Asian country. However, the area of East Asia does not fit China properly. The countries in East Asia have many similarities in culture, the role of the state, the family and their ethics in the social and economic structure, and so on. Indeed, Confucianism (a Chinese character), the 'decree system' and Buddhism have great influence in this region. But it may not be accurate to put China and Japan, South Korea and Taiwan in the same category. From the backdrop of the Cold War, China's unique sovereignty structure and its different geopolitical position make its experience unique. The economic take-off the Asian Tigers is related to 'dependent development', while China has taken an independent path, which still reflects its position during the Cold War. With the end of the Cold War and the change of regional relations, the relationship between China's economy and these economies has gained new form. The concept of 'East Asian model' makes it easy to ignore or even obliterate the different paths that the East Asian countries have followed.

The idea that labour is the ultimate source of wealth of a nation is the most important political value of twentieth-century China and is a result of the Chinese socialist experience. This socialist experiment condensed generations of experience and permeated all aspects of Chinese society. This is the premise that economic reform and opening up should not abandon.

The concept of autonomy is often thought to be related to the closed state before the market reform and the opening up of the economy. However, the definition of the period before the reform as 'closed' is a problematic one. How do we explain the complex and tortuous relationship between China and the socialist bloc in this period, how to explain the relationship between China and the Third World, and how to explain the relationship between China and the West? We know how much effort China made to change relations with the USA, and those efforts began in the period before the market

reform. Changing relations with the USA is also one of China's efforts to seek independence. Autonomy is opposed to attachment, but also opposed to closure. With the deepening of globalization, China's financial system and the entire economic system have profoundly changed the original social relations and production patterns, so that even the sovereignty structure cannot remain intact. The question of empowerment is that under the framework of the World Trade Organization, the original regional relations, international relations and the economic model cannot be defined by a single sovereign state. Therefore, there is a dialectical relationship between openness and autonomy—under the condition of marketization and globalization it is necessary to seek a new form of autonomy. If we recognize that the contemporary world is still a world of high inequality, the search for new forms of autonomy encompasses efforts to create a new world order.

Autonomy is not only an international problem; it also refers to individual states, as society is not to be manipulated by special interest groups both inside and outside individual countries. Today, domestic and international issues have become a tangled issue, and the degree of mutual penetration of international and domestic economic and financial interests is very high. Thus, the state's ability to preserve its autonomy also grants a degree of autonomy to society. Political reform has become a central topic of debate. The core issue of political reform, for what concerns China, is to change the state, the political party and the isomorphic relationship between the two. In fact, a too great isomorphism diminishes the autonomy of both state and party and leaves the state to be predominantly influenced by special interests, thereby distancing it from the public interest. In this sense, the question of autonomy is the central issue of democracy, as autonomy promotes political and social development through the political participation of the public as citizens. Autonomy does not imply closure, and lack of autonomy means dependence rather than openness.

7 The Degradation of China's National Capacity

Neither the Chinese Revolution nor China's reform provides a model that can be completely replicated. Any social experiment is a continuous exploration; it includes self-denial, and the process of summing up and improving. From the dialectical point of view, negation is not absolute; it only involves the change of time horizon to allow creative exploration, as the previous

experience cannot be obliterated. In this sense, any model contains the negation of the previous pattern. This 'spiral rise' may sometime weaken the tension and sometime lead to rupture. However, the rupture itself involves a degree of continuity.

If there is a so-called China Model, one of the key points of this model should be that one can independently carry out self-criticism, self-denial and then autonomously (that is, without coercion) propose a new development path. But nowadays, this possibility of self-correction through practice is facing a severe test. The Chinese government about ten years ago, adopted the goal of structural adjustment, but what are the results of structural adjustment ten years later? The focus of attention has shifted from development to happiness. But the restructuring of the economy has not been completed. This shows a decline in national autonomy. The financial crisis has been a factor in market failure, but there are also government failure factors, such as the speed of government bailouts. Indeed, the pace of structural adjustment is not up to the expected target, many regions and societies postpone the target dates for the achievement of objectives, which is itself a new phenomenon worthy of consideration.

8 The Five Criteria of Social Equality

China has never followed a simple, fixed pattern, as it has always been in the process of adjustment and self-correction. The consideration of China's 'experience', 'road' or 'model' should not make us to forget that experience is always in view of a future development. The dialectical relationship between autonomy and openness, the experience of social equality and the participation of the public in the political process are all worth inheriting and developing. Correction and adjustment should be not only the work of the government, but also the result of broad social participation. Thus, expanding social participation and rebuilding the public domain is an important aspect of reform.

Social equality and openness to social experiments have been fundamental building block of the Chinese experience. Focusing on the modern experience of China, I will define equality in terms of five objectives, which can only be achieved when the five objectives are presented in a comprehensive form.

The first equality criterion, which is the equal opportunity condition, was put forward in the era of European bourgeois revolution. Equality of opportunity is also defined in the sense of legal rights.

The second equality criterion refers to ‘distributive justice’. This criterion goes back to the socialist heritage and has recently been discussed by John Rawls (1972, 2001). Distributive justice also involves rights but on the premise of obligations. In the experience of the past thirty years or so, this criterion has been badly overlooked and nowadays it is necessary to rediscover and redefine it.

The third equality is equality of capability, which has been systematically discussed by Amartya Sen (Sen 1999). This concept of equality arises from the dynamic interdependence of comprehensive equality of opportunity and equality of results. In China’s historical experience, the equal distribution of educational resources has been a fundamental prerequisite for creating equality of access to the building of capabilities.

In addition to the three main concepts of equality mentioned above, I propose to add two new ones. My fourth equality concept is what Taiyan Zhang (1977) called ‘equality of all things’ in 1910, which we may also call *equality-in-diversity* (Wang 2000, 2016). One characteristic of modern egalitarianism is the equality of form, which can be defined only by placing people in the same legal condition. This means that there will always be antagonism and tension between equality and diversity, as diversity is often synonymous with rank from the perspective of formal equality. An instance of this issue is the challenge presented by China’s regional ethnic autonomy, which can be described as a crisis of diversity equality or differential equality, but also suggests that in the Chinese tradition, and especially in socialist practice, the concept of diversity equality (or difference equality) is embodied at the institutional level, which leads to diversity on the premise of equality. The institutional embedding of equality-in-diversity makes diversity and equality mutually complementary rather than opposed to each other. This is the central feature of what we may call a ‘trans-systemic society’. In this type of society, diversity is not rooted in nationalistic premises (in what is said as “ethnic differences”) but the precondition of forming a society. In this way, difference or diversity does not presuppose essentialism but is the product of historical change. They are indeed the product of a historical process in which change, integration and communication are not aimed at cancelling difference and diversity. Equality of difference or equality of diversity is opposed to the homogenization tendency of capital and capitalist finance, and is also opposed to the social model of market law. The formal quality of modern capitalism is the negation of equality of diversity. The Chinese socialist experience bears traces of the capitalist emphasis on formal equality and development as convergence to a single dynamic path. For this reason, it failed to accomplish the full potential of the ‘diversity equality’ project.

However, the success or failure of the practice of regional ethnic autonomy in modern China provides important evidence of the problems to be faced when implementing that project. This experiment is not complete and is facing unprecedented challenges today, but our reflection on 'diversity equality' thinking needs to begin with this historic experiment. Today, the concept of diversity equality involves not only cultural diversity but also ecological diversity, which highlights a concept of equality that is fundamentally opposed to the logic of the capitalist society.

The fifth concept of equality is internationally oriented equality. What I am considering here is not only equality between nations, as discussed for instance at the 1955 Bandung Conference. What I am referring to here is how equality within a society should encompass its international orientation. For instance, the internationalism of modern Chinese history is also part of the Chinese experience. The so-called globalization, which is mainly caused by the transnational development of capital, production and consumption, permeates every sphere of social life within individual countries. Western democracy is based on the premise of civil rights, and citizenship is the precondition of the concept of modern equality. However, in the context of globalization, the development model of any society will have an impact on the development patterns of other societies. For large societies, such as China, the USA and the European Union, any domestic decision-making could have a huge impact on other societies. Under the current democratic model, people outside the political community have no right to participate in the choices taken by that community, as participation in the decision-making process presupposes the condition of citizenship. For example, the USA which is the most energy-consuming country of the world refuses to sign the Kyoto Protocol, and as the hegemonic power has waged wars on other countries, but only the US Congress has decision-making capacity on such matters. However, the consequences of those decisions are borne by the world. Such a problem cannot be addressed under the existing democratic framework.

China's internationalist experience is an important legacy. Can we, based on the experience of modern China, seek a direction based not only on nation-states but also on the whole world as such? Is it possible within China's political system (as defined by the People's Congress and the political consultation system) to create a channel, a mechanism, which would allow China to consider not only its own interests but those of others, no matter where others are? For instance, China's capital exports should be restrained not only to promote China's development, but also the development of other societies. To do so, it would be necessary to establish in China

an international-oriented mechanism capable of integrating the aspirations of other societies into China's equality practice. From this perspective, globalization has provided China with an opportunity to create a new view of equality and a new political model. This model would be based on the combination of openness and autonomy. Nowadays, many of the major decisions of hegemonic powers in the context of international relations are made under closed conditions. If China can create a new, egalitarian model for a more democratic relations in international domain, that would be not only an important achievement for China, but a good news to the world. A political body capable of creating such a new practice must be autonomous, not controlled by special economic interests, and thus truly open.

There is a certain similarity in structure between equality and inequality. The *equality of difference* refers mainly to the equality between different ethnic groups, different cultures and peoples, while the international-oriented equality will be regarded as an important precondition for the consideration of the world system as an integrated whole. The equality of ability, the equality of things and the equality of the international community are all committed to breaking the tendency towards uniform globalization, and demand that workers, different nationalities, and societies be transformed from subordinate object status to autonomous equality status. If we can synthesize the five concepts of equality mentioned above and form a 'model' combining formal and informal features, we will find ourselves in a very different position when assessing the global significance of China's great social experiments.

9 The Government Should Improve Its Responsiveness

In his recent visit to China, Francis Fukuyama discussed the 'China Model' and acknowledged that China had not developed in the direction of the 'end of history', but along its own unique path (Fukuyama and Weiwei 2014). The main objective of Fukuyama's reflections was not China's itself but the USA, which Fukuyama criticized for being too unilateral and too rigid. In way, Fukuyama's analysis is similar in intent to that of Ramo, even if Ramo's attitude is more positive. Fukuyama classifies China as an authoritarian dictatorship in the same category as Russia and Iran, but in fact both the Russian and the Iranian governments are elected, with multiparty parliamentary and presidential elections. This seeming paradox suggests that that the political form

is no longer a yardstick for measuring democracy and dictatorship. Fukuyama does not say that explicitly but, while still adopting the democracy vs. dictatorship conceptual framework, he inadvertently reveals what is the question worthy of consideration. In his view, although China does not have the election and the multiparty system like Russia and Iran, still has a government of very high management ability—not only higher than Russia and Iran, but also higher than that of East Asian model countries such as Japan, South Korea and China Taiwan. He also noted that, while the Chinese government often suppressed public discontent, still it understands situations and can respond quickly to societal challenges. A completely dictatorial state cannot respond to social discontent in such an effective way. On the other hand, what would be the point of a formally representative, multiparty political system if that system was unable to adjust public policy to the needs of the public? This is not to say that China cannot adopt a more open political form, but it means that the central lesson to be drawn from the Chinese political-economy experience is that a state should first improve and expand its response capacity, so that it would be more open and flexible. A condition for greater government responsiveness is the increase in social participation allowed by the expansion of the public sphere.

10 The Crisis of Party Politics and the Way Out of It

The biggest crisis in contemporary China is the crisis of party politics. Modern politics is party politics, and the problem we need to face is the degeneration of party politics. I have summed up this degeneration as a change from party to national party, that is, 'State Party'. Apart from this change, other phenomena have an impact on contemporary democratic practices, such as the politicization of media and the media utilization by politicians, which means that media have become a mechanism for setting political agendas and for raising unilateral claims of political value, rather than being a real public space. This means that a process of monopolization has taken hold of media as a public space. With the intertwining of the party with the state, the party loses its representativeness and politics gets completely separated from society. With the monopoly power of media under the guise of public opinion, and politicians themselves becoming part of the media world, uncertainty and speculation become the dominant features of public policy formation. I am describing trends in the contemporary

world that cannot be taken as a comprehensive description of the current situation. However, the existence of these trends means that the political model that was born in the nineteenth century is being confronted with a crisis and that a transition is inevitable.

In the face of such a political crisis, there are two directions of change. A first but vague solution is constitutionalism. But a formal constitution presupposes constitutional democracy, so that the real question is which constitution is the basis of constitutionalism? The other solution is to promote the interaction between party and society, and to open the national system to different forms of society by increasing social participation. This is premised on the legitimate existence of different social organizations, and social movements and of mechanisms that can provide these movements with access to the public decision-making process. The central condition here is to re-establish social participation and political affiliation.

The crisis of party politics is that the party can no longer connect with public opinion, so that the party is no longer a representative political organization and cannot aggregate the political demands from society. Political parties are like the arteries of the state, and social participation is capillary, and if the capillaries are necrotic, the relationship between the arteries and the human body leads to a crisis. Political parties that are out of touch with society are bound to degenerate into monopolistic political groups. If political parties are to be more open to social participation and social movements, it would be tantamount to a reconnect between arteries and capillaries. In this sense, the political party will be different from a traditional party, and politics will be different from the so-called party politics, as the party will be the channel for self-governance and direct political participation.

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21

Structural Political Economy

Ivano Cardinale

1 Introduction

Political economy, as construed in this Handbook, is divided between approaches focussing on instrumental rationality and approaches studying the structure of division of labour in the economy. Whilst both sets of approaches illuminate important aspects, they fall short of providing a comprehensive understanding of the economic life of the polity, because the former typically have no theory of constraints, whereas the latter have no explicit theory of action (Cardinale and Scazzieri 2018, Chapter 22, this Handbook).

Structural Political Economy (SPE) aims to provide a route to encompass the key insights of the aforementioned approaches within a comprehensive framework. SPE has two interdependent parts. The first relies on models of division of labour. However, it uses them not only to understand material relations, but also as heuristics to uncover the configuration of interests within the economy (e.g. Cardinale 2012, 2015, 2017, 2018b; Cardinale and Coffman 2014; Cardinale et al. 2017; Cardinale and Landesmann 2017; Cardinale and Scazzieri 2018, Chapter 22, this Handbook). The second part concerns the economic actions of various actors within the polity. However, instead of taking objectives and constraints as given, it problematizes who the relevant actors are and how they visualise their objectives

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and constraints, also depending on their positions within the structure of division of labour (e.g. Cardinale 2018b; Cardinale and Scazzieri 2018, Chapter 22, this Handbook). This chapter outlines both parts of SPE and further develops their connections. The idea is that division of labour provides a fundamental principle for the structuring of society. As a result, it provides a map of constraints and opportunities for actors in the polity. Because division of labour can be represented in manifold ways, understanding which one is relevant in a given situation requires problematizing agency. Specifically, it requires understanding the actors, i.e. what social aggregations are more relevant in a given situation, as well as how such actors visualize their objectives and constraints. Doing so runs against the problem of agency and structure, i.e. doing justice to the embeddedness of actors within existing division of labour as well as the possibility that they reconfigure their visualization of the constraints and opportunities they face (Giddens 1984; Bourdieu 1990; DiMaggio and Powell 1991; Sewell 1992; Emirbayer and Mische 1998; Cardinale 2018a). The chapter analyses some key ways in which this problem has been addressed, implicitly or explicitly, in different traditions in political economy and related social sciences. It goes on to argue that the difficulties encountered by these approaches can be overcome through a view of structure as not only enabling and constraining, but also actively structuring actors' visualization, thereby orienting them towards certain understandings of existing division of labour, and hence of objectives and constraints, over others (Cardinale 2018a). This helps understand specific instances of action within structures and how structures change over time.

This chapter's analysis can provide important building blocks for political economy. In fact, by suggesting a route to avoid the black-boxing of action when the emphasis is on structure, and the neglect of the structure of constraints when the emphasis is on action, it can provide a framework that coherently comprises means-ends action and the structure of division of labour.

2 The Economic Structures of the Polity

SPE aims to show a way to bridge approaches that focus on means-ends action and on the structure of division of labour, respectively. In fact, it shows that they are complementary, and that they are both necessary to understand the pursuit of objectives in the polity and the (structure of) conditions for their realization. In particular, division of labour can be seen as

providing a map of possibilities and constraints, which have both material and sociopolitical nature.

In political economy, various representations of division of labour have been proposed. One of the first is François Quesnay's *Tableau économique* (Quesnay 1972 [1759]). Focusing on three fundamental sectors that are also socio-economic groups (agriculturists, manufacturers and landowners), Quesnay unveils structural relationships (specifically, sectoral interdependencies) that display important systemic properties, and specifically the proportionality requirements that the flows across those groups need to satisfy in order for a 'net product' to be produced. Modern formulations have enhanced and systematized Quesnay's approach. For example, 'social classes' have been replaced by industrial sectors (Leontief 1991 [1928], 1941; Sraffa 1960). Moreover, interdependencies have been described through horizontal representations (circular flow) or in terms of subsystems (Sraffa 1960) or vertically integrated sectors (Pasinetti 1973), and each representation has been shown to be associated with price ratios compatible with viability requirements (Sraffa 1960; Quadrio Curzio 1967; Pasinetti 1973, 1977; Seton 1992 [1985]). Another line of research has identified conditions for maximum growth along a proportional path (von Neumann 1945–46) or along a non-proportional path at full utilization of productive capacity and full employment (Pasinetti 1981; Leon 1967; Quadrio Curzio 1975; Lowe 1976).

Each of the aforementioned models of division of labour provides a different map of constraints and opportunities. For example, take the model of circular flow, which can be illustrated through input–output tables. In this model, the economy is represented as a set of interdependent sectors, where the output of each sector is an input to other sectors. The constraint is reproducibility of the inputs used in production, including the generation of a surplus. This is formally expressed through the Hawkins–Simon conditions (Hawkins and Simon 1949; Nikaido 2014; see also Duchin and Steenge 2007), which can be understood as requiring that 'the state of technology expressed by [the technology matrix] is such as to allow a net production, that is an excess production of goods produced relative to goods used as means of production' (Quadrio Curzio 1967, pp. 56–57). Once the conditions of reproducibility are satisfied, opportunities can be seen, e.g. from the viewpoint of a class in Sraffa's model, as receiving a higher income share for that class, or from the viewpoint of a sector, as receiving a higher share of value added (Cardinale 2017, 2018b).

In order to think about the opportunities afforded by a given structure of division of labour, we must understand who the relevant actors are. In other words, we must consider the sociopolitical maps highlighted by different

models of division of labour. The idea, inspired by Durkheim (1902) (see Cardinale et al. 2017), is that division of labour can be taken as a criterion for structuring society into groups. Hence, models of interdependencies, which provide different representations of division of labour, can be used to explore possible configurations of aggregations within the polity, which are based on economic activities. In fact, interdependencies in productive activities can provide an important criterion for group affiliations, and hence division of labour can provide a structure within which economic actors can develop such affiliations. A complex division of labour, which is typical of any economy beyond a minimum level of development, is characterized by manifold interdependencies between activities. As a result, a variety of configurations of group affiliations are possible (Simmel 1955 [1922]). Hence, division of labour does not univocally determine what group affiliations are more relevant in a given situation: '[T]he objective structure of a society provides a framework within which an individual's non-interchangeable and singular characteristics may develop and find expression depending on the greater or lesser possibilities within that structure' (Simmel 1955 [1922], p. 150). The models of division of labour discussed above can be interpreted as providing a set of possibilities for the manifold patterns of affiliations which can be formed within a given configuration of division of labour.

Out of the many possible aggregations suggested by different representations of division of labour, the modern understanding of industrial sectors is particularly relevant, because of sectors' importance in structural economic analysis as well as their significance at the political level. In Quesnay's (1972 [1759]) seminal representation of interdependencies, sectors were sociopolitical aggregations as well as economic activities. Subsequent representations of interdependencies left the sociopolitical aspect on the background (see Cardinale 2012, 2018b). Already in classical political economy, the fundamental conflict was seen as being between classes defined on the basis of type of income (wage, profit, rent) instead of between sectors. When sectoral interdependencies were 'rediscovered' in the twentieth century (Leontief 1941; von Neumann 1945–46; Sraffa 1960), industrial sectors were only considered from the material and technological viewpoint, leaving their sociopolitical dimension on the background. SPE aims to 'complete' the rediscovery of sectoral interdependencies, using such models to understand not only purely economic structures, but also sociopolitical maps (e.g. Cardinale 2012, 2015, 2017, 2018b; Cardinale and Coffman 2014; Cardinale et al. 2017; Cardinale and Landesmann 2017; Cardinale and Scazzieri 2018, Chapter 22, this Handbook). In particular, the idea is to consider a variety of structural representations as maps of economic interests in the polity.

Hence, it is possible to use the construction of sectors derived from the models above as potential interest groups (Truman 1951), in the sense that they benefit from specific policies, whether they organize themselves to influence policymaking or not. For example, taking industrial sectors in a circular-flow model, a sector's interest could be indicated in terms of the value added accruing to that sector, irrespective of its distribution amongst types of income within the sector (see Cardinale 2012, 2018b). Whilst this approach does not exclude conflicts between types of income within each sector or in the economy as a whole, it allows for the possibility that, in some contexts, conflicts between sectors may be more explanatorily relevant than those between classes.

The relevance of sectoral cleavages for political dynamics has been widely documented in political science research. For example, industrial sectors have been shown to have particular importance in shaping a country's political configuration (see Ferguson 1995; Ferguson et al. 2018, Chapter 11, this Handbook) as well as being influential at the supranational level (e.g. Coen 2007; Coen and Richards 2009). The relevance of sectoral cleavages has also been highlighted by economic analysis of development (e.g. Furtado 1967; Hirschman 1968; Mamalakis 1969; O'Donnell 1977). An SPE perspective is in line with these insights, but suggests an explicit and systematic use of representations constructed by economic analysis for the purpose of understanding the relevant configurations of economic interests. This has specific advantages, and especially that it provides key results that help visualize properties that may otherwise not be seen. For example, representations based on the circular flow such as input–output tables provide a heuristic to study the potential interests of industrial sectors and their compatibility with the viability of the economy. A result of structural economic analysis that may be particularly relevant here is the Hawkins–Simon viability conditions (Hawkins and Simon 1949; Nikaido 2014; see also Duchin and Steenge 2007), according to which an economy can be viable and produce a surplus under different sectoral proportions. If we interpret this result in terms of the sectoral interests that the model of circular flow highlights, we can conclude that an economy can remain viable when value added is shifted from some sectors to others, thus benefitting the former over the latter. The concept of 'systemic interest' (Cardinale 2015, 2017, 2018b) can then be used to capture the interest in preserving systemic viability. The existence of systemic conditions for viability suggests that the pursuit of particular interests must be balanced, within the strategy of each sector, by the 'systemic' interest in keeping the economy as a whole viable, for, otherwise, the pursuit of particular interests might be unsustainable.

This reasoning can be generalized from models of circular flow to other structural representations, each of which has specific conditions of systemic coherence. If division of labour is represented through input–output schemes, viability has to do with reproducibility with a non-negative rate of growth. But when considering sectoral interdependencies across countries, viability conditions are not only of the sectoral type, having to do with the ability to import inputs and export excess product, but also of the macroeconomic type, having to do, for example, with how different patterns of industrial specialization may be more or less compatible with the sustainability of external accounts and foreign debt positions (see Cardinale and Landesmann 2017). Or, to take another example, when considering the viability of a trajectory of structural change, such as one involving the transition from one resource base to another, we need to analyse conditions concerning the traverse (Hicks 1973; Lowe 1976; Scazzieri 2009) as well as the fundamental uncertainty surrounding the traverse, which could make it difficult for actors to understand whether certain policies will prove to be in their interest (see Cardinale 2015).

The reasoning above suggests that, to understand the constraints and opportunities that the material sphere poses to the pursuit of objectives in the polity, we must consider material as well as sociopolitical aspects. For example, elsewhere (Cardinale 2015), when analysing the conditions for transition from a resource base to another (e.g. from hydrocarbons to renewables), I first identify the conditions regarding material relationships that make the transition possible, which can be described as ‘economic conditions’. These include requirements about the ‘traverse’, for example that productive capacity is installed before certain products can be produced, and in appropriate proportions in different sectors. However, it is also necessary to consider the sociopolitical conditions, which have to do with the particular and systemic interests that are perceived to surround the transition, and which may or may not make the economic conditions politically feasible. This approach suggests that, within the possibilities that are feasible from the material viewpoint, only some will also be feasible from a sociopolitical standpoint.

But in order to understand what sociopolitical constraints are actually present in a given situation, we need to ask what sociopolitical aggregations are more relevant in that situation out of those which are possible within the existing economic structure. In other words, given the manifold possibilities to represent division of labour and the different representations of interests associated with them, we need to ask how to ‘close the system’: which representations are more likely to be adopted and acted upon in a given situation, thus influencing actual decisions and systemic outcomes?

3 Enter the Actors

In order to ‘close the system’, i.e. to understand the stances taken by actors and hence which path is taken in a given historical situation out of the many that are made possible by economic structures, we need to understand which sociopolitical map is relevant, i.e. the constructions of interests that prevail in that situation. Therefore, we need to understand agency; specifically, who the relevant actors are and how they act within structures. In fact, given the plurality of representations, agency can be attributed to different possible sociopolitical aggregations; it is therefore necessary to understand which aggregation will be relevant in a given situation and which representation actors will adopt as a guide to their action. In terms of the foregoing discussion of group affiliations based on division of labour, the problem could be framed as that of understanding which affiliation is likely to be salient in a given situation. For example, would a given firm see itself as belonging to an industrial sector or to a vertically integrated sector? And if the latter, to a vertically integrated sector based on final demand or, say, on the use of a certain input or infrastructure? By highlighting the multiple aggregations to which agency can be attributed, SPE can be seen as a generalization of the physiocratic and classic approaches, in which the representation of division of labour and the relevant actors were taken as given.

Before proceeding, it is important to note two points. First, the analysis of sociopolitical aggregations is in two steps. One is to identify the aggregations to which agency might in principle be attributed. This step is based on the concept of ‘potential interest groups’ (Truman 1951). In other words, identifying potential interest groups does not require that they actually be organized to influence policy. The purpose is rather to understand what sociopolitical aggregations are made possible by a given structure of division of labour and what their interests may be, irrespective of whether they organize themselves to pursue those interests. In the view outlined here, interests are founded in sectors’ positions in productive structure. The other step is to discuss what interest groups, out of the potential ones, are more likely to actually organize themselves to influence policy.

Second, discussing agency does not amount to making claims about building ‘microfoundations’ in the sense of reducing all explanations to the individual level. In fact, studying action within structures does not amount to reducing the economy and polity to ‘a mass of similar individuals, operating as choosing actors, affected by a situation, taking new actions, and changing society via some aggregation or assembly’ (Jepperson and Meyer 2011, p. 68). The relevant actors occupy different positions within

decision-making bodies and within sociopolitical groups such as industrial sectors or classes, which are in turn positioned within the structure of division of labour; their influence on structural change occurs through actions performed in those positions. Therefore, systemic outcomes are not the 'effects produced by relatively unorganized people' (ibid.), but rather by the effects of actions taking place within 'more and more collective and complexly organized activities' (ibid.). This is coherent with the attention, in this chapter, for models of complex division of labour in which different sectors occupy different positions in terms of weight in the economy, access to political influence, etc. Therefore, the SPE view of action is deeply different from the approach followed, for example, by theories based on the median voter. It is rather about understanding how group interests are formed in different ways depending on their positioning, and with different impact depending on how they organize themselves to influence policymaking.

As discussed above, in order to understand which possibilities are pursued in a given situation, we need to analyse the constructions of interests that prevail in that situation. Such constructions of interests and the systemic outcomes they generate can be seen as 'closing the system', in the sense that they set the economy towards some paths out of the many that are made possible by material relationships. What constructions of interests are likely to prevail in a given situation? The structural models discussed above, on the one hand, focus on the structure of constraints; the construction of objectives and the ensuing decisions are left implicit or described by simple behavioural rules. Approaches that focus on means-ends reasoning, on the other hand, typically take objectives and constraints as given (Cardinale and Scazzieri 2018, Chapter 22, this Handbook). Therefore, to understand the construction of interests and ensuing decisions we need a theory that does justice to means-ends action within complex structures of division of labour.

A related problem has been addressed in the political science literature. According to Blyth (2003), accounts of how political actors construct their own interests are divided, at the extremes, between a view in which interests are conceived of as been structurally determined, i.e. univocally specified by the structures within which actors are positioned, and a view in which interests are 'ideationally constructed' in ways that do not depend on structures. There have been many attempts to reconcile economic structures with 'ideas'. This problem is important for this chapter's analysis, because it leads to asking how actors construct their interests, given their position in the structure of division of labour, and hence the decisions they make and the systemic outcomes that result.

The multiplicity of representations of division of labour throws critical light on both of the aforementioned extremes—structural determination and ideational construction. In previous work, I illustrated this point with reference to Pasinetti's (1973) result that a given economy can be represented through two formally equivalent models. One is based on the circular flow (as in input–output tables); the other is a vertically integrated representation, which only shows primary inputs and final goods, whilst leaving on the background intermediate goods and hence interdependencies between industrial sectors. It can be shown that, depending on the representation adopted, the relevant socio-political aggregations can be industries, classes defined on the basis of functional income, or even vertically integrated sectors. Hence, the same economy can be represented as being characterized by different sociopolitical conflicts and different forms of systemic interest (Cardinale 2012, 2018b). This result is important for this chapter's purposes. In fact, because a structure of division of labour can be visualized through alternative yet equivalent representations, each of which leads to a different configuration of interests, interests cannot be seen as being univocally determined by structure. At the same time, not all constructions of interests are compatible with a given structure of division of labour, and this suggests that ('ideational') constructions that are incompatible with structure might not meet viability requirements and might therefore lead to unsustainable systemic outcomes.

Is there a middle ground between the extremes discussed above? In other words, is there a solution that does justice to actors' embeddedness in structure as well as their ability to reconfigure the visualization of constraints and opportunities? One way to address this problem, inspired by Giddens (1984) amongst others and often adopted across the social sciences including political economy, would appear to be that structures enable and constrain action. However, this view has a key limitation (Cardinale 2018a): whilst it accounts for how structure constrains, in the sense of making some actions impossible, and enables, in the sense of making some other actions possible, it does not allow for how structure *orients*, that is how it makes actors more likely to pursue some actions out of the many that it makes possible. Many might agree that structure does more than just enabling and constraining, i.e. that what is typically described as 'enabling' encompasses both providing possibilities for action and inducing actors to pursue some of those possibilities over others. Yet this distinction is seldom made explicit, much less theorized. Hence, it remains unclear if structure influences how actors choose amongst the possibilities that are 'enabled' by structure itself, and through what mechanisms such influence is exercised. This leads to two

further limitations. First, this view juxtaposes structural constraint ('constrain') and means-ends action ('enable'). Hence, it reintroduces the dualism between means-ends action and constraints that characterizes much political economy. Second, this approach only explains what actions are possible, but not whether some actions are more likely than others. Hence, it does not help us 'close the system', i.e. move from the constructions of interests that are possible in principle to those that are more likely in a specific situation.

A promising route for studying how the system is closed in specific situations may be to overcome the juxtaposition between means-ends action and structural constraints, exploring approaches that can do justice to their mutual influence. We need a theory that explains action by taking into account the influence of existing structure on the visualization of opportunities and constraints, as well as the possibility to change that visualization. It is important to note that, in approaches that focus on means-ends action, embeddedness is just conceived of in synchronic terms, i.e. as embeddedness in current structure. This means that actors are not themselves influenced by structures, which provide means and ends but do not shape actors' cognitive set-up. An alternative would be to complement the synchronic dimension of embeddedness with a diachronic one, whereby positioning in economic structure over time engenders a propensity towards some courses of action over others.

One way to do so would be to develop, with reference to structures of division of labour, a suitable theory of action outlined with reference to social structures (Cardinale 2018a). Such a theory would be based on two types of structure: the structure of division of labour and the structures of cognition and action (what Bourdieu (1990) calls *habitus*) that actors develop by acting in given positions within the structure of division of labour. On this view, action depends on how actors visualize their means and ends. But visualization in turn depends on the habitus, which was developed within a given structure. This suggests that actors are embedded in structure in a dual way: in current structure, which shapes means and ends, and over time, which shapes propensity towards some courses of action. Hence, whilst action is to some extent purposive, in so far as it does include elements of visualization of means and ends, it is also oriented towards some possibilities over others. As a result, not all outcomes are equally likely. And the difference in likelihood—i.e. in propensity—does not derive only from the choosing of means in view of ends, but also from a pre-reflective orientation towards some courses of action over others. This approach thus theorizes a further effect of structure on action, in addition to the enabling and constraining: the imprinting of dispositions that orient actors towards some actions over others.

In order to fully appreciate the relationship between actors and structures, it is important to highlight the time dimension. *Over time*, structures and actors constitute each other. In fact, structures shape the actors' habitus; actions in turn influence what paths are taken and hence modify structures. However, this mutual constitution is not deterministic. Whilst they constitute each other over time, *at any given moment* actors and structures are relatively autonomous: actors are constrained, enabled and oriented by structures, but their action is not univocally determined (see Cardinale 2018a). In this way, it is possible to take actors seriously, acknowledging that outcomes are not determined by structure alone. Yet actors are not reduced to the agents of rational choice theory: action does not only derive from means-ends calculation, but also from the propensity developed by acting within the structure of division of labour. In other words, in this approach the structure of division of labour provides the current embeddedness, but also (over time) shapes actors' understanding of their embeddedness and of the constraints and opportunities they face. Actions and outcomes depend on the encounter between economic structures and actors' structures of cognition and action (the habitus), which originate in the former but are relatively autonomous from them at any given moment.

A theory along these lines would explain how actors form their understanding of the economic structures in which they are positioned and how they are likely to change their understanding in response to changes in structures. On this view, different representations are not equally likely—not just because of inertia in the economy, but also because of inertia in cognitive structures, i.e. in the way actors represent their embeddedness and the opportunities and constraints they face. Therefore, this approach goes beyond specifying possibilities: it captures the visualization of possibilities as well as the propensity towards some representations and hence some possibilities over others. It thus becomes possible to 'close the system' in a way that it is neither deterministic nor voluntaristic.

4 Conclusion

Political economy is divided between approaches emphasizing means-ends action, which have no theory of the internal structure of constraints, and approaches emphasizing the constraints and opportunities afforded by division of labour, which have no explicit theory of action. SPE aims to overcome this dichotomy by proposing a route to understand how the structure of division of labour and action within it constitute each other. The idea is

that structures of division of labour provide constraints and opportunities that are material as well as sociopolitical. However, given the multiplicity of possible representations, in order to ‘close the system’ it is necessary to move from the manifold possibilities to represent opportunities and constraints to the ones that are more likely to be enacted by actors in a given situation.

It was argued that we should not fall into any of the following views. First, that structure determines interests—for structure can be represented in different ways. Second, that interests are ‘ideationally constructed’—for some representations of interests may be ungrounded in structure, in the sense of ignoring existing constraints, hence potentially leading to systemically unsustainable outcomes. Third, that interests can be taken as given (e.g. treated as ‘preferences’), as is often the case in approaches emphasizing means-ends action—for this view provides no explanation of interests and their relation to structure. And fourth, that division of labour merely constrains and enables action—for this view does not explain if some possibilities are more likely than others, and hence why the system is closed in some ways rather than others under specific conditions. More subtly, the latter two views limit the role of the structure of division of labour to the provision of constraints and opportunities ‘at a given time’, but have no room for how embeddedness in structure over time forms the habitus and hence shapes actors’ understanding of constraints and opportunities, thus orienting actors towards some constructions of interests and actions over others.

We therefore need to understand how actors’ embeddedness in division of labour over time influences their formation of objectives and understanding of constraints. This can be captured by a view of structure as not only enabling and constraining but also actively structuring actors’ visualization, thereby orienting them towards certain understandings of existing division of labour, and hence of objectives and constraints, over others (Cardinale 2018a). The core of the theory would be the encounter between the structure of division of labour and the structures of cognition and action of actors, which originate in the former but are developed in a relatively autonomous way. This encounter can also help understand why not all representations are equally likely in a given historical situation.

The approach outlined in this chapter has significant implications for the field of political economy as construed in this Handbook, for it provides a route to conceive of means-ends action and economic structures as complementary and mutually necessary. In fact, over time they constitute each other: action is constrained, enabled and oriented by structures; actions in turn enact some patterns of structural change over others. However, it is

important to stress that such co-constitution occurs over time. At any given moment, actors and structures are relatively autonomous.

It has been argued (e.g. Hicks 1976; Pasinetti 1986) that means-ends action and economic structures are at the centre of the fundamental dichotomy in economic analysis, and that concentrating attention on one or the other has proved useful as a focussing device. In this Handbook, the contention is that political economy as a field requires both approaches, and that it is necessary to analyse the elements of continuity and complementarity between them (see also Cardinale and Scazzieri 2018, Chapter 22, this Handbook). The SPE approach outlined in this chapter can provide some steps in this direction, in so far as it can help avoid the black-boxing of action when the emphasis is on structure, and the neglect of the structure of division of labour when taking the viewpoint of action. More broadly, once the time dimension is taken into account, this approach can lead to encompassing means-ends action and economic structures within a comprehensive political-economy framework.

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Part III

Ways Ahead



22

Political Economy as Theory of Society

Ivano Cardinale and Roberto Scazzieri

1 Introduction

Political economy is concerned with the material life of the polity. It historically developed by emphasizing the interdependencies between relevant economic units in the polity under consideration and/or the relationship between political (systemic) objectives and the means available to achieve those objectives. James Steuart's definition is clear evidence of the position of political economy between the formulation of blueprints for action and the discovery of objective causal mechanisms. On the one hand, Steuart highlights that '[T]he principal object of [political economy] is to secure a certain fund of subsistence for all the inhabitants, to obviate every circumstance which may render it precarious; to provide every thing necessary for supplying the wants of the society, and to employ the inhabitants (supposing them to be free-men) in such

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a manner as naturally to create reciprocal relations and dependencies between them, so as to make their several interests lead them to supply one another with their reciprocal wants' (Steuart 1966 [1767], p. 21). On the other hand, he also emphasizes that '[e]conomy, in general, is the art of providing for all the wants of a family, with prudence and frugality. *If any thing necessary or useful be found wanting, if any thing provided be lost or misapplied* [...] we immediately perceive a want of economy [...] What economy is in a family, political economy is in a state [...] The statesman [...] is neither master to establish what economy he pleases, or in the exercise of his sublime authority, to overturn at will the established laws of it, let him be the most despotic monarch upon earth. The great art therefore of political economy is, first to adapt the different operations of it to the spirit, manners, habits, and customs of people; and afterwards to model these circumstances so as to be able to introduce a set of new and more useful institutions' (Steuart 1966 [1767], pp. 19–21; added emphasis). Steuart's account brings to light the dual character of political economy, which is at the same time instrumental and positive. Its 'principal object' is the pursuit of the effective provision of needs in the light of 'established laws' (the causal mechanism at work at any given time and place). Indeed, pursuing that objective may require the transformation of those laws into 'new and more useful institutions' whenever established laws become a hindrance to effective need provision.

The intertwining of the instrumental and positive points of view has remained a feature of economic reasoning ever since. However, the two points of view entail an emphasis on different features of the economy. This difference led Lionel Robbins to contrast the 'materialist' and the 'scarcity' definitions of the subject matter of economics. The former relates economics 'to the study of the causes of material welfare' (Robbins 1984 [1932], p. 4); the latter relates it to 'human behaviour as a relationship between ends and scarce means which have alternative uses' (Robbins 1984 [1932], p. 16). Robbins acknowledges that the 'materialist' definition 'would probably command most adherents, at any rate in Anglo-Saxon countries' (Robbins 1984 [1932], p. 4), but he finds it wholly inadequate even when considering the material sphere of production. For he argues that in this case too '[t]here is still an economic problem of deciding between the "economic" and the "non-economic"' (Robbins 1984 [1932], p. 11). Robbins's view signals a sharp break from previous treatments, in which economics as 'political economy' is 'the science of economic organisation' (Cannan 1929, p. 40), and the relevant object of study is generally identified with the 'economy of the State' (Cannan 1929, p. 39). In the latter case, what is fundamental is not the relationship between limited available means and human wants but the proportionality conditions turning a collection of activities into a working

system for the provision of human needs. Yet one could argue that in both the ‘materialist’ and the ‘scarcity’ views, economic reasoning pinpoints conditions for the effective arrangement of human activities to fulfil individual or collective requirements. The split between the ‘materialist’ and the ‘scarcity’ approaches relates to the point of view adopted in addressing that issue. The scarcity approach considers the dispositional activity per se, independently of which specific objectives that activity should achieve (the ‘*de gustibus non est disputandum*’ condition is central to that point of view). The materialist approach identifies a specific objective (how to achieve a self-sustaining economic system) and highlights the material requirements to fulfil that objective. In short, the scarcity approach presupposes but does not investigate material (structural) conditions, while the ‘materialist’ approach presupposes but does not investigate dispositional activity. This chapter puts forward a view of political economy that brings together the attention for dispositional activity and for the structure of material conditions within the polity.

2 The Dual Character of Political Economy

The dual character of political economy is at the core of a dichotomy that economists such as John Hicks and Luigi Pasinetti consider to be constitutive of economic theorizing.

In Pasinetti’s view:

[T]he concept of trade is, so to speak, a static concept. It is associated with a situation in which a plurality of economic systems (or of individuals) are endowed with particular resources or products and try to gain advantages by exchange. The interest that such a situation arouses in an economist concerns the problem of how to reach the best allocation of given resources, namely of how to make the best use of what one has already ... The problem involved is a problem of rationality, which may be expressed by a mathematical function to be maximized under certain constraints. The concept of, and the problems entailed by, industry are quite different. Industry is, so to speak, a dynamic concept. It means production, i.e. the engagement and the application of man’s ingenuity to make and shape the products he wants. But since by doing and experiencing man learns, it is implied in the very nature of carrying on a production activity that new and better methods of production will be discovered. Of course, to find new methods takes time, and takes time in a persistent way. The economist is faced here no longer with a problem of rationality, but with a process of learning. (Pasinetti 1965, pp. 574–575)

In a similar vein, John Hicks describes the shift in economic theorizing that occurred in the 1870s when marginalist economic theories raised a challenge against theories of the classical type:

[t]he economists who led such a revolution are commonly called ‘marginalists’; but that is a bad term, for it misses the essence of what was involved. The ‘margin’ is no more than an expression of the mathematical rule for a maximum (or minimum); any sort of economics is marginalist when it is concerned with maximizing [...] The essential novelty in the work of these economists was that instead of basing their economics on production and distribution, they based it on exchange. I therefore propose to make use of a term which was sometimes used, at the time in question, to mean the theory of exchange, it was called *catallactics*. So I shall re-name the so-called marginalists as *catallactists*. There is, of course, no doubt that exchange is a basis feature of economic life, at least in a “free”, or what Marx would have called a “capitalist” economy. (Hicks 1976, p. 212)

In Hicks’s view, this intellectual development suggests a distinction between two separate sub-disciplines, which he respectively calls ‘*plutology*’ and ‘*catallactics*’. The former (‘*plutology*’) is the study of national wealth, principally in its association with the flow of production, under the assumption that the flow of production ‘is so far homogeneous that it can be greater or less’ (Hicks 1976, p. 210; see also Hicks 1976, pp. 215–216, and Hicks 1975). The latter (‘*catallactics*’) is the study of dispositional activity bringing individuals (or social groups) to substitute one collection of goods for another, as characteristically occurring in exchange (Hicks 1976, p. 212; see also Hicks 1975). In *plutology*, there is a concentration of attention on the systemic requirements for the reproduction and expansion of the overall system. This emphasis expresses itself in the analysis of the system’s net product (Physiocrats, Classical Economists) and in the consideration of the macroeconomic relationship between the net product and the amount of resources employed in its formation (Pigou 1912, 1920; Keynes 1936). *Plutology* leads economists to think of wealth as the system’s capacity of producing annual product and income flows, and to develop a theory of value whose primary purpose ‘is not to explain prices, that is to say, to explain the working of markets’, but rather ‘to identify the values which are needed for the *weighing* of the social product, the reduction of the heterogeneous commodities which compose it to a common measure’ (Hicks 1976, p. 211). On the other hand, *catallactics* concentrates on the systemic requirements for the coordination of rational choices in view of exchange. This concentration of

attention expresses itself in the analysis of the conditions for market clearing in a perfectly competitive economy (Walras 1874–77; Cassel 1923), the identification of criteria for the efficient allocation of resources in a multi-agent setting (Pareto 2014 [1906]; de Finetti 1998 [1931]) and the analysis of the relationship between competitive equilibrium and efficient allocation (Arrow 1951; Debreu 1954). Catallactics leads economists to think of wealth as a fund and to develop a theory of value whose purpose is primarily to explain prices as tools for coordination in an exchange economy.

Both catallactics and plutology (or, in Pasinetti's terms, the pure exchange and pure production models of the economy¹) developed into fully fledged theoretical systems that gradually extended to encompass the whole domain of economic actions and structures (Baranzini and Scazzieri 1986). However, 'the differences between the points of departure are as evident as the differences between the priorities accorded to the phenomena studied, and the interpretations of the phenomena themselves are often very different between the two approaches' (Quadrio Curzio and Scazzieri 1986, p. 379). For instance, 'the application of the exchange paradigm to production and distribution [within the general equilibrium framework] created a theory of impressive and comprehensive generality; but it did so by concentrating on some aspects of economic behavior to the exclusion of others' (Hennings 1986, p. 240).² On the other hand, the application of the production paradigm to the sphere of exchange went hand in hand with the idea that the organization of production shapes 'the composition of social consumption' (Bharadwaj 1986, p. 353). This highlights that patterns of individual consumption are significantly dependent on the grouping of individuals into larger social units (of which social classes are an example) (Bharadwaj 1986, p. 353).

¹Pasinetti initially proposed a distinction between maximization models reflecting the 'phase of trade' and production models reflecting the 'phase of industry' opened by the Industrial Revolution (Pasinetti 1965). Subsequently, he described the same duality first by distinguishing between theories of the pure exchange type and theories of the pure production type (Pasinetti 1981) and later by separating the 'pure exchange, or pure preference model' from the 'pure labour model' of the economy (Pasinetti 1986, 2007).

²Hennings argues that 'the Austrian emphasis on the structure of production', 'the Marshallian emphasis on firms, on entrepreneurs and on non-perfect competition', and 'the emphasis [...] on economic dynamics and disequilibrium situations' raised questions that could not be answered in the canonical version of general equilibrium theory (Hennings 1986, p. 240).

3 Ends, Means and Objective Conditions

It is our contention that, despite the different priorities accorded to economic phenomena and the different questions raised, catallactics and platology point to complementary aspects of political economy as the study of structurally constrained social action of the means-aims type. Actions of this type presuppose aims, means and objective conditions intertwined within the system of events to which actions belong. This conjunction makes it inadequate to address economic actions by solely looking at those actions as elements of a collection of subjective plans *or* as elements of an objective system of events independent of human intentionality. In fact, means-aims action involves intentional reasoning as well as objective conditions and mechanisms. Tadeusz Kotarbiński noted in this connection that: '[t]he essential problems of economics have [...] a normative character. Economics poses the question how the actions of a human team, engaged in co-stewardship, should be influenced, so that it operates in a rational manner, i.e. in the most efficient manner. But to prepare solutions of this type of problem one should know the dynamics of the spontaneous formation of structures of the team engaged in stewardship, in other words, the relationship between their parts, which are generated independently of the external factors, programmed in advance. Problems of this kind, from the sphere of the science of the laws of these dynamics, have not a normative, but an assertive character' (Kotarbiński 1965, p. 304; see also Kotarbiński 1960).

The intertwining of intentional actions and objective structures is a constitutive feature of political economy and is at the root of the descriptive duality of economic actions (see Davidson 1985, for a discussion of the descriptive duality of actions in general).³ Economists have responded to that duality by moving beyond the 'maze of interconnections' making up the political economy of any given society and building theories 'trying to get down to the fundamentals' (Pasinetti 1986, p. 414). If we look at the foundational problem of economic value, this endeavour led theoretical economists to make a choice between 'the "objective" route of cost-of-production and, more particularly, of a labour theory of value; and the "subjective" route of a "marginal utility" theory of value' (Pasinetti 1986, p. 415). The 'subjective route' is principally associated with the consideration of the sphere of exchange (catallactics), whereas the 'objective route'

³Descriptive duality may be one important reason behind the possibility to analyse economic actions in terms of 'objective' or 'subjective' criteria, as discussed below (see also Scazzieri 1993).

has primarily investigated production and its contribution to the formation of national wealth (plutology). However, we argue that both catallactics and plutology include elements of *each* approach and highlight the need for a more comprehensive understanding of political economy at the interface between goals and structural conditions. If we look at the catallactic tradition, Léon Walras explicitly emphasizes the importance of objective elements in his analyses of choice and allocation through exchange: ‘any value in exchange, *once established*, partakes of the character of a natural phenomenon, natural in its origins, natural in its manifestations and natural in essence’ (Walras 1954 [1874–77], p. 69; emphasis added). Indeed, Walras’ work on the general equilibrium of a competitive market economy started from Quesnay (the transition arguably occurred through Isnard, who interpreted Quesnay’s *Tableau* from the point of view of market interdependencies; see Isnard 1781 and Jaffé 1969). Subsequent developments of the catallactic tradition also acknowledged the role of objective conditions, and of their unfolding, in determining the character of individual choices and of the corresponding modes of coordination. For example, objective conditions, in Carl Menger’s sense of conditions independent of human will (Menger 1981 [1871], Chapter 4), are central in Friedrich von Hayek’s theory of the evolution of complex economic systems (Hayek 1967) and in Werner Hildenbrand’s discussion of the distributional (systemic) prerequisites for resource endowments compatible with the stability of general competitive market equilibria (Hildenbrand 1989, 1994, 1998). The intertwining of means-ends reasoning with the consideration of the internal structure of material conditions is also manifest in the subsequent developments of plutology. Arthur Cecil Pigou’s theory of the ‘national dividend’ (Pigou 1912, 1920) established modern macro-analysis within the normative framework of welfare economics (see also Hicks 1975). Similarly, Jan von Neumann’s analysis of the conditions for growth at the maximum rate compatible with any given production technology highlights the need to address the constraints arising from the internal structure of the production system to solve a characteristic problem of the means-ends type (von Neumann 1945–46 [1935–37]; Champernowne 1945–46; Chakravarty 1989).

Political economy is intrinsically concerned with problems of the means-ends type. Human activities unfold within economic structures (that is, relatively invariant patterns of interdependence), which may themselves change over time as a result of the means-ends problems being addressed. As we have seen, the concern for the ‘right’ proportions and allocation of means to achieve stipulated objectives is not exclusive to catallactics

(allocation of *given* means to alternative ends by means of exchange). In fact, there is an important element of allocation in plutology as well. For a central concern of the theory of production at systemic level is how to identify 'right' proportions between productive sectors, and thus the appropriate distribution of human activity between different employments in view of systemic conditions (viability) and economic-political objectives. Hence, even models based on pure reproducibility (à la von Neumann and Pasinetti) contain a principle of instrumental rationality: the conditions for the system to achieve an economic objective, such as maximum growth (von Neumann) or full employment and full capacity utilization (Pasinetti). However, addressing means-ends conditions in models of the production type (plutology) takes us a long way from Lionel Robbins's view of production as a special case of the allocation of given resources 'to increase opportunities of consumption' (Robbins 1933, p. 463). In fact, Philip Henry Wicksteed's definition of economics as 'a study of the principles of administration of resources and selection between alternatives, conceived without any formal or conventional limitations' (Wicksteed 1933 [1910], p. 17) may also apply to a political economy of the plutology type. However, this would involve moving beyond Lionel Robbins's definition of economics as 'the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses' (Robbins 1984 [1932], p. 16). For it may require turning back to Wicksteed's general description of economics as a branch of the 'general science of administration of resources' (Wicksteed 1933 [1910], p. 16), which would include Robbins' emphasis on allocation of *given* scarce means as a special case. Means-ends reasoning underlies both the scarcity framework of catallactics and the producibility framework of plutology. The two approaches emphasize different aspects of a nation's wealth: as a *fund* of non-produced resources in catallactics and as a *flow* of produced goods and services in plutology (Pasinetti 1977). In either case, proportionality conditions are of central importance. However, catallactics emphasizes proportionality as the right distribution of 'scarce means' in view of given objectives, whereas plutology highlights proportionality between production processes as a prerequisite for the sustainability (viability) of social production even in the absence of scarcity constraints. The latter point of view recalls the Physiocratic attention for productive linkages between social classes within the polity (Mercier de la Rivière 1767) and emphasizes means-ends problems of the structural type, that is, problems whose solution primarily requires identification of an appropriate system of relative weights between different productive sectors and/or socio-economic groups.

Means-ends reasoning in economic theory developed along two directions. On the one hand, it was extended to the exploration of the general features of agents' dispositional attitudes (Robbins 1933, 1984 [1932]; Mises 1949 [1940], 1960 [1933]), the construction of general objective functions through the attachment of weights to different partial objectives (de Finetti 1952, 1998 [1931]), agents' attitude towards uncertainty (Knight 1921; Keynes 1921; Shackle 1949, 1961; de Finetti 1931, 1964 [1937], 1974–75) and agents' beliefs as the structuring condition of their possibility spaces (Arrow 1982; Bacharach 1986, 1989; Kahneman and Tversky 1979). On the other hand, the consideration of the internal structure of constraints in the economy made it possible to study which individual and collective actions are feasible in the pursuit of a given objective. Quesnay's *Tableau économique* is a seminal contribution in this analytical tradition (Quesnay 1972 [1759]). Quesnay starts with a reconstruction of intermediate and final product flows between different socio-economic groups (agriculturists, manufacturers and the landed classes) in a circular, land-using economy, and outlines a proportionality condition for such an economy to reproduce itself from one period to another without diminishing its productive potential. For this to be possible, intersectoral product flows must allow the reproduction in any given period of the means of production used up for the current production of that period. Intersectoral product flows are also central in Karl Marx's (1983 [1867]) and Piero Sraffa's (1960) studies of the distribution of the economy's net product between social classes, Wassily Leontief's analysis of the interindustry structure of a modern production economy (Leontief 1941), and Jan von Neumann's investigation of proportionality conditions for maximum growth in a 'pure capital' economy (an economy in which all produced goods are inputs to themselves and/or to other goods) (von Neumann 1945–46 [1935–37]).

Despite the alternative emphasis on the visualization of certain opportunities and constraints, or on the internal structure of existing constraints and opportunities, the two political economy traditions closely intertwine. In fact, analysis of means-ends action is necessary to understand which path of structural change is undertaken out of the many that are made possible by a given economic structure. At the same time, understanding relevant structural conditions is necessary for means-ends actions to achieve any given objective.

4 Traditions of Political Economy and Types of Interdependence

Political economy, as construed in this Handbook, deals with how the material sphere makes it possible to satisfy objectives within the polity, considering objectives that are strictly economic, such as systemic viability, as well as the objectives of various actors that are not strictly economic, such as positional goals within power structures (be they within the same polity or relative to other polities). Economic theory suggests different approaches to political economy depending on the route followed in addressing the material needs in the polity. One route highlights dispositional activities associated with a plurality of objectives and a given set of constraints (generally a given distribution of resources between individual or collective actors). The other route highlights dispositional activities associated with a given objective (the provision of material needs) and a variable set of constraints (such as multiple technological structures and a variable distribution of resources between individual or collective actors) (see Scazzieri 2018, this Handbook).

The foregoing characterization of the field of political economy as one that encompasses means-ends action and structural conditions is rooted in its emergence as a distinct field of investigation in the formative period of the early modern state. Antoine de Montchrétien's early use of the term *économie politique* (Montchrétien 1999 [1615]) points to the process by which growing interdependencies between real and financial markets as well as among production activities at the national and international levels came to be constitutive of the political order of society. The new field of political economy expressed the need to systematically address those interdependencies and to encourage consolidation of the political order on a reliable and stable foundation of material resources. Political economy developed from a variety of intellectual sources. The classical tradition of *oikonomia* suggested the idea that one can identify and use rational principles as a benchmark for the allocation of available resources between different uses. As the Renaissance philosopher Augustinus Niphus pointed out: 'The first objective of economic activity is the right stewardship of things pertaining to the household, its ultimate objective is life, as Aristotle and Plato argue, indeed the diligent and industrious life of those living together in the same household' (Niphus, as quoted in Martello 1912, p. 330).⁴ Following a different

⁴'Opus autem oeconomicum primum est rerum familiarum recta dispensatio, ultimum autem est vita, ut Arisot et Plato asserunt, atque studiosa vita eorum qui in eadem domo convivunt' (Niphus, as quoted in Martello 1912, p. 330).

conceptual strand, the humanist tradition of writings on 'civil life' suggested that principles governing human sociability could also explain and govern the interconnectedness of individuals and groups in the material sphere (the sphere in which division of labour provides the goods and services needed to the subsistence and welfare of societies). Indeed, this interconnectedness became the foundation of civil life itself: 'Civil Life I define as the life which we enjoy in community with other people, to the mutual benefit or profit' (Lipsius 2004 [1589], I.i.1, p. 261). The interface between *oikonomia* and *vita civilis* opened a new field of social investigation. The quest for rational principles ensuring the right allocation of resources within the household was extended from individual household units to the whole economic-political system. On the other hand, the sphere of *vita civilis* came to include not only general sociability conditions but also the proportionality criteria that should govern the interdependence between productive sectors and/or social groups. The search for the 'law' (nomos) expressing right allocation moved from the individual to the collective sphere, so that the collective sphere itself became the object of a rational investigation concerning the proportionality between activities in the social domain. This transition had important consequences for the type of proportionality criterion to be considered. For the *oikonomia* of individual households is primarily concerned with the right distribution of existing resources between different uses. On the other hand, the switch to the collective sphere entailed that resources that could be considered as given (and limited) from the point of view of each individual household were not necessarily so from the point of view of the whole system of interdependent activities. In fact, the consideration of *vita civilis* as a set of interdependent activities often involved switching from scarcity to producibility, in the sense that the resource thresholds constraining individual households could often be removed, or at least shifted upwards for a significant time. Indeed, the switch to the producibility setting called attention to a dimension of allocation that had previously been overlooked. This is the proportionality condition that must be satisfied by any collection of interdependent activities for those activities to be effectively integrated with one another in the production system. In this case, the allocation problem moves from the distribution of goods of the scarcity type to the effective organization of division of labour in the delivery of goods of the production type. This switch is fundamental for a number of reasons. First, the search for proportionality moves from the individual to the collective sphere. Second, the collective sphere becomes proper object for systematic economic inquiry. Third, this investigation identifies a new approach in which the search for new principles of allocation (the *nomos* of material life)

combines with the quest for context-relevant allocation criteria (e.g. whether scarcity-type goods or production-type goods should be the primary object of investigation) and with the determination of policy principles fitting the configuration of opportunities and constraints characterizing any given context.

A first attempt to portray political economy as a distinctive systematic approach to the study of society may be found in Antonio Serra's *Brief Treatise* (Serra 2011 [1613]). In the opening pages of that work, Serra argues for the need to apply to the study of national wealth the same methodological principles characterizing the study of natural phenomena:

[The causes of national wealth] may be subdivided into two kinds: proper accidents and common accidents. Accidents are proper when they occur, or may occur, in one particular kingdom and not in others; and they are common when they occur, or may occur, in any kingdom. Of the proper accidents which can make a kingdom abound in gold and silver, there are two main ones. The first is a domestic agricultural surplus, which occurs when the commodities produced by the kingdom exceed the amount required for the needs and comfort of the inhabitants ... This accident is proper because it does not, and cannot, occur in every kingdom. It is more important in our Kingdom than in any other part of Italy, as is well known. The second proper accident is geographical position with respect to other kingdoms and parts of the world. This must be numbered among the proper accidents because it is a powerful occasion for, and almost a cause of, vigorous trade, both with other parts of the world and within the kingdom itself, and this trade causes an abundance of gold and silver. [...] In this proper accident [the city of Venice] holds the first place, not only in Italy but in Asia and Europe: whereas the Kingdom of Naples is more deficient in this accident than any other region [...] The principal common accidents are four in number: a multiplicity of manufacturing activities, an enterprising population, extensive trade and effective government. These accidents may be termed common because they are possible in any kingdom. If all four of them should occur in one place, there is no doubt that, even if there were no domestic agricultural surplus and everything had to be imported, they would still make that place abound in gold and silver even if the country had no mines of those metals. (Serra 2011 [1613], p. 119)

Serra's approach is remarkably close to subsequent analyses in its claim that an 'objective' study of the principles governing the formation of national wealth is possible. Indeed, Serra's causal analysis would fit Henry Sidgwick's description of Adam Smith's *Wealth of Nations* as a study aimed at tracing 'the laws (in the naturalist's sense) by which [the national production and

distribution of wealth] actually *are* governed' rather than at 'recommending laws (in the jurist's sense) by which [those processes] *ought to be* governed' (Sidgwick 1883, p. 18; author's emphasis). Indeed, Serra is even more explicit than many subsequent writers in claiming for political economy the status of a scientific discipline and correspondingly in emphasizing the need to identify conditions that would allow distinguishing between general principles and *ad hoc* circumstances. Serra's treatment of this distinction is in fact one of the earliest analyses of the causal mechanism of national wealth formation and of the plural ways in which this mechanism may work under different historical, institutional and geographical conditions. Against this analytical background, Serra acknowledges the need for economic policy to recognize the fundamental (general) mechanism of wealth formation and the specific conditions of time and place that may require different policy actions.

One important application of Serra's approach to the study of the wealth of nations is his theory of increasing returns and the policy guidelines that follow from it. Serra sees increasing returns as a general possibility associated with subdividing manufacturing activities into increasingly small and simple fabrication stages, thereby generating a cumulative (self-reinforcing) process of improvements in productive efficiency. However, Serra argues that the triggering of increasing returns must be distinguished from the technological and organizational possibility of subdividing manufacturing activities into smaller units. In fact, increasing returns presuppose a plurality of causal factors interacting with one another to generate a process that may become self-reinforcing over time. This process is at work in the economy of Venice:

[Venice] is [...] aided by its multiplicity of manufacturing activities, an accident which attracts a large number of people to the city. Here the determining factor is not the multiplicity of manufacturing activities alone, for if that were the case we would have to attribute the cause to that accident, but a combination of two accidents, each of which lends force to the other. For the number of people attracted by the extensive trade and the geographical position is increased still further by the number of businesses, and the number of businesses is increased by the extensive trade, which is itself increased by the number of people who come to the city. (Serra 2011 [1613], p. 127)

In Serra's analysis, increasing returns are not triggered by any single factor (say, the existence of a manufacturing base or the extent of commerce) but by 'a combination of two accidents'. This remarkable statement points to the interdependence of distinct causal factors in bringing about the cumu-

lative process of increasing returns. It also highlights that increasing returns derive from the mutually reinforcing action of (i) the structural dynamics of manufacturing production that allows increases in activity levels ‘at a proportionately lower cost’ (Serra 2011 [1613], p. 121) and (ii) the behavioural and institutional dynamics of commerce, which allows the implementation of the structural advantages inherent to manufacturing technology thanks to the overall increase in activity levels. The distinction between the structural conditions allowing economic actions (in this case, manufacturers’ decisions to increase activity levels and split manufacturing processes into more elementary fabrication stages) and the causal factors triggering those very actions (the greater extent of commercial opportunities) points to a fundamental characteristic of political economy as it was taking shape in Serra’s times. This is the interdependence between structural conditions and the economic actions that take place under those conditions but may in turn influence those very conditions over time. Indeed, Serra’s analysis of increasing returns suggests a mutually reinforcing interaction between structures and actions and makes this interaction a cornerstone of the plural causality mechanism at work in his case.

This feedback process explains the context-dependent approach to policy that characterizes Serra’s *Brief Treatise*. Serra’s assessment of the structural conditions that need to be satisfied for foreign trade to make a positive contribution to the formation of national wealth is a case in point. Here too Serra highlights the plural causality at work behind increasing returns, and the need not to assign the role of sufficient cause to factors that can *only* lead to increasing returns if working in conjunction with other factors. Thus, Serra highlights the positive contribution of openness to foreign trade in the case of Venice but denies that foreign trade would have a positive influence on wealth formation in the Kingdom of Naples. For Venice is a commercial hub in which trade consists ‘in importing the goods of foreign countries and exporting them to other foreign countries’ (Serra 2011 [1613], p. 219). Here, foreign trade triggers greater activity levels in Venetian manufacturing, which in turn lead to increasing returns. This outcome would not be feasible for the Kingdom of Naples, in which both location and the lack of a manufacturing base would make industrial transformation for export impossible (Serra 2011 [1613], p. 219).

To summarize, political economy in its formative period looks at the interface between structural conditions and economic-political actions by emphasizing the link between plurality of causation, feedback mechanisms and context dependence. Causal plurality highlights the ‘contingent’ feature of certain paths of structural change (such as the structural changes along

increasing returns paths). This means that, given appropriate technological opportunities, increasing returns may or may not take place depending on whether certain additional conditions (such as geographical location or extent of commerce) are satisfied. On the other hand, once a certain dynamic (such as increasing returns) sets in, the structural conditions determining the feasibility range of policy actions are also likely to change. For example, the environment determining whether a country should adopt a free trade policy or protection is not the same before and after the onset of increasing returns. This conceptual framework makes economic policy highly context-sensitive since policy assessment is rooted in the structural opportunities and constraints of any given situation.

Successive phases in political economy have seen a concentration of attention on different types of interdependence between individuals or social groups. For example, Serra's analysis of increasing returns in manufacturing is closely associated with the consideration of international trade and of the links that export-led growth makes possible both externally (between trading countries) and internally (between fabrication stages of commodities sold in foreign markets). In a later period, political economists also became interested in the interdependencies holding together the different parts of any single economy considered as a collection of production and consumption activities. Pierre de Boisguillebert, who was writing between the close of the seventeenth and the early years of the eighteenth century, called attention to the proportions to be maintained between the different production activities in order to avoid both commodity gluts and scarcity crises. According to Boisguillebert, to keep right proportions between activities is a necessary condition for the formation and persistence of a country's wealth: 'it is thus proportions that make the whole wealth' (Boisguillebert 1707a; see also Boisguillebert 1707b).⁵ Boisguillebert's recognition of the circular flow interconnecting the production and consumption activities taking place within any given economic-political system is a stepping stone towards the later discovery by François Quesnay that the proportions ensuring the sustainability (reproducibility) of the system's gross product may be compatible with the formation of a net product over and above what is needed to reproduce the gross product at any given scale. Quesnay's theory of the net product (*produit net*) highlights two related aspects of the proportionality principle: (i) the proportionality between productive sectors required to make the social product sustainable (reproducible) from one production

⁵'Ce sont donc les proportions qui font toute la richesse' (Boisguillebert 1707a).

cycle to another independently of the absolute level of activity of the different sectors; (ii) the effective demand required to make a given level of activity sustainable over time. In Quesnay, there is a close relationship between proportionality conditions on the production side and proportionality conditions on the demand side. Thus, the 'right proportions' within any given economic-political system would reflect both production technology and the social structure of the system. In Quesnay's analysis, the full reproduction of any given set of production and consumption activities at a given scale requires both the availability of appropriate stocks of means of production (Quesnay's *avances*) at the beginning of any given production cycle and the utilization of the whole net product (as unproductive consumption) to allow 'the annual net product to return to the productive class' (Quesnay 2006 [1758], p. 348). This point of view highlights the role of social structures in closing the degrees of freedom provided by net output formation. The subsequent contribution by Jean-Charles-Léonard Sismondi builds on this analytical structure and investigates to what extent specific institutional settings may or may not fulfil the first proportionality condition (technological proportionality) and/or the second proportionality condition (final demand proportionality). Sismondi's contention is that the social structure of industrial capitalism is not suitable to the fulfilment of either condition due to: (i) non-coordinated processes of technical change making technological proportionality difficult to achieve at any given time; (ii) substitution of machines for human work making technological unemployment unavoidable; and (iii) substitution of large-scale production for production in small-sized productive units reducing the purchasing power of large strata of population (Sismondi 1819).

Quesnay's emphasis on the dual proportionality condition and Sismondi's analysis of disproportionalities associated with industrial capitalism are significant building blocks of Karl Marx's political economy of capitalism (Marx 1983 [1867]). Marx draws in a fundamental way on Quesnay's analysis of the circular flow while adapting the formal structure of Quesnay's *Tableau économique* to the technological set-up of an industrial economy.⁶ At the same time, Marx develops Sismondi's idea that the internal dynamics of industrial capitalism involve the disappearance of a large body of potential consumers, thereby endangering the fulfilment of the second proportionality condition and thus the reproducibility of the economic system at a given scale.

⁶This is shown by Marx's splitting of the industrial goods sector into two sub-sectors producing means of production for the consumer goods and capital goods sectors, respectively.

Interdependencies take different forms in economic theory. A fundamental difference can be drawn between vertical and horizontal interdependencies (Baranzini and Scazzieri 1990; Landesmann and Scazzieri 1993). Vertical interdependencies highlight the connection between resource ownership and resource allocation. This connection may be direct (resource utilization through consumption) or indirect (resource utilization through the productive transformation of resources into final consumer goods). Vertical interdependencies are central to Adam Smith's representation of a production economy of interdependent and specialized producers connected to one another via division of labour (Smith 1776). They are relevant to David Ricardo's analytical reconstruction of mechanical production as a vertically integrated process leading from the production of tools and machinery to that of the corresponding final consumer goods (Ricardo 1817; see also Hicks 1985; Cardinale 2018a, Chapter 6, this Handbook). The vertical approach is also a distinctive feature of the catallactic models of political economy, which represent society as a collection of resource owners who trade resources with one another (see, for instance, Walras 1874–77; Pareto 2014 [1906]; de Finetti 1952; Arrow and Debreu 1954; Debreu 1959; Allais 1981).

Horizontal interdependencies take a different view of the economy as they primarily emphasize the 'productive utilization' of what is produced, that is, the utilization of commodities as productive inputs to themselves and/or to other commodities. In this case, the economic system is integrated by means of its *internal structure*, and proportionality conditions have to be met by sectoral proportions and by aggregate demand allowing the economic system to reproduce at a given scale. Economic analysis explored horizontal interdependencies along two different analytical traditions. One approach, followed by Boisguillebert and Marx, highlights horizontal interdependencies between productive sectors. The other approach, adopted by political economists such as James Steuart (1966 [1767]) and David Ricardo (1817), emphasizes the interdependencies between socio-economic groups without fully exploring the relationship between changing proportions in the social structure and proportionality conditions in the production sphere. Ricardo's theory of the technological and social dynamics along a decreasing returns trajectory is of special interest in this connection. This theory calls attention to the existence of a dynamic relationship between the transformation of production structures and changes in the distribution of the net product between profits and rents (Ricardo 1817). However, Ricardo's central idea that the rate of profits on the least productive land determines the rate of profits for the

whole economic system and the whole spectrum of the rates of rent on lands of 'superior quality' establishes a connection between production technology and distribution that is *prima facie* independent of the proportionality conditions holding for the whole economic system. In fact, Ricardo's approach to the relationship between profit and rents is primarily concerned with the distribution of the net product between profit earners (capitalists) and rent earners (rentiers) without explicitly considering which intersectoral product flows make the whole economic system self-sustaining (capable of reproducing itself at a given scale). Ricardo's theory of distribution is a 'hybrid' separating the reproduction conditions of the system (which include the provision of subsistence goods to workers) from the distribution of the net product between capitalists and rentiers. Production technology determines both the proportionality condition for viability (the intersectoral transfers of products needed for the circular flow to reproduce itself from one production cycle to another) and the distribution of the net product between capitalists and rentiers. However, the viability condition may be independent of net product distribution (as highlighted in Sraffa 1960). In short, Ricardo outlines a theory of distribution of the social product in which (similarly to Quesnay) workers' consumption enters the reproduction condition of the circular flow, whereas (differently from Quesnay) the distribution and utilization of the net product is independent of that condition. Ricardo's theory thus entails a break from Quesnay's intertwining of production technology and social structure as components of the circular flow. Marx's analysis of reproduction highlights the implications of this cleavage in view of the fact that the intersectoral proportionality requirements and the aggregate (macroeconomic) requirements are separately determined, and that there is no *a priori* reason why the two conditions should be simultaneously met. The revival of classical political economy in the twentieth century has renewed interest in the analysis of horizontal interdependence between productive sectors, as in Leontief's theoretical analysis of the circular flow (Leontief 1991 [1928]) and empirical investigation of the intersectoral (input-output) structure of the US economy (Leontief 1941) as well as in the discovery of the viability conditions for a system of interindustry relationships expressed as a system of linear production equations (Hawkins and Simon 1949). In a parallel development, Richard Stone, in collaboration with Alan Brown, examined the relationship between socio-economic magnitudes (such as population and national income) and the inner core of interindustry transactions by

means of ‘social accounting matrices’ providing a double-entry representation of national accounts (Stone and Brown 1962). In either case, production interdependencies and social structures are dependent on each other but not fully complementary to one another. In Leontief, the so-called open model introduces a cleavage between production interdependencies and a residual national income. The macroeconomy is separated from intersectoral relationships and is not a component of the economy’s circular flow. In Stone, national income magnitudes become part of a matrix representation of the economy, but they are not directly relevant to the viability of the interindustry core of the economy.

The vertical and horizontal approaches to interdependence highlight different features of a political economy. The vertical approach highlights the possibilities of cooperation or conflict between actors who are structurally independent from one another in their capacities as traders and/or producers. In the pure trading case, cooperation may arise when trade arrangements allow the economy to shift from a sub-optimal to an optimal allocation of resources, while conflict is possible whenever certain allocations privilege one set of actors over another (de Finetti 1952; Allais 1981). In the pure production case, division of labour requires cooperation between producers, while shifting demand structures highlight the possibility of conflict between different sets of producers, as certain producers may be better equipped than others to undertake the required transformation of productive arrangements (Pasinetti 1981, 1993; Bianchi and Labory 2018, this Handbook; Landesmann 2018, this Handbook). The horizontal approach to interdependence highlights different possibilities for cooperation and conflict (Cardinale 2017, Cardinale 2018b, Chapter 21, this Handbook). In this case, the relevant stakeholders (such as productive sectors, or social groups attached to them) are structurally dependent on one another. This means that the very mode of subsistence and operation of each unit of analysis (say, of each industry) presupposes a *de facto* cooperation with other units of analysis (other industries). However, structural interdependence does not exclude conflict (Quadrio Curzio and Pellizzari 1999, 2018, this Handbook). For instance, different industries may be mutually related and yet they may vie with one another for competing shares of total value added (national income). To sum up, vertical and horizontal interdependencies provide alternative heuristics for identifying means-to-end correspondences in a political economy. Context determines which dimensions of cooperation or conflict are the most important under given conditions.

Interdependence analysis straddles production and social relationships and highlights constraints and opportunities for economic and social objectives. A noteworthy feature of interdependence analysis is that it allows addressing the relationships between socio-economic groups in terms of the conditions making any given social structure compatible with the viability of a given production technology (see also Cardinale 2015; Cardinale et al. 2017; Scazzieri 2012; Scazzieri et al. 2015). The interface between production and social structures has been a central feature of the political economy of interdependence since the pioneering works of Boisguillebert (1707a, b) and Quesnay (1972 [1759]) (see also Kubota 1964, 1966). As emphasized in Quesnay's *Tableau économique*, socio-economic groups can be associated with specific positions in the economic-political system. The interface between production and social interdependencies also takes centre stage in the 'material balances' approach at the origin of Wassily Leontief's input–output analysis (Leontief 1963 [1925]).⁷ Indeed, this approach was instrumental to the investigation of 'moving social structures' and of the relationship between this dynamic and the reproduction conditions of the economic system.⁸

Structural analysis addresses economic and social objectives highlighting the degrees of freedom compatible with the existing pattern of interdependence. For example, it may highlight that a given objective (say, raising the economic system's growth rate from g to g' , with $g' > g$) may be achieved by intervening either in the social sphere (for instance by tilting income distribution towards groups with higher propensity to save) or by introducing production technologies that generate greater net output and thus greater potential investment for any given constellation of saving propensities. This approach to the implementation of economic and social objectives is distinctly different from the type of allocation analysis that highlights the direct relationships between objectives and the means (resources) available to achieve those objectives. For in the latter case the relevant constraints are

⁷Leontief maintains that the purpose of the material balances approach is to measure 'not only the production but also the distribution of the social product, in order to obtain an overall picture of the whole process of reproduction in a kind of *Tableau économique*' (Leontief 1963 [1925], p. 130).

⁸In this connection, Stanislav Strumilin highlighted that 'since the process of reproduction of the productive forces of the country takes place within the framework of a complex social structure, in which the different social forms of the economy and the different social classes associated with them confront one another to enhance their existence, also the balance of the national economy must reflect the equilibrium state generated by these competing social forms, the specific weight of each one of them *within the common system*, and the distribution of these weights, as it may be detected during the time period under consideration' (Strumilin 1963 [1927], p. 114, our emphasis).

restricted to the availability of existing means (resources) and do not include the proportionality conditions associated with the given social and technological structure of the economy. The implementation criterion for any given objective entails identification of the best allocation of means in view of that objective but does not afford the ‘screening out’ of allocations incompatible with the viability condition.

To sum up, means-ends analysis can follow either of two routes. On the one hand, one can identify the ‘best’ allocation of any given collection of resources in view of a stipulated objective. In this case, the means-ends problem is simply one of ‘screening out’ inefficient allocation patterns and of selecting one option out of the efficient set (Allais 1981, 1986; de Finetti 1998 [1931]; Pareto 2014 [1906]). On the other hand, one can focus on the interdependencies between production activities and identify a set of constraints due to complementarities between production processes (von Neumann 1945–46 [1935–37]; Pasinetti 1981; Quadrio Curzio 1986, 1996, Quadrio Curzio and Pellizzari 1999, 2018, this Handbook). In this case, the minimum means criterion is still relevant, but its utilization must follow a stepwise procedure based on a ‘nested’ structure of constraints. For example, the viability constraint must be met before the capital accumulation constraint and the latter before any constraint due to income distribution targets in a growing economy. Adolph Lowe’s investigation of the relationship between structural interdependencies and target-oriented trajectories is especially interesting in this connection (Lowe 1952, 1976). Lowe highlights the hierarchical arrangements of productive sectors and grafts on this hierarchy his analysis of the dynamic paths that are structurally feasible in view of the stipulated objective (such as full employment or growth at maximum rate). Structure makes certain production programmes feasible and others unfeasible under the viability and capital accumulation requirements for the political-economic system in question. In this case, the identification of structural conditions is an essential component of means-ends analysis (Lowe 1965).⁹

⁹Lowe’s ‘instrumental method’ highlights the central role of structures in economic investigation by distinguishing between ‘structure analysis’, which is the study of constraints and opportunities rooted in existing structures, and ‘force analysis’, which is the study of motive forces driving the economic system across the structural constraints and opportunities associated with any given dynamic trajectory (Lowe 1965). The combination of structure and force analysis is central in determining the specific tempo of structural change along dynamic trajectories characterized by a given objective and the structural conditions of technology in use (Scazzieri 1998).

5 Towards a Structural Theory of Political Economy

Political economy is characterized in this Handbook as the field comprising objectives within the polity (both material and non-material, and held by different actors at different levels of aggregation) and the internally structured constraints to the achievement of such objectives, deriving from the structure of division of labour. Such characterization requires understanding means-ends action as well as the structures of division of labour within the polity. Traditions in political economy have typically focussed on either of the two aforementioned problems, leaving the other on the background: approaches focussing on means-ends action typically do not investigate the structure of division of labour, whereas approaches that concentrate on division of labour typically have no theory of action. And while both traditions have shed light on constitutive aspects of political economy, doing justice to the field that political economy aims to understand will require further research that unpacks the connections between those aspects. In particular, it will be necessary to envision frameworks that can reconcile both.

One possible direction to study the connection between means-ends action and the structures of division of labour is explored in Cardinale's Chapter 21 in this Handbook (Cardinale 2018b). The aim is to develop a theory that shows how the structures of division of labour and means-ends action taking place within them constitute each other over time, while being relatively autonomous at any given moment. Specifically, such a theory should take into account both the structure of division of labour and the structures of cognition and action (Bourdieu's (1990) *habitus*) that actors develop by operating within it. In fact it is possible to theorize action as depending not only on how actors understand means and ends, but also on how that understanding is shaped by their habitus (Cardinale 2018b). The implication is that actors are embedded in the structure of division of labour at a given moment, which provides means and ends, as well as over time, which shapes their habitus and hence their propensity to pursue certain courses of action out of the many that are possible. In this way, instrumental rationality can be reconciled with a theory of the internally structured constraints and opportunities deriving from division of labour.

Once the time dimension is taken into account, it is possible to conceptualize the relative autonomy of action from structures as well as their mutual constitution over time. In fact, over time, by acting within given positions in the structure of division of labour, actors develop structures of cognition and

action that are attuned to those positions. Division of labour therefore influences action not only by providing opportunities and constraints, but also by shaping the visualization of available possibilities, thereby orienting actors towards some possibilities over others. Actors' structures of cognition and action are therefore the product of embeddedness in division of labour over time, and of the courses of action taken within them. However, despite the influence of division of labour on how actors visualize their opportunities and constraints, action is never fully determined by division of labour. In fact, at any given moment, actors' habitus is relatively autonomous from the structure of division of labour within which they act: action results from the encounter between two relatively autonomous structures. Over time, structures of division of labour depend on the courses of action pursued within those structures, which activate some paths of structural change instead of others.

By doing justice to the autonomy of actors and division of labour, as well as to their mutual constitution over time, approaches such as the one just outlined can provide coordinates to encompass means-ends action and the economic structures of the polity within a comprehensive political economy framework.

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