Moving Towards a Sustainable Economy—A Social Liberal View

Heinrich Bortis

1 Introduction: Problem and Plan

To move in the direction of a sustainable economy and attempting to fully realise sustainability requires a new socio-economic paradigm, *social liberalism* to wit, that is, a fully fledged alternative to the doctrines of *liberalism* and *socialism*, historically realised through capitalism, now dominated by huge corporations and big finance, and socialism with central planning.

To be sure, the various strands of the green movement undertake genuine efforts to harmonise the relationship between man (society) and nature. And within the capitalist system, efforts are made to prevent a climate catastrophe in order to be able to maintain the system. However, there are also strong adverse forces at work. The struggle for survival and

I am indebted to my former scientific collaborator Andreas von Ah for pertinent remarks on controversial issues. Of course, all responsibility remains mine.

H. Bortis (✉)
University of Fribourg, Fribourg, Switzerland
e-mail: heinrich.bortis@unifr.ch

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the striving for high profits leads on to using fossil energy to be able to produce as cheaply as possible; driven by the profit motive, multinationals and transnationals are looking for cheap labour, which, in many instances, is put to work in industry and mining under difficult conditions, with the natural environment being frequently heavily damaged through pollution and production of waste. However, given the global imbalances and widespread poverty, the majority of people simply cannot afford to rely on alternative energy sources to fossil fuels. In agriculture, the introduction of high yielding varieties drives up the use of water and of pesticides, favouring large scale farms and tending to eliminate family peasants; moreover, animals are raised in conditions of mass production in an entirely unnatural way and plants genetically modified, with largely unknown (long term) consequences for the health of human beings. Moreover, deforestation creates the conditions for industrial and agricultural mass production, accompanied by an almost boundless growth of cities. Given all this, global warming goes on, biological diversity is reduced and many species are threatened by extinction.

In this chapter, we summarise all these environmental problems under the heading of *environmental alienation*. This notion sums up the overall deviation from an ideal sustainable economy, which implies harmony between man (society) and nature.

However, this chapter does not deal with technical aspects of sustainability. Instead, the paper focuses on an additional impetus to be given at moving towards a sustainable economy through implementing, step by step, a new paradigm, social liberalism, which is, in our view, badly needed to permanently bring about a sustainable economy.

In the second section, we very briefly deal with the social philosophies of liberalism and social liberalism. This is followed by opposing neoclassical economics, the economic theory of liberalism, to classical-Keynesian political economy, representing the economic theory of social liberalism. Fourth, the notions of the natural state and alienation are hinted at. In the fifth section, the relationship between classical-Keynesian political economy and the natural environment is alluded to. Sixth, the actually prevailing environmental situation is sketched on the basis of the external employment mechanism. In the seventh section, normative aspects of sustainability are taken up, grounded upon the internal employment mechanism. Section eight deals with environmental policies to be pursued. The conclusion (section nine) is about mobilising the social

capacities of human beings to create the enthusiasm required to speed up and to intensify the movement towards a sustainable economy.

2 Liberalism and Social Liberalism

The autonomous and self-contained individual stands at the centre of the social philosophy of Liberalism. Social phenomena are derived and come into being through explicit and formal or implicit and informal contracts, firms and loose associations would be instances. Since the individuals are primary, institutions in the liberal sense could be called individualistic institutions. The most important, almost natural, liberal institution is the market, which, ideally, co-ordinates the rational, profit and utility maximising behaviour of producers and consumers, respectively, in a socially optimal way. In a liberal society, historically realised through Capitalism, individualistic materialism dominates and there is a tendency for everything to become a commodity. The state should, ideally, be of a minimum size, its main task being to ensure competition and to provide for some public goods, for instance, education, a legal system and internal and external security.

With Social Liberalism individuals are *social* individuals. This implies that there are "social states of affairs", the "social" for short, resulting in the existence of genuinely social entities, that is, *social institutions*. Such institutions come into being if several or all members of a society persistently pursue *common or social aims* that isolated individuals could not achieve. In doing so, individuals or groups exercise differing complementary functions (planning or executive, physical or intellectual) within a social institution; co-operation and co-ordination are essential if such institutions are to function properly. In this sense, football teams, orchestras and enterprises are social institutions. But the most striking example of a social institution is the social process of production: in a monetary production economy based upon extensive division of labour, production of commodities goes on by means of commodities and labour; each sector of production and each enterprise (themselves social institutions), and each individual performs a specific function within the process of production, and thus contributes to reaching a common (social) aim, that is the production of the social surplus and of the social or national product.

Besides the social institutions there are behavourial institutions, customs and habits in the domains of consumption, culture and ethics. However, behaviour takes place on the basis of specific ideas and values

in the economic, social, political, cultural and religious domain. These interdependent ideas and values make up the intellectual scenery of some time period.

Social and behavioural institutions are all complementary, making up society and the state and bringing about a certain way of life. Given this, society and the state are much more than the sum of the individuals living on the state territory. Consequently, societies and states conceived along social liberal lines are unique. This, in turn, is associated with cultural diversity and the possibility of mutual enrichment in the cultural and material domains.

3 Neoclassical Economics and Classical-Keynesian Political Economy

With liberal economic theory, neoclassical economics to wit, all the great economic problems—value, distribution and employment most importantly—are, ideally, solved on competitive markets. The rational, profit and utility maximising behaviour of the economic agents are supposed to be co-ordinated by interdependent markets in such a way that a social optimum obtains, the Pareto optimum: the situation of no agent can be improved without worsening the situation of some other agent. The Pareto optimum implies a general equilibrium in all markets, hence full employment of all factors of production, land, capital, and, most importantly, labour. The principle of supply and demand closely associated with the marginal principle underlies the neoclassical equilibrium model.

The economic theory of social liberalism is classical-Keynesian political economy (Bortis 1997). The economy considered is a *monetary production economy* in which the social process of production is at the centre of the economic system; production has to be financed, hence the crucial importance of the financial sector and production has to be sold against money, hence the overriding importance of demand in money terms.

Given this, the basic classical-Keynesian model must be made up of the primary principles governing the functioning of modern monetary production economies. Two principles are of classical origin: the labour value principle summarises the essential features of the immensely complex social process of production to provide the essence of the prices of production, which are the fundamental prices in a monetary production economy; the surplus principle of distribution implies that the distribution of income is positively a problem of social power and normatively of

distributive justice situated at the heart of social ethics. Keynes provided a third principle, namely the principle of effective demand, related to determining the scale of economic activity. These three principles imply that money plays a fundamental role. Indeed, the processes of production and circulation could not go on without money, since production takes time, outlays and receipts are not synchronised and goods are never exchanged against other goods but always against money, which also acts as a store of value and as such is intimately connected to the financial sector.

The classical-Keynesian core model consists of a price and of a quantity equation (Bortis 2019, pp. 194–96). The price equation embodies two principles of classical political economy: the labour value principle and the surplus principle. The quantity equation, the super-multiplier, tells us how output and employment are determined in principle through effective demand. Private and public consumption represents the internal demand components of demand, whereby private consumption increases if income distribution becomes more equal. Exports obviously lead on to an increase of external demand, which is reduced by imports.

4 The Natural State and Alienation

The notion of alienation has been coined by Karl Marx—through reinterpreting Hegel—to denote cleavages between natural states of societies and social reality. In his *Frühschriften* Marx equates the natural state with communism; in fact, he puts communism equal to humanism and naturalism. The old Liberals, Adam Smith, in particular, considered the (ethically grounded) market economy as a natural state of affairs; however, Adam Smith's ethical foundations of the market gradually faded away to be replaced by the notion of perfect competition; here the desirable state is represented by the Pareto optimum, which is entirely individualistic and devoid of ethical content.

The social liberal notion of the *natural state* is grounded upon the fundamental social ethical value of the *Common Good*, which is "social" in the sense proper, that is, in the social liberal sense as is sketched in Sect. 2 above. Common aims are to be reached through common complementary actions which require co-operation and co-ordination. Common aims are pursued, for instance, within firms: the production of one or several goods, or within the social process of production, resulting in the social product and the social surplus.

In the sphere of the material (economic) basis, the most important components of the Common Good are full employment or the absence of involuntary unemployment, and a fair distribution of incomes and wealth. The institutional social, political, legal, ethical, cultural and religious superstructure ought to be such that the space of freedom is maximised and that the social individuals may prosper, that is, develop their dispositions and acquire new capacities. Given this, the political economy of social liberalism, classical-Keynesian political economy to wit, could also be called the political economy of the Common Good, which is, in fact, the social liberal equivalent to the liberal Pareto optimum.

In capitalism in general, the immensely complex phenomenon of alienation appears, for example, in the form of involuntary unemployment, precarious living conditions due to low wages and inappropriate work conditions. In the capitalist industry, an important dimension of alienation shows up in the workers becoming appendages of the machine, beautifully illustrated by Charlie Chaplin's *Modern Times*.

All the elements of alienation mentioned in the introduction to this chapter represent environmental alienation, defined as the deviation from the sustainable (natural) state, which implies harmony between man (society) and nature. In general, the huge environmental problems, global warming in the first place, are due to large scale alienation between man (society) and nature brought about by capitalism in general and by neoliberal capitalism in particular. In the following sections, we now attempt to come to grips with environmental alienation in capitalist economies through putting to use classical-Keynesian tools of economic analysis.

5 Classical-Keynesian Political Economy and the Problem of the Natural Environment

To apply classical-Keynesian political economy to the problems of the natural environment and to a sustainable economy, two output and employment mechanisms contained in the super-multiplier equation, the classical-Keynesian quantity equation, have to be considered (Bortis 1997, pp. 190–98; 2019, p. 197):

The *internal* mechanism is based upon the fundamental macroeconomic equality ($S = I$):

$$Q_i = \frac{G}{(1-c)-a} \tag{1}$$

The economy is set into motion through government expenditures (G). The level of output and employment (Q_i) is governed by (G) and the consumption/output ratio (c), which, in turn, depends on the distribution of incomes. In a Keynes/Beveridge vein, a more equal income distribution enhances the spending power of the population, raising thus the output and employment level. The gross investment volume is, like consumption, a derived variable; hence, the gross investment/output ratio (a) is given.

The *external* mechanism is based upon the current account equilibrium ($X = M = b\,Q$):

$$Q_e = (1/b)X \tag{2}$$

The inverse of the import/output ratio (b) represents the familiar export multiplier stating how output (Q_e) and thus employment are governed by the external employment mechanism.

If Q_e exceeds Q_i, a surplus in the balance of current account occurs, and vice versa. This emerges from the super-mulitiplier equation (9.2a) set out in Bortis (2019, pp. 198 and 205). With the balance of current account in equilibrium, the super-multiplier relation equals relation (1) above, picturing the internal employment mechanism.

The internal employment mechanism, which might be called the Common Good mechanism, is the starting point to consider the natural state, implying harmony between man (society) and nature, which is of a normative and desirable nature. The external mechanism, however, enables us to deal with the actually prevailing situation of environmental alienation, picturing a heavy disturbance of the relationship between man (society) and nature. It is to this situation we now turn.

6 The External Employment Mechanism at the Origin of Environmental Problems

In a globalised world, it is exceedingly difficult to pursue economic policies based upon the internal output and employment mechanism (relation (1) above). Indeed, to enhance effective demand through private and public consumption requires distribution policies, possibly resulting in higher wages and, eventually, higher taxation, reducing thus international competiveness; moreover, increasing effective demand may lead to deficits on current account. Given this, all countries, more or less integrated

into the globalised world economy, will rely on the external employment mechanism to enhance output and employment (relation (2) above).

According to the external employment mechanism each country attempts to create workplaces through exporting as much as is possible. This mechanism is greatly enhanced through globalisation and large free-trade areas, like the European Union. A world currency based upon a national currency, the US dollar to wit, also strengthens the external employment mechanism, with the deficit countries facing ever-higher indebtedness.

Given the fact that, in capitalist economies, there is no tendency towards a full-employment equilibrium whatsoever, competition will not only operate through a favourable price/quality relationship, but will consist in a struggle for market shares and, in the extreme, competition will result in a merciless struggle for survival. And the basic aim of Capitalism, above all of Monopoly-Finance Capitalism, is large profits in the real sector, and profit-making is enhanced by the activities of the financial sector, by means of takeovers for example.

Given this, the working mechanism of the globalised capitalist system leads to massive alienation in the socio-economic sphere (large involuntary unemployment, precariousness, growing inequalities in income and wealth distribution). However, massive alienation also occurs in the environmental domain and, therefore, deeply disturbs the relationship between man (society) and nature; in fact, intensive competition and struggles for market shares and survival on the world markets inevitably lead on to considering nature as a free good.

Moreover, the structure of foreign trade leads on to the formation of a small group of highly industrialised aristocratic countries—Germany, Japan and Switzerland as the leading examples—and to a large number of proletarian countries where highly industrialised isles may come into being in some instances. "[Indeed] the employment effect of foreign trade will be particularly strong if the bulk of exports consists of high-quality industrial products and services and if imports are, in the main, made up of primary goods; in this case the terms of trade will, as a rule, be favourable. High-quality industrial goods and services are, as Nicholas Kaldor has emphasised time and again, labour-intensive if account is taken of direct, indirect and past labour (fixed capital) and of research and development activities. However, primary products (agricultural products, raw materials and energy resources) are land-intensive and industrial standard products create few and low quality workplaces since their production is

usually very mechanised with machines being imported as a rule. Here the employment effect of foreign trade will be weak and heavy outside dependence regarding technologically advanced industrial products will occur" (Bortis 2019, p. 199).

Moreover, socio-economic alienation is, on the one hand, strongly reinforced by the presence of massive involuntary unemployment worldwide which results in a pressure on wages. On the other hand, there is rapid technical progress which benefits all large firms. These are able to set relatively low prices and simultaneously achieve large profits. This drives part of small and medium-sized enterprises out of the market, weakening thus the position of the middle classes. These developments are enhanced through the big players in the financial sector attempting to increase profits through takeovers. Ultimately, *persistent* heavy involuntary unemployment inevitably leads to ever-growing inequalities in the distribution of incomes and wealth *worldwide*.

Furthermore, alienation steadily increases through a contradiction between the internal and the external development mechanism on the world level (Bortis 2019, pp. 199–201): Each region and each country attempts to attract enterprises who export the bulk of their production. Given this, taxes must not be too high relative to other regions and countries. This may lead to stagnating and even declining government expenditures worldwide. Since, however, world economic activity must be governed by the internal output and employment mechanism, world effective demand is reduced which renders competition and the associated struggle for survival even more ferocious. Finally, through the external employment mechanism the successful exporters of high-quality industrial goods and services may nevertheless enjoy a satisfactory, even a booming economic situation. The losers, however, mostly countries exporting agricultural products, raw materials and energy resources, and, eventually, standard industrial products, will be precipitated into the abyss of mass unemployment, increasing indebtedness and social and political instability. Owing to the law of increasing returns and huge differences in technological standards and dynamism as well as to the principle of effective demand, there is a *cumulative causation of growing disequilibria and widening inequalities*, resulting in ever-larger inequalities of income and wealth, and employment opportunities worldwide, an argument put forward by Friedrich List, Gunnar Myrdal and Nicholas Kaldor (Bortis 2019, p. 200); regarding the inequality of incomes and wealth wide-ranging empirical work has been done, James K. Galbraith and

Thomas Piketty being important authors. The inequalities in the distribution of incomes and wealth as well as the existence of massive involuntary unemployment strongly enhance overall alienation, socio-economic and environmental.

Alienation can only be systematically tackled if we know what the natural or normative counterpart to alienated reality looks like. To this issue we now turn.

7 The Internal Employment Mechanism, the Sustainable Economy and the Natural State

To realise the sustainable economy requires the implementation of the internal output and employment mechanism inherent in classical-Keynesian political economy (relation (1) above and Bortis 2019, pp. 201–4). This has far-reaching implications. Indeed, to apply the internal employment mechanism requires moving from the actually prevailing neoliberal Capitalism to Social Liberalism. This means fundamental changes in the value system of modern societies amounting to a *Second Great Transformation*, following up Karl Polanyi's *First Great Transformation* 1750–1830 which brought about the transformation from a traditional society to a modern industrial-cum-service society. In modern capitalist societies the economy (the market) and materialistic values—consumerism and striving for profits and wealth—are primary and cultural–ethical values are secondary. *In social liberalism this order of values is reversed:* the economy, the material basis, becomes ancillary and the use of the social surplus ought to be directed towards cultural and ethical purposes through the institutional superstructure, implying that the social and political sciences, political economy most importantly, become moral sciences; in fact, the striving after perfection in all domains and to realise the Common Good to the largest possible extent would move to the fore. This was, broadly, also Keynes' view who has perceived with incomparable clarity that the *materialist capitalist era* must be followed by an *epoch dominated by ethics and culture* if modern civilisation is to survive. On this, the Italian Keynes biographer Piero Mini writes: "[Even the] most superficial reading of Keynes's writings […] should convince anybody that Keynes was not an economist as we understand the term. He was primarily a social philosopher, a cultural leader interested in the cultural amelioration of society. Throughout his

life he prodded the people and their leaders to set for themselves standards worthy of men [...]: the promotion of solidarity among people (the opposite of Benthamite individualism and egoism) and the extension of the realm of beauty (the opposite of Benthamite "push-pin"). Attainment of full employment—via the agency of the state and through substantial reforms of the system—was to be the way of attaining these [...] ends" (Mini 1991, pp. 102/3). "[Keynes was greatly influenced] by an anti-rationalistic current associated with certain critics of the emerging commercial England [e.g. Coleridge and Carlyle, who]" (Mini 1991, p. xvii) "stressed the primacy of the spiritual over the material, of ends over means, of intuition over the narrowly logical. They were humanists who opposed the claims of [materialistic] individualism with the claims of community and tradition and who had a positive view of the state and of the binding value of culture" (Mini 1991, p. 2).

This reversal of values implies that the education system should be of a traditional nature, with an emphasis on culture (*Bildung*): history of facts and ideas, ancient and modern philosophy and the fine arts, to give instances. *Bildung* will have a positive influence on professional formation in all domains (*Ausbildung*), as an engineer or an economist, for example, in that autonomous and creative thinking is greatly enhanced.

As suggested above, the fundamental and all-encompassing social ethical value of social liberalism is the Common Good. The natural state is an objective state of affairs in which the Common Good is realised as far as this is possible for imperfect human beings. Alienation, socio-economic and environmental, briefly dealt with in the preceding section, represents a deviation from the natural state.

The Common Good comprises values related to the material basis of a society and to the socio-political and cultural–ethical superstructure. The most important values linked with the material basis are full employment, the absence of involuntary unemployment, a fair distribution of incomes and socially appropriate prices. According to the internal employment mechanism, full employment can be reached through bringing about sufficient effective demand created by government expenditures and private consumption, which, in turn, depends on an equitable distribution of incomes, based upon the principle of distributive justice related to relative wages and a socially appropriate profit rate; with distribution regulated, socially appropriate prices of production will obtain (Bortis 2019, pp. 201–4).

Let us now consider some crucial issues related to a sustainable economy taken up in the present volume.

First, a sustainable economy may require a stationary economy and, in a post-Keynesian vein, this would render it impossible to realise profits since the rate of profits is governed by the rate of growth. However, according to social liberal classical-Keynesian political economy where the share of property income is regulated by the surplus principle, any rate of profits is possible even if there is no growth. Indeed, in the zero growth case, profits and the surplus in general, would simply be consumed, spent on cultural purposes and paid on taxes. Saving would have to be zero in order to satisfy the macroeconomic equilibrium condition "saving equal investment" (see on this equation (7b) and its implication in Bortis 1997, pp. 168–69). In any case, in a social liberal economy, the rate of growth compatible with sustainability may be chosen.

Second, full employment is an essential component of the Common Good. This enables the state to *minimise* social and welfare expenditures. In fact, people able to work do not want to be dependent upon unemployment benefits; they simply want to work and to get a fair salary. Given this, the bulk of social expenditures will consist of expenditures in the health sector.

Third, in a Common Good perspective, the economy and technology must be in the service of Man and Society. This implies that modernity must be based upon the achievements of tradition, and these achievements have to be preserved. Very importantly, artisans and family farmers have accumulated an immense knowledge over very long periods of time, which has to be maintained and perpetuated. This knowledge also contains precious information about the natural environment and how to bring about a sustainable economy. Hence craftsmen and family farmers could greatly contribute to building up a harmonious relationship between Man (Society) and Nature. In fact, craftsmanship and traditional farming are basic human activities constituting autonomous fundamental human values, indispensable for the prospering of the social individuals. Modern methods of production, machinery and associated to artificial intelligence are derived activities. If the basis is damaged and even destroyed, then, in the long term, the modern superstructure will break down, causing heavy damage to man, society and nature. Consequently, socio-economic and environmental alienation will grow dramatically.

Fourth, the importance of tradition also implies a certain attitude towards modern technologies, artificial intelligence (algorithms, robots)

most importantly. Indeed, social individuals get more perfect through social activities, for example, going to school, to university, discussing, reading, contemplating works of art and architecture, practising sports, and, last, but not least, the enhancing of manual skills; in a world with ever scarcer natural resources, skilled trades—craftsmanship—might become of crucial importance again; Richard Sennett's very important book *The Craftsman—Handwerk* (Sennett 2008) points in this direction. In this context, we may mention that, in a social liberal society in which cultural–ethical values are primary, craftsmen will be badly needed to maintain the immense cultural heritage (buildings, paintings and other) to be found in Europe and elsewhere.

Sennett's book leads to a very important point. At present traditional types of manual work, traditional craftsmanship and traditional farming in the main, but also service activities, are threatened by the invasion of computer software (artificial intelligence and the use of robots, for example). If going on in an unrestricted way these developments are bound to be destructive for modern societies, since they destroy precious *basic* knowledge (*savoir-faire,* know-how) acquired by artisans and traditional farmers over hundreds and thousands of years.

On this issue, the former Fribourg (Switzerland) Professor of Statistics and Operations Research, *Ernst Billeter,* founder of the *first* institute of computer sciences in the world in 1958, told his students around 1965 something like this: "Computer sciences, particularly software applications, must be the object of *post-graduate* studies in all domains. First, our young people must go through a *traditional* apprenticeship or obtain a *traditional* university degree with an emphasis on *Bildung* (culture) leading on to autonomous and comprehensive thinking (*eigenständiges und ganzheitliches Denken*), and only subsequently they ought to become acquainted with computer sciences. This will enable artisans, traditional farmers and holders of a university degree to use computer software in a socially appropriate, that is, a Common Good oriented way."

In our view, Billeter's statement is at present, at the beginning of the twenty-first century, more valid than ever. However, it must be adapted to actually prevailing circumstances. The computer sciences have by now become a fully-fledged scientific system. Given this, post-graduate courses in computer sciences for artisans, political economists, social and political scientists as well as natural and medical scientists ought to provide a general introduction to the computer sciences. This introduction should

enable artisans and general academics to discuss with computer scientists about the introduction of software technologies, artificial intelligence most importantly, in the economic, social and political domain as well as in the field of natural, technical and medical sciences. The question to be answered will always be the same: does a specific software application *promote the Common Good* or not? The answer to this question also implies that *the destruction of "human agency"* is to be avoided and that *the prospering of the social individuals is to be promoted. The decision to introduce a specific software application should always be taken by traditional artisans and academics.*

The absolute necessity to adopt this procedure is confirmed by the growing number of very critical publications on *artificial intelligence (AI)*, Daneke (2020) being an excellent example. To be sure, there are positive aspects, if AI is used to improve *techniques,* enhancing thus the capacity of man: "[For instance,] powerful medical diagnostics (especially using radiological and biopsy data) are already well established and new treatments are also emerging on a regular basis" (Daneke, p. 23). However, when complex social, macroeconomic, political and cultural problems are dealt with, precise scientific methods turn out to be inadequate. Indeed, based on holistic thinking (*ganzheitliches Denken*), *understanding* is required which is of an essentially qualitative nature, metaphysical elements, for example, the vision of man and society enter the analysis; moreover, a search for the most plausible principles of analysis and policy action is required in the social and political sciences and political economy, most importantly; given all this, the conclusions, while being rational, will, as a rule, not be certain, implying that knowledge is probable in a qualitative sense as has been emphasised by Maynard Keynes (on this see O'Donnell (1989), specifically Chapter 2, pp. 28–49). All this defies the systematic use of artificial intelligence and gives way to *common sense,* put to the fore by Keynes and Einstein. Indeed, "[the] divergence from the isomorph with human capabilities will be pretty much moot as machine intelligence speeds away. … Along the way, however, practitioners of machine learning might lose track of some of the vital understandings and enhancements that they originally promised. If they have already lost interest in arriving at a full understanding of the human mind and the meaning of consciousness, they might also inadvertently obliterate many ethical and legal considerations in their haste to monetise 'superintelligence'. … [Surveys among AI pioneers, business leaders and policy-makers have] identified a number of negative

prospects [of AI]. In addition to privacy and imbedded algorithmic biases, *the destruction of 'human agency' was paramount* [our emphasis]. Given macroeconomic mismanagement and political disintegration, individuals in developed nations have never felt such a sense of loss of control over their lives, and most experts agree that widespread use of AI will make matters much worse. Toxic levels of anomie and alienation could have immense societal consequences. While the experts have diagnosed the loss of norms [and] personal efficacy … [a lack] of understanding of the social ecology of AI tends to play down its central, yet sublime theme. On its current institutional trajectory, AI is not so about enhancing human intelligence as it is about insisting that humans become more like machines themselves, and reorder their lives to become more compliant cogs in the bigger machine. Once algorithms know us better than we know ourselves, many an on-going effort to interject legal and ethical concerns might fall by the wayside" (Daneke 2020, pp. 23–24).

It is likely, that the unrestricted application of AI on exclusively money-making lines will lead to reduce or even to ignore environmental problems since the productive use of nature will be considered costless and the notion of *external effects* might definitely become a foreign word. Moreover, it is highly likely that, given an extended use of AI, involuntary and structural unemployment will dramatically increase. Given this, the actually prevailing external development and employment mechanism will lead to even more ferocious competition and the struggle for survival will intensify, with disequilibria and inequalities increasing, bringing about even more unemployment: an additional vicious circle will come into being (Bortis 2019, pp. 197–201). Given all this, consciousness about the absolute necessity of a sustainable economy might gradually fade away to a large extent as is indeed the case with leading politicians of certain countries and the already considerable number of climate sceptics might increase.

However, applying computer technology in a socially appropriate way will evidently increase the Common Good; for example, boring work at the assembly line (pictured in Charlie Chaplin's *Modern Times*) would be carried out by robots. However, creative work should always be done by human beings because computer software of some kind will never be able to recognise what is of fundamental and what is of secondary importance to perceive beauty and goodness, to be aware of problems and to propose solutions adapted to specific circumstances. Moreover, for the artisan, for example, producing a good is not just an economic and technical matter.

Producing a good as perfectly as possible provides an immense satisfaction and greatly contributes to the prospering of producers, through developing their dispositions and applying enhanced capacities acquired through professional practice.

However, producing goods predominantly through software applications leads on straightaway to a more unequal society and worsens the social situation as well as the situation of the social individuals in that boredom and frustration sets in. Economically, the few who develop the software will be well paid, those who apply it will, as a rule, be badly paid and those who own the software will, as a rule, become very rich; in fact, under this perspective, the basic aim of introducing computer software in all domains is not to promote the Common Good, but simply to *make money*. Moreover, as is very likely, involuntary unemployment will increase dramatically, and, as a consequence, the pressure on wages will grow, reducing effective demand which, in turn, will cause involuntary unemployment to increase further: a vicious circle comes into existence. As a consequence, chaotic situations may come into being in which the very rich, including the owners of software, will exercise not only economic and financial power but also political power. These socially destructive effects are bound to increase alienation, individual and social. Given this, *power* will ever more replace *Common Good oriented ethics* as the dominating force in "modern" societies. Here, we should remember that, in a Common Good perspective, the economy and technology should not dominate man (and society) but should stand in the service of man and of society, implying that not everything that is technologically feasible should be applied. The only sphere where all the great nations must be technologically at a top level is defence (military) technology; this is unfortunate, but nothing else than *Bismarckian Realpolitik*.

Finally, in a sustainable economy, small and medium-sized enterprises should dominate. For large enterprises whether privately or publicly owned, environmental regulations may be required. In short, a mixed economy will have to be built up. Materialism-cum-consumerism and profit and moneymaking have to be replaced by a strong impetus to aim at realising the Common Good which has multiple dimensions: social, political, cultural and ethical; however, the Common Good also implies organising production in industry and agriculture such that a harmonious relationship with nature comes into being.

8 Environmental Policies: Employment Projects and the Natural Environment

The second Great Transformation also implies realising Naomi Klein's Green New Deal (Klein 2019), which is also associated to Timothy Wise's call to promote family agriculture (Wise 2019). This transformation will be associated with important structural changes, implying that structural unemployment will be important during the transition period. Given this, permanent full employment policies will be of the utmost importance.

In a small article published in the middle of the Second World War (Keynes 1980/1942), Keynes proposes to increase employment through great projects, for example, "to rebuild London" (p. 264). An eminent architect objected: "Where is the money to come from?" (p. 264). Keynes replied that "we build houses with bricks and mortar, not with money" (p. 265). Indeed, money is only a device to mobilise real resources. And Keynes adds that the architect "was making the very usual confusion between the problem of finance for an individual and the problem for the community as a whole" (p. 266). In fact, "if we keep good employment when peace comes …, even the post-war Budget problem will not be too difficult [also because of low interests in the future]" (p. 266). However, we must be allowed "to devote a large body of labour to capital works which would bring in no immediate return [this means increasing autonomous state or social expenditures (G) in relation (1) above]. Here is a real problem, fundamental but essentially simple, which is important for all of us to try to understand. *The [primary] task is to make sure that there is enough demand to provide employment for everyone*" (Keynes 1980/1942, p. 267, our emphasis). "To make sure of good employment we must have ready an ample programme of re-stocking and of development over a wide field, industrial, engineering, transport and agricultural—not merely building [and we may add, projects aiming at reducing environmental alienation through Naomi Klein's Green New Deal to reduce global warming or to change agricultural methods of production through promoting family farming as conceived by Timothy Wise, to decrease the use of pesticides for instance, are of crucial importance at present]" (p. 267). "Having prepared our blueprints covering the whole field of our requirements … and these can be as ambitious and glorious as the minds of our engineers [in agriculture and industry] and social planners can conceive—those in charge must then concentrate on the vital task of central management, the *pace* at which the programme

is put into operation, neither so slow as to cause unemployment nor too rapid as to cause inflation [or a deficit on current account]. The proportion of the [social] surplus which can be allocated to [reducing environmental alienation] must depend on the order of our preference between different types of project" (Keynes 1980/1942, pp. 267–68). It should be evident that in the present situation projects aimed at reducing environmental alienation, that is, projects aiming at realising a sustainable economy as they are implied, for example, by Klein (2019) and Wise (2019), are of primary importance. Making rivers, lakes and oceans clean again and reforestation are examples.

Keynes' suggestion that finance does not fundamentally matter is confirmed by the internal employment mechanism contained in the supermultiplier equation, that is, relation (1) above. Indeed, in macroeconomic equilibrium ($S = I$), the equation representing the internal output and employment mechanism becomes:

$$Q_i = (1/t)G, \tag{3}$$

where (t) is the tax–income ratio (see also Bortis 2019, p. 197). Government expenditures may increase through realising Keynes' projects just mentioned until full employment is reached. Of course, in the present situation, projects aiming at reducing environmental alienation ought to be given priority. This means moving towards a sustainable economy.

This economic meaning of relation (3) emerges more clearly if written as

$$G = tQ. \tag{3a}$$

This relation means that, in a monetary production economy, government expenditures (G) set the economy into motion if the internal mechanism prevails. A macroeconomic equilibrium is reached once a budget equilibrium is realised. In a way, if there is involuntary unemployment, increasing government expenditures bring about the tax revenues required to keep the state budget in equilibrium; this is analogous to Keynes' proposition that investment will generate the savings required to bring about a macroeconomic equilibrium. And the budget equilibrium will persist if (G) is raised through implementing environmental projects (relation 3a). Given this, finance emerges to be a disequilibrium

phenomenon, required to finance the setting into motion of new projects which would lead to a temporary budget deficit. But this task could be taken on by Central Banks without any problem.

9 Concluding Remarks: Unleashing the "Social" Through Striving After the Common Good

The theoretical and technical aspects of setting up projects in the environmental domain in order to move in the direction of full employment and a sustainable economy are certainly of the greatest importance. Even more important, however, is to create a spirit of enthusiasm which would constitute a powerful engine to move towards a sustainable economy. To create this spirit an unleashing of the "social" through teamwork is required. We can see the "social" at work with football (soccer) teams and appreciate the immense strength the "social" unfolds in order to reach a social aim through participating in a team; every player gives everything for the team, restrained only by the rules of fair-play. As members of a team, the social individuals are complementary; co-operation and co-ordination are required to operate successfully.

Now one may conceive of society as a huge team in which the various parts of society—production of goods, cultural and social activities, the political and legal domain, for instance—are all complementary in view of reaching *one* common aim, that is, striving for the Common Good, which includes a great variety of components, for example, full employment and a sustainable economy, that is, harmony between man (society) and nature, with environmental alienation eliminated. As Keynes has perceived with greatest clarity, full employment is the most important component of the Common Good. Indeed, if politicians and social leaders tell (and show) to all those who feel excluded from society because of prolonged involuntary unemployment, to those living in precarious conditions, to those who live in poverty and even misery, that to reach the Common Good everybody is needed, nobody is to be excluded, then an immense hope and an equally immense enthusiasm will be created. *The entire social climate will change fundamentally*. Certainly, Keynes had this in mind when, in the middle of a terrifying World War, he wrote his short notes on creating full employment through realising big projects for the after-war peace period (Keynes 1980/1942, pp. 264–70). And Keynes also held that full employment could be reached in a socially appropriate way through the internal employment mechanism hinted at above and in

Bortis (1997 and 2019). Finally, Keynes was convinced that the internal employment mechanism could only be applied properly if the balance on current account could be kept in broad equilibrium in the long run and if there was some control of international capital movements (for a very short presentation of this issue, see Bortis 2019); this would require the setting up of a supranational money, the *Bancor*, and of a *Clearing Union* (Keynes 1980, *Activities 1940–1946*). In a way, this volume and the *General Theory* are complementary: In fact, the *General Theory* (Keynes 1973/1936) deals with the internal employment mechanism which operates within an economy and Keynes (1980, *Activities 1940–1946*) states that the economy considered in the *General Theory* need not be a closed and self-sufficient, but that mutually beneficial trade relations are possible to any extent, the only condition being that the balance on current account is in broad equilibrium in the long run (see also Bortis 2019, pp. 198, 205–6). Hence Keynes' overall message remains fully valid at the outset of the twenty-first century, also in relation with the issue of a sustainable economy.

References

Bortis, H. (1997), *Institutions, Behaviour and Economic Theory—A Contribution to Classical—Keynesian Political Economy*, Cambridge University Press, Cambridge, UK.

Bortis, H. (2019), "Principles underlying classical-Keynesian employment and distribution policies", in *A Modern Guide to State Intervention*, edited by Nikolaos Karagiannis and John E. King, Edward Elgar, Cheltenham, UK, and Northampton, MA, USA, pp. 191–209.

Daneke, G.A. (2020), "Machina-economicus or homo-complexicus: Artificial intelligence and the future of economics?", *Real World Economics Review,* issue no. 93, pp. 18–39.

Keynes, J.M. (1973/1936), *The General Theory of Employment, Interest and Money*. CW, vol. VII, Macmillan, London.

Keynes, J.M. (1980/1942), *Employment Policy—How Much Does Finance Matter?* CW, vol. XXVII, *Activities 1940–1946—Shaping the Post-War World—Employment and Commodities*, The Royal Economic Society (Macmillan and Cambridge University Press), London et al., pp. 264–70; orig. *The Listener*, 2 April 1942.

Keynes, J.M. (1980), *Activities 1940-1944, Shaping the Post-War World: The Clearing Union,* CW, vol. XXV, Macmillan and Cambridge University Press, London and Basingstoke.

Klein, N. (2019), *Warum nur ein Green New Deal unseren Planeten retten kann*, Hoffmann und Campe Verlag, Hamburg; American original 2019: *On Fire. The (Burning) Case for a Green New Deal*.

Mini, P. (1991), *Keynes, Bloomsbury and The General Theory*, Macmillan, London.

O'Donnell, R.M. (1989), *Keynes: Philosophy, Economics and Politics—The Philosophical Foundations of Keynes's Thought and their Influence on his Economics and Politics*, Macmillan , London.

Sennett, R. (2008), *Handwerk*, Berlin Verlag GmbH, Berlin; American original 2008: *The Craftsman*, Yale University Press, New Haven and London.

Wise, T. (2019), *Eating Tomorrow: Agribusiness, Family Farmers, and the Battle for the Future of Food*, The New Press, New York City.