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John R. Hicks (1904–1989)

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1 Introduction

John R. Hicks taught at the London School of Economics (LSE) from 1926 to 1935, first as an Assistant Lecturer, whose contract was regularly extended, with Hicks finally becoming a Lecturer. He was born on 8 April 1904 at Warwick where his father Edward was a journalist at a local newspaper. From 1917 to 1922, Hicks was educated at the noted British public school, Clifton College, where he had won a scholarship in mathematics. In 1922, Hicks went up to Balliol College, Oxford, where in his second year he switched from mathematics to the new programme in Philosophy, Politics and Economics (PPE), 'which was perhaps better devised for the training of politicians than of academics' (Hicks 1979a: 195). After getting his BA, he secured a one-year scholarship for postgraduate research in which he focused on economics where he could make use of his mathematical skills. Hicks consulted Graham Wallas and Edwin Cannan at LSE but ended up writing his thesis on 'Skilled and Unskilled Wages in the Building and Engineering Trades' under the supervision of G.D.H. Cole at Magdalen College, Oxford: 'Economics at Oxford, was very "social"; so they started me working on labour problems' (ibid.). Following his father, in 1926 Hicks worked for a

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time as a junior reporter at the *Manchester Guardian* before moving to LSE at the beginning of the new academic year.

It was LSE that made Hicks an economist and he did some of his best work there: 'Those nine years at LSE fall very sharply, from my point of view, into two parts. They are separated, in 1929, by the arrival of Lionel Robbins as head of department. In the three years before that time I had been working mainly by myself … After 1929 I was a member of a group, the group which Robbins built up around him' (ibid.: 196).[1] Until his retirement, economics at LSE in the 1920s was dominated by Cannan, who acted as a counterpart to Alfred Marshall at Cambridge. Allyn Young (1876–1929), who succeeded Cannan in the Chair of Political Economy, came over from Harvard in 1927 but suddenly died after only eighteen months at LSE. In this short period, he had a much deeper influence on Nicholas Kaldor than on Hicks. Robbins, who was a Lecturer at LSE when Hicks arrived but soon after left for New College, Oxford, was only 30-years-old when he returned as Professor in 1929. Robbins struggled to establish both himself and economics at the School. However, his influential *Essay on the Nature and Significance of Economic Science* (Robbins 1932) transformed the teaching of economics away from Cannan's 'commonsense approach' into a more analytical approach, in turn creating a distinct research programme as outlined in Robbins's January 1930 Inaugural Lecture 'The Present Position of Economic Science' in which he referred to the contemporary boom in economic theory and demanded a re-examination of fundamental theoretical questions. This marked a clear watershed compared to Cannan who in his 1933 Presidential Address to the Royal Economic Society was still claiming 'The Need for Simpler Economics', arguing against finding contentment in neat equations and elegant equilibria in the higher branches of theory.

Whereas Cannan and Arnold Plant, the teacher of the young Ronald Coase in industrial organisation, were applied economists with a strong institutional interest, Robbins, Hayek and Hicks played 'a leading role in' bringing 'into being, for good or ill, the modern age in economics' (Coase 1982: 34). However, despite the transition from a common sense to a more professionalised economics, free-market views continued to prevail at the Department of Economics as Cannan had guided it away from the roots of LSE in Fabian socialism.[2] So the young Hicks 'became a free market man' (Hicks 1979a: 197) before he left LSE in 1928/1929 to spend almost a year

[1] See also Chapter 1 in Hicks (1982).

[2] 'It was from Cannan that the LSE "free market" tradition descended' (Hicks 1982: 4).

teaching at the University of Witwatersrand in Johannesburg. With his LSE training, he quickly recognised that the trade unions in South Africa were functioning as monopolists, reserving skilled jobs for white labour.

Continuity also prevailed in the dispute with Cambridge which intensified in the early 1930s, this time with Robbins (and later Hayek) on the LSE side and Keynes (and later Sraffa) on the Cambridge side.[3] The clash between Robbins and Keynes became conspicuous when at the meetings of the Economic Advisory Council in September-October 1930 Robbins, armed with his laissez-faire convictions, fundamentally opposed Keynes's turning away from free trade at the peak of the Great Depression, Keynes's argument against money wage cuts as a stimulus to output and employment, and particularly Keynes's 'favourite remedy—the one to which I attach much the greatest importance' (Keynes 1981: 126), namely government investment or public works. In his *Autobiography*, Robbins later regretted his violent disagreement with Keynes and considered it as 'the greatest mistake of my professional career' (Robbins 1971: 154). While he denied that he had actively advocated deflation in the Depression, he conceded that the Keynesian remedies were a proper medicine against the slump rather than a reliance on the self-healing forces of the market:

> The trouble was intellectual. I had become the slave of intellectual constructions which, if not intrinsically invalid as regards logical consistency, were inappropriate to the total situation which had then developed and which therefore misled my judgement. I realized that these constructions led to conclusions which were highly unpalatable as regards practical action. But I was convinced that they were valid and that therefore it was my duty to base recommendations as regards policy upon them (Robbins 1971: 153–154).

Robbins's statement points to the fact that he had derived his economic policy conclusions from the Austrian theory of the business cycle as developed by Mises and elaborated by Hayek which in its emphasis on monetary overinvestment as the decisive cause of the slump was diametrically opposed to Keynes's explanation. Thus, the fierce controversies that took place in 1930–1932 were not only due to methodological or political differences but also and primarily due to differences in the underlying *theories* of the causes of the crisis. In the early 1930s, among economists inside

[3]For more details, see, for example Winch (1969), Robbins (1971), Coats (1982), McCormick (1992), Skidelsky (1992), and Kurz (2000).

and outside England, LSE became increasingly considered as 'a suburb of Vienna' (Plant 1974: 170).

However, this special suburb was neither provincial nor parochial but in fact very cosmopolitan. The Economics Department at LSE in the inter-war period acted as a centre of gravity for many bright students from all over the world. Of course, it helped that the School was located in the capital of the commonwealth, but the focus on all areas of the social sciences and a tolerant atmosphere,[4] despite many fierce controversies as, for example, on socialist calculation, and numerous seminars and lectures by leading foreign economists, also contributed to the international reputation of LSE.[5] It was a time when most classics in economics that had been written in foreign languages were not yet translated into English nor was English already the lingua franca as it developed in the post-war period.

The young Hicks benefited from his excellent language skills and his reading knowledge of French, German and Italian which allowed him to read Walras and Pareto but also Wicksell and Cassel in the original. During his PPE studies at Oxford, Hicks had to do a translation into French. This inspired him to read French literature, with Voltaire becoming one of his favourites following a suggestion from his maternal aunt Winifred Stephens.[6] Hicks shared a great interest in history and literature with his two sisters, the elder Phyllis and the younger Mary. His favourite author was Dante to whom he had been introduced by his mother Dorothy Stephens. Hicks had started to learn Latin at the age of seven which was a great help in learning Italian. Italy later became the favourite travel destination for Hicks and his wife.[7] After the Second World War, Hicks at Oxford, together with Piero Sraffa at Cambridge and, somewhat later, Franco Modigliani at MIT, became one of the centres of attraction for promising young Italian economists to acquire a PhD.

'I managed enough German to read the Austrians, and also Wicksell and Myrdal (at that time only available to me in German). I have never learned Swedish, but…I have been deeply influenced by Swedish economics'

[4]"There was indeed a substratum of "liberal" political principles which our socialists and our free market men had in common' (Hicks 1979a: 198).

[5]In his centennial history of LSE, Ralf Dahrendorf (1995: 223), following Harry Johnson (1972: 22), could rightly state: 'The internationalization of LSE was, and is, one of its greatest strengths'.

[6]For further details, see Chapter 1 of Hamouda (1993). For shorter surveys on the life and work of Hicks, see Bliss (1987) or Hagemann (2016). For critical assessments of various aspects of Hicks's works, see the collection edited by Wood and Woods (1989).

[7]'We now feel that a year that does not contain a visit to Italy is a year in which there is something missing. And now, when we come to Italy, we come to see our friends' (Hicks 1979a: 204).

(Hicks 1979a: 198). One leading Swedish economist, who became increasingly important for Hicks's own work, is missing from the above: Erik Lindahl. Lindahl (1891–1960), who had started his remarkable scientific career in public finance with an important treatise on 'just taxation', was among the early distinguished visitors at LSE in the Robbins period where he came into closer personal contact with Hicks and Ursula Kathleen Webb (1896–1985), herself a renowned economist in public finance and development economics, with whom he became a lifelong close friend. Ursula was of greatest help for the English edition of Lindahl's masterpiece, *Studies in the Theory of Money and Capital* (Lindahl 1939); Lindahl's contributions on the methods of dynamic analysis and his notion of temporary equilibrium had a decisive influence on the work of John. Hicks married Ursula on 17 December 1935 in London, four months after his departure for Cambridge.[8] For the next fifty years, she became his closest intellectual companion.

Hicks stayed in Cambridge for three years as a University Lecturer in Economics and a Fellow of Gonville and Caius College. In 1938, he moved to the University of Manchester as Stanley Jevons Professor of Political Economy. As the only professor available at Manchester during the war, Hicks had to do mainly elementary teaching, which was not his area of comparative advantage. His former LSE student Ronald Coase in retrospect pronounced that 'Hicks was unsuccessful as an undergraduate teacher', failing 'to inspire his undergraduate audience' (Coase 1982: 32). Hicks's aversion to undergraduate teaching has been confirmed by Hans Singer who as a young lecturer worked closely with Hicks at Manchester in the war years. In an interview with Keith Tribe, Singer remembered that 'Very often Hicks lectured above the heads of the students' (Singer in Tribe 1997: 69). However, Hicks's reputation as a teacher underwent a change when from 1931 onwards he 'began to give lectures on advanced economic theory [at LSE] and his power as a theorist [became] immediately apparent' (Coase 1982: 32).[9]

Nevertheless, it was at Manchester that Hicks did his main work on welfare economics.[10] He found the Manchester period unexciting because of the elementary teaching he had to do, although he 'took advantage of this to write my *Social Framework*' (Hicks 1979a: 201), one of the first

[8]For the letters between Hicks and Webb during September–December 1935, see Marcuzzo et al. (2006).

[9]See Coase (1982: 32, fn. 9) for the list of topics covered by Hicks in his advanced courses.

[10]See Hicks (1981: Part I) and for a modern assessment, see Chipman (1994).

textbooks on national income accounting (Hicks 1942) which ran into the fourth and final edition in 1969 and was translated into many foreign languages.

A greater focus on research was a key stimulus for Hicks to return to Oxford in 1946, first as a Research Fellow at Nuffield College and from 1952 to 1965 as Drummond Professor of Political Economy. After taking an early retirement from his Chair and thereby from teaching and administrative duties, Hicks remained at Oxford as a Research Fellow of All Souls College until 1971. This was a very productive period for Hicks who at the end of 1972 became the first British economist to be awarded the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. Hicks won the prize jointly with Kenneth Arrow 'for their pioneering contributions to general economic equilibrium theory and welfare theory', although Hicks himself was not particularly happy about it since he thought that he had outgrown his earlier work. He had first met Arrow, and Paul Samuelson, on his visit to the USA in late summer and fall of 1946 when he was surprised to find how deeply their work had been influenced by his *Value and Capital* (Hicks 1939a): 'But I am afraid I disappointed them; and have continued to disappoint them. Their achievements have been great; but they are not in my line. I have felt little sympathy with the theory for theory's sake' (Hicks 1979a: 201–202). Hicks insisted that he had already pointed out at the end of his Preface to *Value and Capital* 'that the place of economic theory is to be the servant of applied economics' (Hicks 1939a: iii). Thus, Hicks was never likely to fall victim to Schumpeter's 'Ricardian vice,[11] when forty years later he stated 'that I have also been aware that theory gives one no right to pronounce on practical problems unless one has been through the labour, so often the formidable labour, of mastering the relevant facts' (Hicks 1979a: 202).

Hicks was President of the Royal Economic Society from 1960 to 1962 and Knighted by Queen Elizabeth II in 1964. He had already become a Fellow of the British Academy in 1942, a foreign member of the Royal Swedish Academy in 1948, of the Italian Accademia dei Lincei in 1952, and of the American Academy in 1958. Hicks, who received an honorary doctoral degree from more than a dozen universities, died at his home in Blockley, Gloucestershire, which he had inherited from his Aunt Winifred, on 20 May 1989.

[11]See Kurz (2017) for a recent discussion.

2 Hicks the Labour Economist

Hicks's early work as a labour economist culminated in *The Theory of Wages* (Hicks 1932), which 'is in its main lines thoroughly "neo-classical"' (Hicks 1979a: 197). Despite some shortcomings, later openly conceded by the author in his long commentary on his 'juvenile opus' to the second edition of *The Theory of Wages*, the book, which was founded upon marginal productivity theory and influenced by the work of Wicksell, introduced a number of innovative concepts. This holds in particular for the famous Chapter 6 on 'Distribution and Economic Progress' in which Hicks presents the new concepts of the 'elasticity of substitution' and 'Hicks-neutral', 'labour-saving' and 'capital-saving' inventions to discuss how the relative shares of labour and capital (under the assumption of constant returns to scale) will respond to changes in the capital–labour ratio as a consequence of changes in the relative 'prices' of the factors of production, i.e. the ratio between the wage rate and the rate of profits, and changes in the methods of production due to technical progress.[12]

In Section III of Chapter 6 'Inventions must Increase the Social Dividend', Hicks joins forces with Kaldor (1932) and Wicksell's earlier critique of Ricardo's analysis of the machinery problem, in particular, Ricardo's conclusion as to a possible diminution of the gross produce, which Wicksell and Kaldor considered as wrong: 'On the contrary, the machinery will always have the effect of raising the gross produce of the country to its greatest possible amount, and in so far it will provide the *means* for bettering the economic conditions of the working men as well as of their employers' (Wicksell quoted in Jonung 1981: 201; italics in original). In the same fashion, Hicks argued in 1932:

> Under the assumption of competition, it inevitably follows that an invention can only be profitably adopted if its ultimate effect is to increase the National Dividend. For if it is to raise the profits of the entrepreneur who adopts it, it must lower his costs of production—that is to say, it must enable him to get the same product with a smaller amount of resources. On balance, therefore, resources are set free by the invention; and they can be used, either to increase the supply of the commodity in whose production the invention is used (if the demand for it is elastic), or to increase the supply of other commodities (if the demand for the first is inelastic). In either

[12]For retrospective views on Hicks's *Theory of Wages*, see Rothschild (1994) and Solow (2008).

> case, the total Dividend must be increased, as soon as the liberated resources can be effectively transferred to new uses (Hicks 1932: 121).

In the late 1980s, Samuelson set out to vindicate Ricardo's propositions on machinery,[13] in particular the analytical question as to whether a viable invention could reduce aggregate output, coming to the conclusion that all those economists who dismissed Ricardo's propositions were erroneous. 'Ricardo is right. Wicksell (and Kaldor and …) are wrong' (Samuelson 1989: 52). Samuelson added that 'J.R. Hicks (1969) is perhaps an exception but his discussion does not address Wicksell's query about the invention's effect on total output' (ibid.: 48, fn. 2). However, it should be noted that Samuelson himself overlooked Hicks's analysis of the problem in Chapter 6 of *Theory of Wages* in which at the end of the quoted passage above Hicks explicitly referred to the section entitled 'The Influence of Technical Inventions on Rent and Wages' of Wicksell's *Lectures on Political Economy*[14] and Kaldor (1932) for a fuller elaboration of the argument.

Thus, although Hicks shared Wicksell's and Kaldor's opinion that Ricardo's view that the introduction of new machinery can result in a reduction in gross income was erroneous, there is not necessarily a contradiction with the views of Hicks (1969, 1973a). The last sentence of the quoted passage already indicated that this increase will take place under the assumption that employment is maintained, i.e. a successful compensation process has taken place. This conclusion in no way contradicts Ricardo's one of a diminution of gross income in his numerical example of an embryonic form of traverse analysis in which the introduction of new machinery causes a decline in the demand for labour and the output of consumption goods, but, due to Ricardo's numerical example only extending to four periods, the long-run time paths of employment and output are left unresolved: 'Ricardo's theory is a theory of the working of the individual impulse' (Hicks 1983a: 38). Since it is a characteristic feature of Ricardo's example that it abstracts from capital accumulation, his approach contains a kind of *capital shortage* theory of temporary technological unemployment. Nevertheless, Ricardo deserves merit for pointing out that a process of additional saving and

[13]See Ricardo (1821 [1951]: Chapter 31).

[14]Hicks (1932: 121, fn. 2) refers to the German edition of Wicksell's *Lectures* (Wicksell 1913: 195–207) which at that time were not yet translated into English. Interestingly, it was Robbins who wrote an insightful Introduction to the English translation in which he rightly stated, 'that Wicksell…must be looked upon as one of the founders of the marginal productivity theory' (Robbins in Wicksell 1934: xiii) and points out that '[t]he final version of the text owes much to Dr. J.R. Hicks, who generously gave much time to the checking and correction of the manuscript' (ibid.: xix).

investing is necessary to assure the compensation of displaced workers. Hicks's emphasis in 1932 was a different one, namely on the functional distribution of income. Thus, he emphasised: 'In every case, however, a labour-saving invention will diminish the relative share of labour' (Hicks 1932: 122).[15]

3 Hicks and Hayek

During the 1930s, the research seminars held by Robbins and Hayek were the focus of intense theoretical debates at LSE.[16] Hicks participated in both seminars until his move to Cambridge in 1935. Hayek gave his famous *Prices and Production* lectures in February 1931 and was appointed Professor to the revived Tooke Chair of Economic Science and Statistics the following autumn. In fact, the second part of Hicks's time at LSE itself has to be divided into two sub-periods. 'There is a pre-Hayek stage which can be identified' to which 'my own *Theory of Wages* belongs' (Hicks 1982: 3). Before Hayek's arrival, Hicks had paid little attention to monetary economics. Furthermore, it was Hayek who made Hicks think of the production process as a process in time, a key Austrian element dating back to Böhm-Bawerk's capital theory, which was emphasised in Hayek's business cycle theory.

The economics of Hayek, as with the economics of Keynes, became a lifelong challenge for Hicks in his efforts at developing his own theory.[17] In particular, Hayek had introduced him to the work of Wicksell. However, 'Wicksell plus Keynes said one thing, Wicksell plus Hayek said quite another' (Hicks 1967: 204). 'But I did not begin from Keynes; I began from Pareto, and Hayek' (Hicks 1979a: 199). Hicks had always been sceptical about Hayek's claim that the economy would be in equilibrium if there were no monetary disturbances. This scepticism was already manifested in Hicks's early essay on 'Equilibrium and the Trade Cycle' (Hicks 1933 [1980]) which essentially is the result of Hicks's grappling with Hayek's *Prices and Production* and Hayek's 1928 concept of intertemporal equilibrium (Hayek 1928 [1984]). Here, we find Hicks arguing against Hayek's statement, that a change in the effective volume of monetary circulation is to be regarded

[15]For a more detailed treatment of Wicksell's analysis of Ricardo's machinery problem and Hicks's view on the subject, see Hagemann (2008).

[16]'Hayek's presence added great strength to the magnetic attraction of Robbins's seminar … In the 1930s, J.R. Hicks was one of the outstanding regular attenders at the Robbins-Hayek seminar' (Plant 1974: 170–172).

[17]See Hicks (1967: 203–215) and Hagemann (1998).

as an independent cause of disequilibrium. I cannot accept this in its literal sense, though I am prepared to agree that in a world of imperfect foresight monetary changes are very likely to lead to acute disequilibrium (Hicks 1933 [1980]: 526, fn. 8).

Hicks realised that to analyse money one must consider uncertainty and expectations. He endured a long struggle to arrive at an inherently dynamic version of the economy in which agents' present decisions represent attempts to cope with an uncertain future in view of monetary and real constraints imposed upon them by past actions. But although Hicks made important contributions to monetary theory over a period of almost six decades, he never ceased emphasising 'the *real* (non-monetary) character of the cyclical process' (Hicks 1950: 136; italics in original). Indeed, it had been one of the main objectives of his *Contribution to the Theory of the Trade Cycle* 'to show that the main features of the cycle can be adequately explained in real terms' (ibid.). Hicks remained a lifelong critic and modifier of Hayek's original business cycle theory. Hayek's theory essentially is based on monetary overinvestment. But while monetary factors cause the cycle, real phenomena constitute it. Although cyclical fluctuations are caused by monetary factors, in particular excessive credit creation, it is the distortion of the structure of relative prices and their impact on the real structure of production which is most important. Hicks, by contrast, always treated the cycle as fundamentally a real phenomenon reflecting technological changes and the fluctuations in investment that accompany them. Monetary disorders may be superimposed upon real disorders, but they are of only secondary importance.[18]

The Hicks–Hayek debate went on for many decades after the LSE seminars. Thus, when Hicks published his 'Hayek Story' (Hicks 1967: Chapter 12), Hayek (1969) reacted with his 'Three Elucidations of the Ricardo Effect', i.e. the effect of a shortage of consumption goods on the production of investment goods, which plays a key role in the explanation of the upper turning point in Hayek's business cycle theory. Hayek had already referred to 'Ricardo's doctrine of the conversion of circulating into fixed capital' in his *Prices and Production* (Hayek 1931 [1935]: 101), but began

[18]As such, Hicks was more in agreement with Wicksell who essentially held a real theory of the business cycle. See Boianovsky (1995), Leijonhufvud (1997), and Laidler (1999). For a more detailed comparison of the different views of Hicks and Hayek concerning the major cause of cyclical fluctuations, see Hagemann (1998).

to refer to the 'Ricardo effect' only when his focus shifted from money and interest to capital and profit (Hayek 1939: Chapter 1, 1942).[19]

Hicks always acknowledged that it was one of Hayek's major contributions to have shown the importance of the temporal structure of production processes for cyclical fluctuations. The use of Böhm-Bawerk's theory of capital and Hayek's emphasis on vertical maladjustments in the structure of production was unfamiliar in England and created a key obstacle to an easy reception of Hayek's theory: '*Prices and Production* was in English, but it was not English economics' (Hicks 1967: 204). Although Hicks (1973a) took in his 'neo-Austrian theory' of *Capital and Time* from the Austrians the idea that production is a process in time with strong intertemporal complementarities and took over from Hayek the idea that the impact of an impulse on the real structure of production is decisive, unlike Hayek, Hicks kept emphasising the priority of real factors, i.e. technological change, over monetary factors as the key underlying cause of cyclical fluctuations:

> Where…I do not go along with him [Hayek] is in the view that the disturbances in question have a monetary origin. He had not emancipated himself from the delusion…that with money removed "in a state of barter" everything would somehow fit. One of my objects in writing this book has been to kill that delusion. It could only arise because the theory of the barter economy had been insufficiently worked out. There has been no money in my model; yet it had plenty of adjustment difficulties. It is not true that by getting rid of money, one is automatically in "equilibrium"—whether that equilibrium is conceived of as a stationary state (Wicksell), a perfect foresight economy (Hayek) or any kind of steady state. Monetary disorders may indeed be superimposed upon other disorders; but the other disorders are more fundamental (ibid.: 133–134).

'One must introduce uncertainty, before one can introduce money' (Hicks 1982: 7). Hicks had not focused on monetary economics before Hayek's arrival at LSE. This did not only change but, dating from his 1935 'A Suggestion for Simplifying the Theory of Money', a landmark in the evolution of a theory of liquidity preference, which 'drew Money into the orbit of marginalist calculation' (Leijonhufvud 1984: 27). Hicks had established himself as an influential monetary economist. He continued to make contributions to this field through his *Critical Essays in Monetary Theory* (Hicks 1967) and 'The Foundations of Monetary Theory'

[19]For an examination of the use and role of Ricardo effect(s) in Hayek's business cycle theory, see Hagemann and Trautwein (1998).

(Hicks 1982: Chapter 19) to his last book *A Market Theory of Money* (Hicks 1989) in which Hicks treated money as an integral part of the institutional framework and elaborated a neo-Wicksellian approach for a modern 'overdraft' economy in which interest rates and their control play a central role.

From the beginning, Hicks felt uneasy about the 'terribly unrealistic *perfect foresight*' concept of equilibrium (Hicks 1982: 7; italics in original). In 'Equilibrium and the Trade Cycle', which was a response to Hayek and was first published in German in the Vienna-based *Zeitschrift für Nationalökonomie*, Hicks adopted an early formulation of an Arrow–Debreu–McKenzie concept of equilibrium for which he rightly pointed out that '[t]he condition for equilibrium…is Perfect Foresight. Disequilibrium is the Disappointment of Expectations' (Hicks 1933 [1980]: 526). 'Thus we cannot escape the conclusion that if the future course of economic data (and the corresponding future course of prices) were exactly foreseen, there would be no demand to hold money as money' (ibid.: 528). For Hicks, two consequences arose: imperfect foresight causes economic fluctuations, and monetary theory falls outside equilibrium theory.

With increasing age, Hicks emphasised more and more the relationship between economic theory and economic history as of fundamental methodological significance. This becomes very clear in Essay 9, 'Monetary Theory and History—An Attempt at Perspective', where Hicks (1967: 156) points out that a larger part of the best writings in monetary economics is topical, i.e. linked to special historical circumstances and institutional settings: 'Monetary theory is less abstract than most economic theory; it cannot avoid a relation to reality, which in other economic theory is sometimes missing'.[20]

History was Hicks's favourite subject at school and occupied a larger part of his library.[21] He had not only a deep sense of the historical origins and the time-related genesis and content of economic models, thereby also identifying their intrinsic limits, but also made ample use of the materials of economic history and the history of economic thought as necessary tools in the process of economic theorising.[22]

[20]For a more detailed assessment of Hicks's work on monetary economics, see Leijonhufvud (1984), the contribution by Laidler in Hagemann and Hamouda (1994), Fontana (2004) and the essays in Part III of Scazzieri et al. (2008).

[21]See Hamouda (1993: Chapter 10).

[22]For an example of the former, see *A Theory of Economic History* (Hicks 1969), in which Hicks worked out the origins and evolution of the market mechanism, and for the latter, see Part I, 'Classics and Post-Classics', in Hicks (1983a).

4 Hicks and Keynes

Hicks's 'Suggestion for Simplifying the Theory of Money' (Hicks 1935), of which Hicks had 'a much higher opinion…than of any other of' his 'early papers' (Hicks 1982: 9), brought him into closer contact with Keynes who in 1935 had already gone most of the way on his journey from the *Treatise on Money* to the *General Theory*, in which his new concept of liquidity preference played an essential role. Hicks (1977: 134) later remembered in 'Recollections and Documents', 'the story of my personal "Keynesian Revolution"', that it had been the first time in Keynes's response to the proofs of his 'Simplifying' paper that he had heard of liquidity preference (see ibid.: 142). In the 1970s, Hicks came to appreciate the *Treatise* as 'more genuinely dynamic, and therefore more human' than the *General Theory* which he considered 'a brilliant squeezing of dynamic economics into static habits of thought' (ibid.: 148). He now considered Keynes's theory of liquidity preference as 'misnamed. It makes the demand for money depend on Uncertainty, not Liquidity' (ibid.: 147).

No wonder that many economists have pointed out similarities between Keynes's views on liquidity in the *Treatise* and Hicks's ideas in his 'Simplifying' article. The two authors originally may have felt the similarity themselves, but in his many writings on 'Liquidity', starting with his Presidential Address to the Royal Economic Society in 1962, Hicks increasingly emphasised their differences and pointed out that 'its ['Simplifying'] message was a Declaration of Independence, not only from the "free market" school from which I was expressly liberating myself, but also from what came to pass as Keynesian economics' (Hicks 1982: 10). The latter he now found more mechanical than he or Keynes had intended. However, Hicks was also not very happy about what was to become of his own approach in the modern mainstream where his 'Simplifying' paper has laid the foundation for a choice-theoretical money demand function or theory of portfolio selection where choice between different assets is a choice between probability distributions. This is due to the fact that he laid the microfoundations of monetary theory just after his joint work with Roy Allen on consumer demand. Hicks's attempt to marginalise the theory of money in his 'Simplifying' paper is surely not what Keynes had in mind.

On the other hand, there are some parallels, so when Hicks points out 'that the use of money is enough in itself to make a free-market system potentially unstable; and that the higher the degree of development, or sophistication, that it exhibits the greater does the danger of instability

become' (Hicks 1982: 9). Hicks considered monetary institutions, in particular central banks, to play an important though imperfect role in safeguarding against instability, while acknowledging that such bodies could themselves become unstable. Furthermore, Hicks like Keynes emphasised the important role of psychological factors which exclude a reliance on simple mechanical remedies. From the very beginning in 'Simplifying' until his final *A Market Theory of Money*, Hicks's emphasis on balance sheet equilibria was a common theme in his writings on monetary economics. Focusing on the assets side and rather neglecting the liabilities side, Hicks argues that balance sheet equilibrium is governed by expectations of the yield of investments and risks, i.e. 'determined by subjective factors like anticipations, instead of objective factors like prices', which 'means that this purely theoretical study of money can never hope to reach results so tangible and precise as those which value theory in its more limited field can hope to attain … It needs judgment and knowledge of business psychology much more than sustained logical reasoning' (Hicks 1935: 13).

'One is driven back, in the end…from Keynes to Wicksell', Hicks (1982: 237) states at the end of his Prefatory Note to 'The Foundations of Monetary Theory', which is 'meant to represent the substance of my later work on monetary theory' (ibid.: 236). This later work concludes with *A Market Theory of Money* in which Hicks reconsiders modern institutional developments in the money and financial markets. According to Hicks, the modern financial system had entered into a complex form of a Wicksellian credit economy in which overdraft facilities had become an important characteristic: 'If the firm knows that it can get funds when it needs them, it need keep no liquid assets as reserves', Hicks (1974: 50) had already pointed out in *The Crisis in Keynesian Economics*. It had been the pressure of high short-run interest rates in the 1970s and 1980s which gave a strong incentive for economising in money holding and replacing reserve assets, i.e. non-interest-bearing money, with 'an overdraft system, on which interest is *saved* on the part of the overdraft that is *not* used' (Hicks 1982: 265; italics in original). In the Hicksian credit economy, in which the Wicksellian model is extended to include financial intermediaries who have better information on sound investments, the rate of interest is the key instrument of monetary control. Closer cooperation between specialised financial intermediaries and the central bank can reduce instability in case of exogenous shocks. The establishment of well-functioning money and financial markets with the central bank at the centre acting as lender of last resort can contribute to a reduction in short-run liquidity risks faced by individual banks. In such an overdraft system, it is the interest rate set by the central bank

which rules the roost. Writing in the tradition of Thornton and Bagehot, Hicks considers this deposit rate as the decisive controlling factor in monetary policy and as a means to help protect against financial crises. He quotes Bagehot with approval: 'The best palliative to a panic is a confidence in the adequate amount of the bank reserve' (Bagehot quoted in Hicks 1989: 97, fn. 4). Hicks's focus is on interest rates, not the quantity of money. As such, he directly opposed the British Currency School and its emphasis on the exogenous regulation of the quantity of money but also the Keynesian wing of the Credit School (a term Hicks preferred to the British Banking School (see Hicks 1967: viii)), insofar as their representatives backed quantitative easing or 'monetary socialism'. For Hicks, the Keynes of the *General Theory* was '*too* monetarist' (Hicks 1982: 264; italics in original). Therefore, one has to go back to Wicksell and to the 'Keynes of the *Treatise on Money*, who was by no means a "modern Keynesian"' (Hicks 1967: viii). Hicks did not reject the liquidity preference theory as explicitly as Leijonhufvud had done in his 'Wicksell Connection', where he posits a 'Z-Theory' as the *Treatise* plus quantity adjustment or the *General Theory* minus liquidity preference (see Leijonhufvud 1981: 164–169). Saying this, Hicks sometimes gives the impression of reconciling liquidity preference with the loanable funds theory (see, for example, Hicks 1986). Indeed, it would not be out of place to call Hicks the 'John Stuart Mill of Keynesian Economics', a label which Hicks would probably have considered a compliment since he had a strong preference for Mill (see Hicks 1983a: Chapter 5). However, there exist major problems in trying to integrate Keynes's liquidity preference theory with a (neo-)Wicksellian model in which the credit supply is elastic and the money supply is endogenous (see Chick 1991).

IS-LM (after Hansen's modification of Hicks's original SI-LL terminology) are the four letters students of several generations have associated with Hicks after their first basic course in macroeconomics. The IS-LM schedule specifies the combinations of interest rates and levels of national income which ensure equilibrium in the goods and money markets. The point of intersection determines simultaneous equilibrium in both markets. However, the labour market is left out of IS-LM. So, is Keynesian unemployment compatible with a Walrasian interpretation, when in Walras all markets are cleared?

Despite the great influence of his interpretation of Keynes's *General Theory* through IS-LM and the ensuing development of modern macroeconomic theory—as well as students being trained in the effects of monetary and fiscal policies on the basis of this standard macroeconomic model—Hicks was never convinced that the whole Keynesian theory could be properly represented

within the model he was responsible for establishing in his 'Mr. Keynes and the "Classics"; A Suggested Interpretation' (Hicks 1937).

This article, which Hicks first presented to the meeting of the Econometric Society at Oxford in September 1936, was not the first but the second interpretation of the *General Theory* by Hicks, after he had written his review article 'Mr. Keynes's Theory of Employment' for the *Economic Journal* of which Keynes was editor: 'I was asked because it was hoped that I should be a sympathetic but independent critic; and such, at that date, were not easy to find' (Hicks 1974: 6). Nevertheless, it was his second article, which captured those parts of Keynes's theory most accessible to formalisation that exerted the major influence: 'Keynes's own version of Keynesian economics is by no means easy to determine. I do not pretend that I can determine it; yet on these matters I think I have something to say' (ibid.: 5) Hicks stated in the Introduction to his *The Crisis in Keynesian Economics*.

From the mid-1960s onwards, Hicks came back time and again to a reinterpretation of Keynesian economics (Hicks 1974, 1977: Chapter VI, 1980), and he increasingly drifted away from the 'neoclassical synthesis' (Samuelson) mainstream he himself had helped to establish in his younger years and which was strongly disliked by Keynes's disciples such as Richard Kahn and Joan Robinson who rightly argued that IS-LM did not capture the uncertainty that characterises a monetary economy. Keynes also never completely accepted Hicks's interpretation, as Hicks may have felt at the time,[23] but neither did he explicitly reject the IS-LM approach. At the beginning of his friendly letter to Hicks dated 31 March 1937, Keynes stated: 'I found it very interesting and really have next to nothing to say by way to criticism' (Keynes 1973: 80–81). Kahn perceived that 'Keynes' rebuke was too mild' (Kahn 1984: 160) but pointed out that Keynes in his reaction objected that Hicks overemphasised current income in the investment function whereas it is expected income over the investment period which is the relevant variable which he tried to grapple with in his notion of the marginal efficiency of capital. Agreeing with Robinson, Kahn deplored 'that the elementary teaching of Keynesian economics has been the victim of IS-LM and related diagrams and algebra. It is tragic that Keynes made no public protest when they began to appear', but also acknowledged Hicks's increasing distance from what became of his own construction of Keynesian economics as 'comforting to read' (ibid.: 160–161.)

[23]'I think I may conclude from this letter (as I have always done) that Keynes accepted the IS-LM diagram as a fair statement of his position—of the nucleus, that is, of his position' (Hicks 1973b: 10).

Hicks himself later pointed out that the IS-LM diagram 'is now much less popular with me than I think it still is with many other people. It reduces the *General Theory* to equilibrium economics; it is not really *in* time' (Hicks 1982: 289–290; italics in original). Among the three parts he considered as the essential building blocks of Keynes's theory, the marginal efficiency of capital and liquidity preference is unquestionably *in* time, whereas the multiplier theory is not. In his widely read 1980 article, '*IS-LM*: An Explanation', Hicks accordingly emphasised the hybrid character of his own construction that the IS curve is a flow relation, whereas the LM curve is a stock relation referring to a point in time. The IS-LM analysis therefore could only survive 'in application to a particular kind of causal analysis, where the use of equilibrium methods…is not inappropriate' (ibid.: 152). Leijonhufvud (1983) came to the conclusion that the hybrid character of the IS-LM apparatus, which ignores the sequence of events within a period, is due to the fact that it combines a Walrasian element of a simultaneous equilibrium on interdependent markets with Marshallian microfoundations. The problem was that Marshallian economics was *in* time, whereas theory in the Walrasian tradition was not, as Hicks only later came to recognise.

Hicks, unlike Keynes, did not have a high public profile. He was convinced that the third quarter of the twentieth century should be considered 'as the age of Keynes' (Hicks 1974: 1) which mainly began, interestingly, after the end of the Second World War and the death of Keynes, although Hicks attested that Keynes had a 'keen nose for the actual, the current actual' (Hicks 1973b: 7, fn. 1) which contributed to his 'win' over Hayek in the debate over appropriate policy proposals during the Great Depression. Hicks explicitly remained 'A Sceptical Follower' of Keynes, as he confessed at the centenary of Keynes's birth (see Hicks 1983b).

4.1 *Value and Capital*

'[T]he version of Keynes that is put forward in many modern writings… looks to me more like the *Value and Capital* formulation than like Keynes's own' (Hicks 1974: 7). The elder Hicks repeatedly distanced himself from Keynesian economics of the 'neoclassical synthesis', descended from Paul Samuelson, Don Patinkin, et al. who themselves had been influenced by Hicks's own work.[24] Although written in Cambridge in the years

[24]See, for example, Hicks (1983a: 361). On the differences between Hicks's original SI-LL model and the textbook IS-LM models, see Barens and Caspari (1999).

1935–1938, '*Value and Capital* is in essence an LSE book, not at all a Cambridge book. The ideas that went into it were fairly fully formed before I left LSE' (Hicks 1991: 371; see also Hicks 1983a: 360).

Hicks had moved to Cambridge in summer 1935 accepting the offer which came from Pigou for two particular reasons: his friendship with Dennis Robertson, whose 'influence on me has been much more personal than that of Keynes' (Hicks 1967: x), and 'Beveridge's insensate hostility to pure theory' (Robbins 1971: 129) which undermined Robbins's attempt to keep Hicks at LSE by appointing him as a Reader. However, Hicks did not enjoy his period at Cambridge at all, where only Marshall's nephew and editor Claude Guillebaud became a friend, because of internal quarrels among the economists and the hostility which came from Kahn and Joan Robinson who were convinced that Pigou and Robertson had invited him in order to stop Joan Robinson getting a Lectureship. So, in his Cambridge years, Hicks focused on writing his magnum opus, the basic ideas of which had, as noted, already been conceived at LSE. In Cambridge, he got only 'some very useful criticism from Mr. Sraffa' as Hicks (1939a: iii) points out in the Preface to *Value and Capital* which happily had been published early in 1939 so that it was distributed around the globe before the outbreak of war.

The Swedish Committee cited *Value and Capital* as one of the main reasons why it awarded Hicks the Nobel Prize, with its formulation of modern general equilibrium theory on which subsequent work by Samuelson, Arrow, Hahn, Debreu, McKenzie and others is built.[25] In the *Laudatio,* it is emphasised that Hicks gave general equilibrium theory 'an increased economic relevance', extending 'the applicability of the static method of analysis to include multiperiod analysis … By being deeply anchored in theories of the behaviour of consumers and of entrepreneurs, Hicks's model offered far better possibilities to study the consequences of changes in externally given variables than earlier models in this field' (Nobel Prize website 1972). Unlike Arrow, Hicks did not take the existence problem beyond the counting of equations and variables.[26] Despite the merits of Walras's construction of a system of simultaneous equations, Hicks (1939a: 60) identified a 'certain sterility' in the approach

[25]For modern assessments, see also the proceedings of the conference held by the International Economic Association at Bologna in September 1988 to celebrate the fiftieth anniversary of the publication of *Value and Capital*, edited by McKenzie and Zamagni (1991).

[26]'Hicks did most of the general equilibrium theory worth doing. An exact existence proof would be an exception to that view. The existence theorem is important not just because it tells us that an equilibrium exists; more importantly *it shows us what we are assuming when we suppose that an equilibrium does exist* … In this area Hicks left too much unanalysed' (Bliss 1994: 94–95; italics in original).

of Walras who 'did not go on to work out the laws of change for his system of General Equilibrium … [H]e did not explain what would happen if tastes or resources changed' (ibid.: 61). In contrast, Hicks undertook a pioneering analysis of the stability of a system involving multiple exchange.

Hicks succeeded in formulating a number of economically interesting theorems. He was the first to apply comparative statics within a general equilibrium framework. However, Hicks was aware that fruitful theorems in comparative statics could only be derived when the equilibrium of the economic system is stable. This was later elaborated by Samuelson in his *Foundations of Economic Analysis* as the 'correspondence principle' (see Samuelson 1947: Chapter IX). Here Samuelson pointed out:

> The equations of comparative statics are then a special case of the general dynamic analysis. They can indeed be discussed abstracting completely from dynamical analysis … But the problem of stability of equilibrium cannot be discussed except with reference to dynamical considerations, however implicit and rudimentary. We find ourselves confronted with this paradox: in order for the comparative-static analysis to yield fruitful results, we must first develop a theory of dynamics (ibid.: 262–263).

Hicks struggled with these problems in Parts III, 'The Foundations of Dynamic Economics', and IV, 'The Working of the Dynamic System', in *Value and Capital* and subsequently (see, for example, Hicks 1956a, 1965: Part I, 1985). In these parts of *Value and Capital*, stronger components from the Marshallian-Keynesian tradition of the short run are merged with ideas originating from Walras and Wicksell and from Austrian capital theory, conceiving production as a process in time. The most important method used is the *method of temporary equilibrium*. Hicks had learned this 'point of time' theory, where all decisions are taken on a Monday morning, from Lindahl which he now applied when he 'was trying to find a way of bringing the behaviour of an economy, over a period, into a formal model' pointing out that '[t]he most obviously Lindahlian chapter in *Value and Capital* is the chapter on Income' (Hicks 1991: 373). In the short run, markets are in equilibrium. The expectations of actors concerning future developments influence their behaviour in current markets. One of the most important concepts developed by Hicks in *Value and Capital* is the 'elasticity of expectations' (Hicks 1939a: 205), which turned out to be fruitful in later macroeconomic theory.

Hicks paid tribute to Lindahl in his contribution 'Methods of Dynamic Analysis' to the Lindahl Festschrift (Hicks 1956a) to which he wrote an addendum in Volume II of his *Collected Essays* where he emphasised that the

fixprice method, which he had elaborated in Part I of *Capital and Growth* (Hicks 1965) and which could manage short-run problems rather well, is a disequilibrium method, whereas the flexprice method is a temporary equilibrium method (see Hicks 1982: 232). According to Hicks, dynamic theory may also be cast in the form of stock-flow analysis, with balance sheets capturing most of the expectational influences via capital valuations.[27] In his view, the evolution of disequilibrium over time is the key subject of macroeconomics. He later became disappointed with the fixprice equilibrium model of a single period of which his own SI-LL version of Keynes's *General Theory* had been the first prototype: 'Although the fixprice method is a disequilibrium method, it cannot dispense with a concept of equilibrium … It needs both stock equilibrium and flow equilibrium … [I]t is stock equilibrium which is fundamental' (Hicks 1982: 233). In other words, Hicks, who from the beginning considered perfect foresight models as essentially static and later came to dislike steady-state models as they became fashionable in post-war growth economics, in his own analysis had to pay attention to inventories of goods and buffer stocks of liquid assets, not least including money, as the consequence of risk and uncertainty and the disappointment of expectations.

5 Welfare Economics

By the time *Value and Capital* was published, Hicks had already moved to Manchester. It was here that most of his important contributions to welfare economics originated: 'The Foundations of Welfare Economics' (Hicks 1939b), 'The Valuation of the Social Income' (Hicks 1940), 'The Rehabilitation of Consumers' Surplus' (Hicks 1941) and 'The Four Consumer's Surpluses' (Hicks 1943).[28]

Some important ideas developed during this period go back to his earlier collaboration with Roy Allen at LSE which culminated in their two papers 'A Reconsideration of the Theory of Value, Parts I and II' (Hicks and Allen 1934), when the authors (and others) were still unaware of the classic paper

[27]For Hicks's later recantation of the temporary equilibrium method due to its elimination of dynamics and lags from analysis, i.e. the impermanence problem, see Petri (1991). For a critical assessment of Hicks's capital theory in *Value and Capital*, see Garegnani (2012).

[28]All of these essays plus further contributions and some comments by Hicks are also included in the collection *Wealth and Welfare* (Hicks 1981). For extensive comments by a modern specialist, see Chipman (1994).

'On the Theory of the Budget of the Consumer' (Slutsky 1915) written in Italian by a Russian who had independently derived similar results.

Allen (1936) and Hicks, who considered his papers with Allen as the starting point for *Value and Capital*, soon acknowledged Slutsky's pioneering work. Thus, Hicks wrote in the section 'Need for a Theory Consistently Based upon Ordinal Utility' of Chapter I 'Utility and Preference' that '[t]he theory to be set out in this chapter and the two following ['The Law of Consumer's Demand' and 'Complementarity'] is essentially Slutsky's … The present volume is the first systematic exploration of the territory which Slutsky opened up' (Hicks 1939a: 19). Hicks[29] and Slutsky both showed that the effect of a price change on the quantity demanded can be divided into two effects: *income effects* and *substitution effects* (residual variability in Slutsky). The algebraic sum of these two independent effects gives the 'Fundamental Formula' of value theory or 'Slutsky Equation' which 'is clear of any reference to measurable utility' (Hicks 1981: 4).

Welfare theory is the second field explicitly mentioned in the Nobel *Laudatio* for Hicks. Starting with Kaldor's short but famous article 'Welfare Propositions of Economics and Interpersonal Comparisons of Utility' (Kaldor 1939), Hicks soon became one of the most important contributors to 'New Welfare Economics'. At a time when cardinal utility was not accepted by many economists, Hicks, like Kaldor, proposed the compensation test, according to which Pareto improvements are possible when the welfare beneficiaries of a move from state A to state B could fully compensate any losers and still be better off. It was a distinctive feature of the Kaldor–Hicks criterion that it was enough that Pareto improvements were hypothetical, i.e. even if compensation did not actually take place. Hicks (1981: xiii) later openly conceded that at the time of formulating the compensation principle, he was not aware of the 'Scitovsky paradox', i.e. the criterion for an improvement is not necessarily reversible. The decisive point of the paradox is the fact that the relative valuations of a basket of goods depend on the way in which the basket is distributed.

The issue of welfare improvements is closely related to the problem of the measurement of real national income as an index of economic welfare. Hicks concluded that the two types of measurement of income, in terms of utility and in terms of cost, are quite different, and he rejected the utility approach to measure welfare. Unlike Arrow, Hicks never developed an interest in the formulation of a social welfare function, this probably also

[29]See Hicks (1939a: appendix to Chapters II and III).

due to a lack of faith in the optimality of market processes and their results. A particularly controversial question is the measurement of capital, a problem to which Hicks made his most important contribution at the 1958 Corfu Conference of the International Economic Association on capital theory (see Hicks 1981: Chapter 8). Hicks took this problem up again in his subsequent books on capital (see Hicks 1965: Chapter 24, 1973a: Chapter 13).

In the 1940s, Hicks aimed at the rehabilitation of the Marshallian concept of consumers' surplus, i.e. the area under an individual's demand curve between two prices. In its revised Hicksian formulation with the famous compensating and equivalent variations, it had a great impact in subsequent cost–benefit analysis and other areas of applied economics aimed at measuring (approximately) changes in welfare. Hicks later noticed that the biggest shortcoming in his contemporary work on welfare economics was that it fell short of the 'revealed preference' theory developed by Samuelson (1948). It was Samuelson's approach which prompted Hicks to write his *A Revision of Demand Theory* (Hicks 1956b).

6 Sir John Versus J.R.

> Clearly, I need to change my name. Let it be understood that *Value and Capital* (1939) was the work of J.R. Hicks, a "neoclassical" economist now deceased, while *Capital and Time* (Hicks 1973a)—and *A Theory of Economic History* (Hicks 1969)—are the work of John Hicks, a non-neoclassic who is quite disrespectful towards his "uncle" (Hicks 1975: 365).

With these words, Hicks made his conversion from J.R. to Sir John public.[30] Hicks himself dates his 1956 contribution 'Methods of Dynamic Analysis' to the Lindahl Festschrift as the 'turning point' (Hicks 1982: 9) of his own thinking. Thereafter, he increasingly kept his distance from the use that American and other neoclassicals, who never made friends with the work of Sir John, made of his earlier works rather than for the ideas he had developed himself and continuously re-examined and modified. Thus, he emphasised 'how important it (Hicks 1956a) is in explaining the development of my thought' (Hicks 1979b: 991). It therefore does not make much sense to distinguish between 'Hicks I', i.e. J.R. as the bad guy from the Dallas soap opera, and 'Hicks II' as the good guy, from a more heterodox perspective.

[30]See also Pasinetti and Mariutti (2008) who clearly favour the work of the elder Hicks, the 'nephew', over the work of the younger Hicks, the 'uncle'. They rightly point out: 'He remained Hicks, in the sense that his independent mind always refused to be part of any school of thought' (ibid.: 66).

Although it is characteristic that Hicks himself dedicated his Nobel Lecture to 'The Mainspring of Economic Growth' (Hicks 1973c) and not to general equilibrium theory and/or welfare theory for which the Prize was granted, it is more rewarding to look at the work of Hicks from an evolutionary perspective. Thus, he was wrestling with the concept of time in economics during his whole life as an economist. Time plays a particular role when the economist thinks about how to handle dynamic problems. Hicks became increasingly dissatisfied about his own method 'which ruined the "dynamic" theory of *Value and Capital*' (Hicks 1977: vii). An excellent account of Hicks's later thought is his 1976 contribution 'Some Questions of Time in Economics' to the Festschrift for Nicholas Georgescu-Roegen who himself had emphasised the irreversibility of time in his writings on the entropy law. Here, Hicks points out that, 'It is because I want to make economics more human that I want to make it more time-conscious' (Hicks 1976: 151). Whereas for a hardcore neoclassical general equilibrium theorist this view may end up in analytical nihilism, since in historical time the evolution of the system is unknowable in principle, Hicks struggled to find analytical ways to deal with time in economic theory.

In a similar way, Sir John continuously expressed his strong interest in methodology as in his late *Methods of Dynamic Economics* (Hicks 1985), a revised and enlarged version of the first part of *Capital and Growth*. In this line of thought, *Causality in Economics* (Hicks 1979c) plays a central role. Hicks elucidates that sequential causality, in which cause precedes effect in a causally relevant way, provides the decisive explanatory structure for his dynamic theories. Over the years, Hicks became more radical in his approach to economics. A characteristic example is the concluding chapter 'A Discipline Not a Science' of the three volumes of his *Collected Essays*. Here, Hicks (1983a: 375) expresses his agreement with Keynes that economic theory 'is a method rather than a doctrine, a technique of thinking which helps its possessor to draw correct conclusions'. The elder Hicks had a quest for lessons of history and questions of economic substance much more than he was seeking for theorems in pure logical reasoning.

Throughout his life, Hicks kept a deep interest in capital theory: 'Capital…is a very large subject, with many aspects; wherever one starts, it is hard to bring more than a few of them into view', Hicks (1973a: v) writes in the Preface to the last volume of his famous trilogy *Value and Capital*, *Capital and Growth* and *Capital and Time*. He had finalised the manuscript of *Capital and Time* around the same time he received the Nobel Prize. Implicit in *Capital and Time* is the concept of the 'Impulse', which is elaborated in his Nobel Lecture (Hicks 1973c) and particularly in his subsequent essay on 'Industrialism' (Hicks 1977: Chapter 2).

The relevance of the time dimension is particularly important in the taking-up process of a new technology. In Chapter 16 of *Capital and Growth*, Hicks had pioneered a theory of the *traverse* focusing on dynamic impulses, such as changes in population growth or technology, causing out-of-equilibrium processes. The resulting structural change is a time-consuming process in which rigidities or bottlenecks, particularly in the production sphere, play an important role. The criticism raised by Charles Kennedy (1968) against the inadequate treatment of time in his embryonic traverse analysis based on a two-sector fixed coefficient or horizontal model in *Capital and Growth* was one major reason why Hicks switched to a 'neo-Austrian' or vertical model in *Capital and Time*.[31] The decisive Austrian elements in Hicks's 'neo-Austrian' theory are a focus on the time structure of the production process and the special treatment of capital goods as intermediate products in a vertical model. Capital goods are a medium for sequential production. By dealing explicitly with fixed capital goods,[32] Hicks, in his neo-Austrian approach, in contrast to Böhm-Bawerk and Hayek, considers production processes to be of the flow input-*flow* output type. He saw the decisive advantage of his neo-Austrian method in its ability to cope with the important fact that process innovations normally involve the introduction of *new* capital goods. Horizontal approaches, on the other hand, illuminate intersectoral interdependencies, as best represented in input–output models. Both ways of disaggregating production structures in an economy, the vertical and the horizontal models therefore have their comparative (dis-)advantages. This led Hicks to explore both routes in which the economic system can adjust to dynamic impulses when it faces rigidities and bottlenecks. Iterating between the two approaches, Hicks finally took a complementary perspective, as indicated in Chapters 13 and 14 of his *Methods of Dynamic Economics* (Hicks 1985).

Beginning in the late 1960s, Hicks had become fascinated by the Ricardo machinery effect, i.e. the employment consequences of a different, more mechanised method of production. His traverse analysis in *Capital and Time* is an important attempt by a leading modern theorist 'to clear up an ancient controversy' (Hicks 1973a: 97): 'The 1973 Hicks Fixwage model provides almost an exact replication of Ricardo's assumptions; the real wage is fixed, labor supply is perfectly elastic, and employment…varies positively with saving' (Burmeister 1974: 435). Hicks defended what he considered the core of Ricardo's analysis. There exist important cases, 'strongly forward-biased

[31]For a more detailed analysis, see Hagemann (2009).

[32]See Burmeister (1974) for a more elaborate analysis.

innovations' in Hicks's terminology, in which the introduction of a new type of machinery may reduce both real output and employment in the short run. The detrimental effects continue to exist, but after a while the stronger investment spending, due to higher profits as a consequence of the more efficient new method of production, generates a higher rate of growth that eventually leads to an output and employment path above the reference path of the old equilibrium.[33] The Hicks of the 1973 vintage clearly is a precursor of the Samuelson of the 1989 vintage showing that 'Ricardo was Right!'

7 Conclusion

'Already, before I left LSE, I had done what I still feel to be some of my best work' (Hicks 1983a: 356). Hicks felt a lifelong commitment to LSE, the institution which made him an economist. This loyalty was confirmed by the fact that he donated his Nobel Prize money to the School's Library Appeal in 1973 as a gesture of gratitude: the donation was an important contribution towards the purchase of Strand House as the new location for the expanding LSE Library (see Dahrendorf 1995: 480). For its part, LSE decided to establish a Sir John Hicks Professorship of Economics, a position currently held by John Sutton. Previous holders include Lord Stern (1989–1993) and Michio Morishima (1982–1988), the latter of whom had help influence Part III, 'Optimum Growth', of Hicks's *Capital and Growth* in the early 1960s (see Hicks 1965: vii).

References

Main Works by John R. Hicks

For a full bibliography of Hicks's writings, see Hagemann and Hamouda (1994: 260–270).

Hicks, J.R. (1932). *The Theory of Wages*. Second edition, 1963. London: Macmillan.

Hicks, J.R. (1933) [1980]. 'Gleichgewicht und Konjunktur'. *Zeitschrift für Nationalökonomie*, Bd. 4(H.4): 441–455. Translated as 'Equilibrium and the Trade Cycle', *Economic Inquiry*, 1980, 18(4): 523–534.

[33]For a more detailed analysis, see Hicks (1973a) and Hagemann (1994).

Hicks, J.R. (1935). 'A Suggestion for Simplifying the Theory of Money'. *Economica*, New Series, 2(5): 1–19.
Hicks, J.R. (1936). 'Mr. Keynes's Theory of Employment'. *Economic Journal*, 46(182): 238–253. Reprinted as Chapter 7 in J.R. Hicks (1982) *Money, Interest and Wages: Collected Essays on Economic Theory*. Volume II. Oxford: Basil Blackwell: 84–99.
Hicks, J.R. (1937). 'Mr. Keynes and the "Classics": A Suggested Interpretation'. *Econometrica*, 5(2): 147–159.
Hicks, J.R. (1939a). *Value and Capital*. Second edition, 1946. Oxford: Clarendon Press.
Hicks, J.R. (1939b). 'The Foundations of Welfare Economics'. *Economic Journal*, 49(196): 696–712.
Hicks, J.R. (1940). 'The Valuation of the Social Income'. *Economica*, New Series, 7(26): 105–124.
Hicks, J.R. (1941). 'The Rehabilitation of Consumers' Surplus'. *Review of Economic Studies*, 8(2): 108–116.
Hicks, J.R. (1942). *The Social Framework: An Introduction to Economics*. Oxford: Clarendon Press.
Hicks, J.R. (1943). 'The Four Consumer's Surpluses'. *Review of Economic Studies*, 11(1): 31–41.
Hicks, J.R. (1950). *A Contribution to the Theory of the Trade Cycle*. Oxford: Clarendon Press.
Hicks, J.R. (1956a). 'Methods of Dynamic Analysis'. In *25 Economic Essays, in English, German and Scandinavian, in Honour of Erik Lindahl*. Stockholm: Ekonomisk Tidskrift: 139–151. Reprinted with an addendum in J.R. Hicks (1982) *Money, Interest and Wages: Collected Essays on Economic Theory*. Volume II. Oxford: Basil Blackwell: 219–235.
Hicks, J.R. (1956b). *A Revision of Demand Theory*. Oxford: Clarendon Press.
Hicks, J.R. (1962). 'Liquidity'. *Economic Journal*, 72(288): 787–802.
Hicks, J. (1965). *Capital and Growth*. Oxford: Clarendon Press.
Hicks, J. (1967). *Critical Essays in Monetary Theory*. Oxford: Clarendon Press.
Hicks, J. (1969). *A Theory of Economic History*. Oxford: Clarendon Press.
Hicks, J. (1973a). *Capital and Time: A Neo-Austrian Theory*. Oxford: Clarendon Press.
Hicks, J. (1973b). 'Recollections and Documents'. *Economica*, New Series, 40(157): 2–11. Reprinted as Chapter VI in J. Hicks (1977) *Economic Perspectives: Further Essays on Money and Growth*. Oxford: Clarendon Press: 134–148.
Hicks, J. (1973c). 'The Mainspring of Economic Growth'. *Swedish Journal of Economics*, 75(4): 336–348.
Hicks, J. (1974). *The Crisis in Keynesian Economics*. Oxford: Basil Blackwell.
Hicks, J. (1975). 'Revival of Political Economy: The Old and the New'. *Economic Record*, 51(3): 365–367.

Hicks, J. (1976). 'Some Questions of Time in Economics'. Chapter 6 in A.M. Tang, F.M. Westfield and J.S. Worley (eds) *Evolution, Welfare, and Time in Economics: Essays in Honour of Nicholas Georgescu-Roegen*. Lexington, MA: Lexington Books: 135–151.

Hicks, J. (1977). *Economic Perspectives: Further Essays on Money and Growth*. Oxford: Clarendon Press.

Hicks, J. (1979a). 'The Formation of an Economist'. *Banca Nazionale del Lavoro Quarterly Review*, 32(130): 195–204. Reprinted as Chapter 31 in J. Hicks (1983) *Classics and Moderns: Collected Essays on Economic Theory*. Volume III. Oxford: Basil Blackwell: 355–364.

Hicks, J. (1979b). 'On Coddington's Interpretation: A Reply'. *Journal of Economic Literature*, 17(3): 989–995.

Hicks, J. (1979c). *Causality in Economics*. Oxford: Basil Blackwell.

Hicks, J. (1980). '*IS-LM*: An Explanation'. *Journal of Post Keynesian Economics*, 3(2): 139–154.

Hicks, J. (1981). *Wealth and Welfare: Collected Essays on Economic Theory*. Volume I. Oxford: Basil Blackwell.

Hicks, J. (1982). *Money, Interest and Wages: Collected Essays on Economic Theory*. Volume II. Oxford: Basil Blackwell.

Hicks, J. (1983a). *Classics and Moderns: Collected Essays on Economic Theory*. Volume III. Oxford: Basil Blackwell.

Hicks, J. (1983b). 'The Keynes Centenary: A Sceptical Follower'. *The Economist*, 18 June: 17–19.

Hicks, J. (1985). *Methods of Dynamic Economics*. Oxford: Clarendon Press.

Hicks, J. (1986). 'Loanable Funds and Liquidity Preference'. *Greek Economic Review*, 8(2): 125–131.

Hicks, J. (1989). *A Market Theory of Money*. Oxford: Clarendon Press.

Hicks, J. (1991). 'The Swedish Influence on *Value and Capital*'. Chapter 15 in L. Jonung (ed.) *The Stockholm School of Economics Revisited*. Cambridge and New York: Cambridge University Press: 369–376.

Hicks, J.R. and R.G.D. Allen (1934). 'A Reconsideration of the Theory of Value, Parts I and II'. *Economica*, New Series, 1(1 and 2): 52–76 and 196–219. Reprinted as Chapter 1 in J. Hicks (1981) *Wealth and Welfare: Collected Essays on Economic Theory*. Volume I. Oxford: Basil Blackwell: 5–29 and 30–55.

Other Works Referred To

Allen, R.G.D. (1936). 'Professor Slutsky's Theory of Consumers' Choice'. *Review of Economic Studies*, 3(2): 120–129.

Barens, I. and V. Caspari (1999). 'Old Views and New Perspectives: On Re-Reading Hicks's "Mr. Keynes and the Classics"'. *European Journal of the History of Economic Thought*, 6(2): 216–241.

Bliss, C. (1987). 'Hicks, John Richard (1904-)'. In J. Eatwell, M. Milgate and P. Newman (eds) *The New Palgrave: A Dictionary of Economics*. Volume 2. London: Macmillan: 641–646.

Bliss, C. (1994). 'Hicks on General Equilibrium and Stability'. Chapter 7 in H. Hagemann and O.F. Hamouda (eds) *The Legacy of Hicks: His Contributions to Economic Analysis*. London and New York: Routledge: 87–95.

Boianovsky, M. (1995). 'Wicksell's Business Cycle'. *European Journal of the History of Economic Thought*, 2(2): 375–411.

Burmeister, E. (1974). 'Synthesizing the Neo-Austrian and Alternative Approaches to Capital Theory: A Survey'. *Journal of Economic Literature*, 12(2): 413–456.

Cannan, E. (1933). 'The Need for Simpler Economics'. *Economic Journal,* 43(171): 367–378.

Chick, V. (1991). 'Hicks and Keynes on Liquidity Preference: A Methodological Approach'. *Review of Political Economy*, 3(3): 309–319.

Chipman, J.S. (1994). 'Hicksian Welfare Economics'. Chapter 8 in H. Hagemann and O.F. Hamouda (eds) *The Legacy of Hicks: His Contributions to Economic Analysis*. London and New York: Routledge: 96–146.

Coase, R.H. (1982). 'Economics at LSE in the 1930's: A Personal View'. *Atlantic Economic Journal*, 10(1): 31–34.

Coats, A.W. (1982). 'The Distinctive LSE Ethos in the Inter-War Years'. *Atlantic Economic Journal*, 10(1): 18–30.

Dahrendorf, R. (1995). *LSE: A History of the London School of Economics and Political Science, 1895–1995*. New York and Oxford: Oxford University Press.

Fontana, G. (2004). 'Hicks on Monetary Theory and History: Money as *Endogenous Money*'. *Cambridge Journal of Economics*, 28(1): 73–88.

Garegnani, P. (2012). 'On the Present State of the Capital Controversy'. *Cambridge Journal of Economics*, 36(6): 1417–1432.

Hagemann, H. (1994). 'Employment and Machinery'. Chapter 13 in H. Hagemann and O.F. Hamouda (eds) *The Legacy of Hicks: His Contributions to Economic Analysis*. London and New York: Routledge: 200–224.

Hagemann, H. (1998). 'Monetary Causes of the Business Cycles and Technological Change: Hicks vs. Hayek'. *Indian Journal of Applied Economics*, 7(4): 61–77.

Hagemann, H. (2008). 'Capital, Growth, and Production Disequilibria: On the Employment Consequences of New Technologies'. Chapter 19 in R. Scazzieri, A. Sen and S. Zamagni (eds) *Markets, Money and Capital: Hicksian Economics for the Twenty-First Century*. Cambridge: Cambridge University Press: 346–366.

Hagemann, H. (2009). 'Hicks's Traverse Analysis. From *Capital and Growth* to *Capital and Time*'. Chapter 4 in H. Hagemann and R. Scazzieri (eds) *Capital, Time and Transitional Dynamics*. London and New York: Routledge: 133–149.

Hagemann, H. (2016). 'John Richard Hicks (1904–1989)'. Chapter 95 in G. Faccarello and H.D. Kurz (eds) *Handbook on the History of Economic Analysis: Volume I: Great Economists since Petty and Boisguilbert*. Cheltenham and Northampton, MA: Edward Elgar: 602–609.

Hagemann, H. and O.F. Hamouda (eds) (1994). *The Legacy of Hicks: His Contributions to Economic Analysis*. London and New York: Routledge.

Hagemann, H. and H.-M. Trautwein (1998). 'Cantillon and Ricardo Effects: Hayek's Contributions to Business Cycle Theory'. *European Journal of the History of Economic Thought*, 5(2): 292–316.

Hamouda, O.F. (1993). *John R. Hicks: The Economist's Economist*. Oxford: Blackwell.

Hayek, F.A. (1928) [1984]. 'Intertemporal Price Equilibrium and Movements in the Value of Money'. Chapter 4 in R. McCloughry (ed.) *Money, Capital and Fluctuations: Early Essays of F.A. Hayek*. London: Routledge: 71–117.

Hayek, F.A. (1931) [1935]. *Prices and Production*. Revised and enlarged second edition. London: Routledge.

Hayek, F.A. (1939). *Profits, Interest and Investment*. London: Routledge.

Hayek, F.A. (1942). 'The Ricardo Effect'. *Economica*, New Series, 9(34): 127–152.

Hayek, F.A. (1969). 'Three Elucidations of the Ricardo Effect'. *Journal of Political Economy*, 77(2): 274–285.

Johnson, H.G. (1972). 'Individual and Collective Choice'. In W.A. Robson (ed.) *Man and the Social Sciences*. London: LSE: 1–13.

Jonung, L. (1981). 'Ricardo on Machinery and the Present Unemployment: An Unpublished Manuscript by Knut Wicksell'. *Economic Journal*, 91(361): 195–205.

Kahn, R.F. (1984). *The Making of Keynes' General Theory*. Cambridge: Cambridge University Press.

Kaldor, N. (1932). 'A Case Against Technical Progress?'. *Economica*, 36(May): 180–196.

Kaldor, N. (1939). 'Welfare Propositions of Economics and Interpersonal Comparisons of Utility'. *Economic Journal*, 49(195): 549–552.

Kennedy, C. (1968). 'Time, Interest, and the Production Function'. Chapter 10 in J.N. Wolfe (ed.) *Value, Capital and Growth: Papers in Honour of Sir John Hicks*. Edinburgh: Edinburgh University Press: 275–290.

Keynes, J.M. (1930) [1971]. *A Treatise on Money*. Volumes V and VI of *The Collected Writings of John Maynard Keynes*. London: Macmillan.

Keynes, J.M. (1936) [1973]. *The General Theory of Employment, Interest and Money*. Volume VII of *The Collected Writings of John Maynard Keynes*. London: Macmillan.

Keynes, J.M. (1973). *The General Theory and After. Part II: Defence and Development*. Volume XIV of *The Collected Writings of John Maynard Keynes*. London: Macmillan.

Keynes, J.M. (1981). *Activities 1929–31: Rethinking Employment and Unemployment Policies*. Volume XX of *The Collected Writings of John Maynard Keynes*. London: Macmillan.

Kurz, H.D. (2000). 'The Hayek-Keynes-Sraffa Controversy Reconsidered' Chapter 6 in H.D. Kurz (ed.) *Critical Essays on Piero Sraffa's Legacy in Economics*. Cambridge: Cambridge University Press: 257–301.

Kurz, H.D. (2017). 'Is There a "Ricardian Vice"? And What Is Its Relationship with Economic Policy Ad"vice"?'. *Journal of Evolutionary Economics*, 27(1): 91–114.

Laidler, D.E.W. (1999). *Fabricating the Keynesian Revolution: Studies of the Inter-War Literature on Money, the Cycle, and Unemployment*. Cambridge: Cambridge University Press.

Leijonhufvud, A. (1981). *Information and Coordination: Essays in Macroeconomic Theory*. New York and Oxford: Oxford University Press.

Leijonhufvud, A. (1983). 'What Was the Matter with IS-LM?'. Chapter 3 in J.-P. Fitoussi (ed.) *Modern Macroeconomic Theory*. Oxford: Blackwell: 64–90.

Leijonhufvud, A. (1984). 'Hicks on Time and Money'. In D.A. Collard, D.R. Helm, M.F.G. Scott and A.K. Sen (eds) *Economic Theory and Hicksian Themes*. Oxford: Clarendon Press: 26–46.

Leijonhufvud, A. (1997). 'The Wicksellian Heritage'. *Economic Notes*, 26(1): 1–10.

Lindahl, E. (1939). *Studies in the Theory of Money and Capital*. London: George Allen & Unwin.

Marcuzzo, M.C., E. Sanfilippo, T. Hirai and T. Nishizawa (2006). 'The Letters Between John Hicks and Ursula Webb, September-December 1935'. Working Paper No. 207. Nishiku and Kobe: Institute for Economics and Business Administration Research, University of Hyogo.

McCormick, B.J. (1992). *Hayek and the Keynesian Avalanche*. Hemel Hempstead: Harvester Wheatsheaf.

McKenzie, L.W. and S. Zamagni (eds) (1991). *Value and Capital: Fifty Years Later*. London: Macmillan.

Nobel Prize website (1972). https://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1972/press.html.

Pasinetti, L.L. and G. Mariutti (2008). 'Hicks's 'Conversion'—from J.R. to John'. Chapter 3 in R. Scazzieri, A. Sen and S. Zamagni (eds) *Markets, Money and Capital: Hicksian Economics for the Twenty-First Century*. Cambridge: Cambridge University Press: 52–71.

Petri, F. (1991). 'Hicks's Recantation of the Temporary Equilibrium Method'. *Review of Political Economy*, 3(3): 268–288.

Plant, A. (1974). *Selected Economic Essays and Addresses*. London: Routledge & Kegan Paul.

Ricardo, D. (1821) [1951]. *Principles of Political Economy and Taxation*. Third edition. *Works and Correspondence of David Ricardo*. Edited by P. Sraffa. Volume I. Cambridge: Cambridge University Press.

Robbins, L.C. (1930). 'The Present Position of Economic Science'. *Economica*, 28(March): 14–24.

Robbins, L.C. (1932). *An Essay on the Nature and Significance of Economic Science*. London: Macmillan.

Robbins, L.C. (1971). *Autobiography of an Economist*. London: Macmillan.
Rothschild, K.W. (1994). 'The Theory of Wages Revisited'. Chapter 5 in H. Hagemann and O.F. Hamouda (eds) *The Legacy of Hicks: His Contributions to Economic Analysis*. London and New York: Routledge: 60–74.
Samuelson, P.A. (1947). *Foundations of Economic Analysis*. Cambridge, MA: Harvard University Press.
Samuelson, P.A. (1948). 'Consumption Theory in Terms of Revealed Preference'. *Economica*, New Series, 15(60): 243–253.
Samuelson, P.A. (1989). 'Ricardo was Right!'. *Scandinavian Journal of Economics*, 91(1): 47–62.
Scazzieri, R., A. Sen and S. Zamagni (eds) (2008). *Markets, Money and Capital: Hicksian Economics for the Twenty-First Century*. Cambridge: Cambridge University Press.
Skidelsky, R. (1992). *John Maynard Keynes. Volume 2: The Economist as Saviour, 1920–1937*. London: Macmillan.
Slutsky, E. (1915). 'Sulla Teoria del Bilancio del Consumatore'. *Giornale degli Economisti e Rivista di Statistica*, 51(26, 1): 1–26. English translation: 'On the Theory of the Budget of the Consumer'. Chapter 2 in K.E. Boulding and G.J. Stigler (eds) (1953) *Readings in Price Theory*. London: Allen & Unwin: 26–56.
Solow, R.M. (2008). '"Distribution and Economic Progress" after Seventy Years'. Chapter 15 in R. Scazzieri, A. Sen and S. Zamagni (eds) *Markets, Money and Capital: Hicksian Economics for the Twenty-First Century*. Cambridge: Cambridge University Press: 277–286.
Tribe, K. (1997). *Economic Careers: Economics and Economists in Britain, 1930–1970*. London and New York: Routledge.
Wicksell, K. (1913). *Vorlesungen über Nationalökonomie auf Grundlage des Marginalprinzips*. Volume I. Stuttgart: Gustav Fischer.
Wicksell, K. (1934). *Lectures on Political Economy*. Volume I. Translation of Wicksell (1913) by E. Classen and edited with an introduction by L.C. Robbins. London: Routledge.
Winch, D. (1969). *Economics and Policy: A Historical Study*. London: Hodder & Stoughton.
Wood, J.C. and R.N. Woods (eds) (1989). *Sir John Hicks: Critical Assessments*. Four volumes. London: Routledge.