Richard F. Kahn (1905–1989)

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1 Introduction

In his short autobiographical note (Kahn 1984), with characteristic modesty and sparing use of words, Richard Kahn set out the basic facts of his apparently unglamorous life, which was however rich in emotions, replete with academic honour, and burdened with many teaching and administrative responsibilities.

He was born on 10 August 1905, in London, son of a government inspector of schools; from 1918 to 1924 he attended St Paul’s School, London, and went on to study mathematics and physics at King’s College, Cambridge, achieving modest results in the Natural Sciences Tripos. Thus he fell short of qualification to enter the academic world, but the early disappointment turned into success. Since he still had a further year’s scholarship available, under the guidance of Gerald Shove and John Maynard Keynes he set about studying for the Economics Tripos, which he passed with brilliant results in June 1928.

It is worth noting that the dissertation he wrote between October 1928 and
December 1929 to obtain a Fellowship at King's was also the happy outcome of initial failure—in this case to gain access to the Midland Bank's monetary statistics, which Keynes thought could offer good material for his dissertation. Since the data could not be used, Kahn was allowed to choose his own subject. Under the influence of Marshall's Principles, and following a suggestion by Shove and Piero Sraffa, he chose The Economics of the Short Period (Kahn 1989). The dissertation secured him election as a Fellow of King's on 15 March 1930; with very few interruptions, notably during the Second World War and a sabbatical year in Geneva, Kahn spent all his life in his College, where he supervised students in economics from 1936 to 1951, having moved, after Keynes's death, into his rooms. He died in Cambridge on 6 June 1989.

He was very active and influential in the Faculty of Economics and Politics at Cambridge, where he started as Lecturer in 1933, finally becoming Professor in 1951. He chaired many committees and mastered mind academic activities and appointments. He had several administrative duties at King's; in particular, he was appointed Second Bursar in 1935, and subsequently succeeded Keynes as First Bursar in 1946, also becoming executor of his will and trustee of his estate. In this capacity, he was responsible for the stock exchange portfolio of the Keynes Trust until Lydia Keynes's death in 1981.

At the outbreak of the war, Kahn worked at the Board of Trade, where he was involved in the point-rationing scheme to curb consumption and free resources for the war effort; he then acted as Deputy Director of the Middle East Supply Centre in Cairo, where he was given many administrative duties. Subsequently, he moved on to the Ministry of Supply, where he started working on issues related to post-war organization of international economic institutions, and became Head of the General Division of the Board of Trade after the end of hostilities. From the late 1940s he worked for a number of international organisations (the Organisation for European Economic Co-operation (OEEC), the United Nations Conference on Trade and Development (UNCTAD), and the Food and Agricultural Organization (FAO)) and for various British Labour governments, for which he drew up incomes policy schemes. In the 1960s he served for three years as part-time member of the National Coal Board. He received a life peerage in 1964.

Starting in the early 1930s he invested in shares, bonds, and commodities with alternating fortunes. He was in charge of the finances of friends and relatives and devoted a considerable part of his time to the management of their savings. Unlike Keynes and Sraffa, with whom he frequently discussed financial matters, he made modest gains and did not die rich.

He was an enthusiastic mountaineer and even late in life would still spend most summers in the Alps. In all matters he was a careful planner, holidays included. He never married, but his lasting relationship with Joan Robinson was ever at the centre of his sentimental and intellectual life. He always remained very close to his family, particularly his three sisters, supporting them financially and emotionally. An important aspect of his life was his strong Jewish identity, even when he gave up religious practice, as testified by the fact that he wanted to be buried in the Jewish part of the Cambridge cemetery (Pasinelli 2007).

Kahn did not publish much, but his contributions are landmarks in the economics of the twentieth century. A complete bibliography can be found in Marcuzzo (1989). In the following pages we aim to offer a critical exposition of Kahn's main contributions to our understanding of the working of the economic system by focusing on the aspects which best show his originality and innovative thought. He investigated a wide range of topics: employment, money, market structure, international trade, and systems of payments. He liked to approach a problem in general abstract terms but, when necessary, he was also interested in carefully reconstructing the details of the actual workings of the economy. He brought to his research in economics his strong logical powers, a perfectionism which came close to becoming an obstacle to publishing, a strong commitment to the public cause, and a love for the Cambridge way of life.

In the following sections we present Kahn's scientific works under three headings: Employment, Liquidity, and the Fight Against the Quantity Theory of Money (Section 2); Markets and Prices: Superseding the Theory of Perfect Competition (Section 3); and Reforming International Economic Institutions (Section 4). Rather than following a strict chronological order, we have grouped Kahn's contributions according to subject matter and followed the evolution of his thought within. The order and length of the sections reflect what we believe to be the level of their theoretical significance. Furthermore, in Section 5 we show Kahn as protagonist and champion of Cambridge economics, in close association with Keynes and Robinson. In the concluding section we draw on his parliamentary speeches to reveal the force of his commitment to the cause of full employment.

2 Employment, Liquidity, and the Fight Against the Quantity Theory of Money

Kahn is by no means the most widely known of the Cambridge economists, and if he is known it is mostly in association with the concept of the multiplier, which he presented in an article 'The Relation of Home Investment to Unemployment', published in the Economic Journal (Kahn 1931). Even less
well known is how he contributed to the development of an approach which turned out to be pivotal in Keynes’s *General Theory*, namely the concept of the short period, which he presented in his Fellowship dissertation, and in an unpublished and unfinished book under the same name (Kahn 1932a). 1

Kahn accepts Marshall’s distinction between the short period—when the productive capacity of the firm is constant both in terms of physical capital and organization of production—and the long period, defining the distinction as ‘one of Marshall’s most fruitful contributions’ (Kahn 1989: xiii). The distinction is not seen as grounded on logical foundations but as a matter of fact, that is, even if nature non facit saltus, there is a factual dichotomy between the life of fixed capital and the period of production, the former being considerably longer than the latter (Kahn 1932a: Chapter 2, page 2). The productive life of physical capital is not distributed along a continuum, but, as Kahn noted (1989: xiii): ‘As a general rule, the life of physical capital is illustrated either by the mayfly or by the elephant’.

Although the short-/long-period distinction has a factual basis, the actual length of the short period cannot be defined on the basis of technological considerations alone. These determine only the upper and lower boundaries of the interval in which the short period varies because fixed capital cannot remain constant for a period longer than its physical life or be substituted before the period of production comes to an end. Within this interval, the length of the ‘short period’ is determined by the expectations of entrepreneurs regarding demand conditions. Accordingly, depending upon whether entrepreneurs believe changes in demand to be transitory or permanent as compared with the level considered as ‘normal’, the decision on whether to modify plant or organization—typically long-period decisions—will or will not be taken.

The two aspects—the nature of the production process, which is characterized by changes that occur rapidly (such as output and employment) and others that occur only slowly (such as alterations in fixed plant) and expectations of changes in demand relative to the level perceived as normal—are combined to explain why in the short period productive capacity is not altered. This is so because a change in the conditions of demand is not perceived as permanent; in fact, the ‘ideal’ short period is defined as a situation where ‘any change that occurs is not expected to be permanent’ (Kahn 1932a: Chapter 2, page 10). The conditions prevailing in the economy—depression or boom—mould expectations of a return to normal conditions of demand and introduce an asymmetry in the length of the short period. In a boom, short-period equilibrium implies that expectations are such that increasing production, at higher costs, is preferred to building up capacity until the increase in demand is confidently perceived as ‘permanent’; the short period, however, can be very short and innovations are introduced rapidly. In a depression, short-period equilibrium implies expectations that demand will return to its normal level; in this case, the short period can last decades if the firm survives (at a loss) while its physical capital is decaying. Since what matters are expectations regarding the normal value of the level of demand, it follows that the short period need not be a short time interval, nor is it a transitory state before the long-period forces work out their effects. It is, rather, a position which is maintained as long as the set of decisions, depending upon the expected level of demand, do not change. This attributes to short-period equilibrium a meaning showing a fairly evident analogy with the unemployment equilibrium of Keynes’s *General Theory*.

Turning to another major contribution by Kahn to Keynesian economics—the multiplier—its importance lies in providing the terms for analysis of the conditions that see an increase either in the level of prices or in the quantities (or a combination of the two) in aggregate, following an exogenous increase in demand (in the case presented in the 1931 article, public investments in road building). In a depression—as prevailed at the time—Kahn showed that the effect on quantity outweighs that on prices, so that an autonomous increase in demand could boost income and employment. The multiplier has a story of alternate acceptance and rejection in the 80 plus years of its existence. After a long period of neglect and suspicion by the majority of the economics profession, it has come back into favor. 2

Kahn was very close to Keynes in the years preceding and following the publication of *The General Theory*. He played the leading role in orienting Keynes’s thought in certain significant aspects through discussion and debate during the period when *The General Theory* was taking shape. In particular,

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1 One draft is extant, with annotations and related material, amounting to roughly 300 pages (RFK/J/1). References beginning with RKF are to the documents preserved in the Richard Kahn Papers, King’s College Archive Centre, Cambridge University. Of the planned 11 chapters, according to the table, Chapters 1, 3, and 4 remained unwritten, while Chapters 7, 9, and 10 are seemingly unfinished; the draft was almost certainly written in the last quarter of 1932. We will refer to it as Kahn (1932a). Part of Chapter 7 merged into ‘Imperfect Competition and the Marginal Principle’, which was an article Kahn submitted to Frank Taussig in 1933 for publication in the *Quarterly Journal of Economics* and which, having been rejected, still remains unpublished in English (Marcuzzo and Rosselli 2008). We will refer to it as Kahn (1932b).

2 As recently noted: 'In the 1950s and 1960s, when Keynesianism was in contrast at its height, the multiplier was generally assumed to be about 2. Then in the 1990s and 2000s, these estimates gradually dropped, leaving the consensus range about 0.5-0.7 by 2009' (Davies 2012: 3), in contrast with the current figures of 0.9-1.7 presented in the 2012 *World Economic Outlook* by the International Monetary Fund.
the influence of Gerald Shove and the collaboration with Joan Robinson during the writing of the *Economics of Imperfect Competition* (see below) persuaded Kahn of the need to recover, rather than discard, Marshall's apparatus, against Staaff's criticism in his 1926 article. The task—as Kahn saw it—was to transform certain concepts into precise analytical tools and apply them to Keynes's new ideas to obtain logically coherent results. The framework Kahn provided—the aggregate demand and supply curves—arguably had the eventual effect of taking the presentation of *The General Theory* in directions that departed from Keynes's approach in *A Treatise on Money*, and at any rate of restricting its scope, but it helped Keynes to finally shake off the 'stranglehold' of the quantity theory of money. Kahn always prided himself on 'finally disposing of the idea that the price level is determined by the quantity of money' (Patinkin and Leith 1977: 147).

After Keynes's death, Kahn carried on his battle against the quantity theory to the end of his life. Opposed as he was to an approach to monetary policy which paid exclusive attention to the money stock, Kahn developed his own theory of money following lines which moved him slightly away from Keynes. In particular, Kahn was critical of Keynes's representation of the demand for money as a smooth curve, which could be placed at the same level of importance as the consumption function or the marginal productivity of capital as a key component of the structure of the economic system (as it was in fact placed within the IS-LM framework). This was not the only source of dissatisfaction with *The General Theory*, as Kahn explained in 'Unemployment as Seen by the Keynesians', where he disapproved of the way Keynes defined involuntary unemployment, going so far as to say that the second chapter of *The General Theory* always left him 'very cold' (Kahn 1976a: 23) However, where Kahn distanced himself most from Keynes was in relation to the liquidity preference theory.

In his essay 'Some Notes on Liquidity Preference' (Kahn 1954), Kahn defends Keynes's analysis of the long-term rate of interest as depending on the expectations for future rates held with uncertainty, and puts forward his own views on the workings of the financial markets and the behaviour of investors. According to Kahn, in the financial markets there are two kinds of investors: those who hold definite expectations for the future interest rates and those who do not have a clue' (ibid.: 241) whether the rate of interest is going to increase or decrease. The same division exists in the mind of the investor himself, who can reveal contradictory preferences and decide to hold money and securities at the same time, while rational behaviour (and expected utility theory) would imply a definite choice between the two. On the basis of this observed behaviour, Kahn argues that a finite elasticity of the demand for money relative to the rate of interest is associated not only with the heterogeneity of opinions held by the public divided between bulls and bears, but also with the lack of conviction individuals show in their own conjectures. It is as if bullish and bearish sentiments 'operated inside each person's mind, one being responsible for his holding securities and one for his holding money' (ibid.: 247). This analysis implies the 'unsuitability of thinking of a schedule of liquidity preference as though it could be represented by a well-defined curve or by a functional relationship expressed in mathematical terms or subject to econometric processes' (ibid.: 250).

In terms of monetary policy, it follows that since the monetary authority would be facing a shifting schedule of liquidity preference, a given quantity of money cannot be taken as a policy target. As Kahn confirmed in his evidence to the Radcliffe Committee, the quantity of money necessary to bring about a fall in the rate of interest varies with the circumstances (Kahn 1960: 742) and the rate and responsiveness of the market: 'If the market likes to help by altering its expectations...the authorities will not have to do so much. If the market proves very obstinate and does not believe that they are going to succeed in doing what they are trying to do, then they will have to do much more' (ibid.: 743).

In the 1970s—when the tide was turning against the hegemony of Keynesian thought and the Western economies were hit by levels of inflation such as had never been reached in the post-war period—Kahn deployed all the defences he could muster against monetarism, which, to all intents and purposes, amounted to the restoration of a pre-Keynesian approach. In fact, when Margaret Thatcher became Prime Minister in 1979, for the first time since the war the British government ceased to proclaim the goal of full employment, for, according to the monetarist philosophy behind official policy, it was not an objective which the government could pursue directly with policies to support demand. What the Conservative administration aimed at was cuts in public spending, the tax burden and the economic demands of the public sector, and the restoration of market mechanisms. It was these mechanisms that were supposed to boost employment indirectly. In addition, the goal of reducing inflation was to be achieved through a decrease in the money supply growth rate, this being in sharp contrast with the incomes policy advocated by Kahn (1976b, c).

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1 Staaff (1926) produced a devastating critique of Marshall's supply and demand apparatus for the analysis of competitive markets, showing that the assumption of increasing costs underlying the upward-sloping supply curve was inconsistent with the assumption of partial equilibrium or was confined to the case of an industry which employs the totality of a productive factor. However, at the same time, Staaff was not prepared to offer his alternative theory based on the surplus approach.

2 An excellent analysis of Kahn's theory of liquidity preference can be found in Dardi (1994).
Even today, the all-time record of money growth expansion overseen by the Federal Reserve, the European Central Bank, and the Bank of Japan to fight the present downturn has proved Kahn's arguments: markets have been flooded with liquidity, but rather than inflation we have witnessed a general deflation, in the absence—with the possible exception of the USA—of that expansionary fiscal policy which the multiplier argument suggested as the means to increase income and employment.

3 Markets and Prices: Superseding the Theory of Perfect Competition

In his dissertation, reviewing the cost structure of the typical firm in the British cotton industry, Kahn argued that in the short run the average cost curve of the firm is not U-shaped, but is an inverted L, meaning that the average cost remains constant up to a point corresponding to the maximum obtainable level of production. Given this form of the average (and marginal) cost curve and the assumption of a horizontal demand curve in perfect competition, the only way to determine the level of production at which the firm maximizes profits is by postulating imperfect competition, or in other words that the firm is facing a downward-sloping demand curve. In this way Kahn explains why the degree at which productive capacity is exploited during a period of economic downturn falls below full capacity for all the existing firms. His account tallied with the empirical evidence, which revealed that only efficient firms surviving the competitive struggle would be able to continue production, and at a level corresponding to full capacity, while the others would stop production altogether (Marcuzzo 1994).

The dissertation formulates two fundamental questions that arise once the hypothesis of perfect competition is abandoned: (1) If the firms are no longer subject to perfect competition but decide the price themselves, how will they take into account the behaviour (the reactions) of the other firms in the same industry? and (2) Is the pursuit of maximum profit the best way to describe a firm's behaviour? Three papers by Kahn, 'Imperfect Competition and the Marginal Principle' (Kahn 1952a), 'The Problem of Duopoly' (Kahn 1937), and 'Review of Oxford Studies in the Price Mechanism' edited by T. Wilson and P.W.S. Andrews' (Kahn 1952a), represent successive stages in the evolution of his thought and the contemporary literature that developed on the subject. However, what they have in common is the same approach in answering these two questions.

As to the first question, in the Principles Marshall had addressed the problem of the determination of monopoly equilibrium, but he had not ventured very far into the effects of the behaviour of rival firms on a firm's demand elasticity, or, indeed, into the effects of one firm's price policy on the behaviour of rival firms. Despite the works by Cournot and Edgeworth on duopoly, at the time that Kahn's dissertation was being written, a decisive solution to the problem had yet to be arrived at and integrated into general analysis of imperfect competition. There are two aspects of particular interest marking out the dissertation from the previous literature on oligopolistic markets. The first is Kahn's invention of a way to measure the degree of market imperfection assuming linearity in the demand and average cost curves, through the so-called annihilation coefficient (Kahn 1989: 121), which is conceptually identical with that measurement that was subsequently to become known as the 'degree of monopoly'.

The second interesting aspect is the approach taken to the effects on firms' demand curves when one of the rival firms changes its price. A whole section of the dissertation is dedicated to this issue, and here Kahn also criticizes the conclusion Sraffa had arrived at in his 1926 article, to the effect that in an imperfect market the final equilibrium price is the price that would be arrived at if the market were entirely controlled by one single monopolist. Kahn argues his point on the basis of the idea that the slope of the individual demand curves reflects the conjectures that each firm makes about the behaviour of the others. Kahn demonstrates that whatever the hypothesis on the conjectures, the relation between the individual and market demand curves is such as never to produce equilibrium at the monopoly price, but at a lower price, and consequently with a greater quantity than would have been chosen by a monopolist in the same technical conditions (ibid.: 117).

Thus, we must reckon Kahn as among the inventors of the kinked demand curve, even if he defines his treatment of the problem as 'primitive and incomplete' (ibid.: xx). However, it had the merit of introducing 'conjectures' into demand curves, in the form of elasticity values, for analysis of price and quantity produced in a duopolistic or, more broadly speaking, oligopolistic markets. In 'The Theory of Duopoly', which became a classic on the subject, without any mathematical tools, Kahn goes through the whole complicated discussion on the effects of the actions of one duopolist on the behaviour of

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5 This section draws on Marcuzzo (2011).
the other, and thus the role of the strategies implicit in every move of each firm, anticipating the later development in the theories of oligopoly.

As to the second question—the validity of the hypothesis of profit maximization—and in contrast to the traditional marginalist analysis, Kahn unfailingly considered it as the one certain rule upon which to build economic analysis, but interpreted the pursuit of maximum profit by firms as tantamount to a 'trial and error' method rather than as a manifestation of an optimizing rationality on the part of entrepreneurs. But, again marking himself out from approaches alternative to those based on marginal analysis, Kahn never accepted explanations of the price-formation mechanism of the descriptive type or based on a hypothesis of non-"rational" behaviour.

From the theoretical point of view, the leading advocate for the abandonment of the theory of perfect competition and of the hypothesis of profit maximization in favour of price-formation theory based on (fairly steady) mark-ups on (fairly steady) prime costs was Michal Kalecki, who formulated his theory subsequent to a study of the prices, proceeds, and costs of a number of British industries (Marcuzzo 2011: 189). Unlike Joan Robinson, who subsequently adopted it, Kahn remained averse to mark-up pricing, maintaining to the very end,

I think that the concept of the horizontal short period supply is exaggerated. I do not hold altogether with the ideas of Wynne Godley about the fixed write-up margin. Why does the shape of this margin? And of course it varies between firms in accordance with their differences in prime costs (Kahn quoted in Marris 1991: 184).

Similarly, and unlike Robinson, Kahn was never convinced by Sraffa's long-period production prices, prompting Robinson to state bluntly: 'Cannot we agree on Piero's prices for the long run and on Keynes's prices for the short run and leave it at that?' (Robinson to Kahn, 19 May 1961, RFK 13/90/6/199-200).

4 Reforming International Economic Institutions

Kahn was always concerned about the capacities of the existing international institutions to perform their task of generating virtuous behaviours and opinions in the markets. The role of these institutions should be to create the right conditions for decisions to be arrived at which are 'virtuous' from the point of view of the community, given that the individual pursuit of maximum profit or utility is not always able to generate the optimal outcome for society, nor indeed, over the long period, for the individual. To this end, Kahn was involved in designing and establishing new institutions which could foster international cooperation and trade.

In the 1950s, Kahn started to write a monograph for the FAO on the instruments required to curb commodity price volatility. In this report, Kahn analysed in great detail the causes of the price fluctuations of raw materials, which were damaging both for producers, who could never rely on a constant source of income or adequate price signals for their investments, and for consumers, who were subject to sudden price variations. Since both demand and supply of commodities are generally inelastic or adjust only slowly to the conditions of the market, small variations in quantities imply large variations in prices. The causes are therefore structural and policies must be devised to mitigate their impact without resorting to restrictive measures. Kahn advocated the establishment of an international buffer stock agency for each commodity. By buying or selling the commodity on the market, the agency could stop or at least alleviate otherwise excessive increases or decreases in prices. The agency was supposed to be managed by a supranational board, made up of experts chosen not as national representatives but for their knowledge and skills. Under their guidance, the price determination of raw materials, unlike under a quota system, would be not a matter of bargaining strength, but of judgement based on scientific enquiry and expert experience (RFK/2/12.3).

Although Kahn explicitly built on Keynes's proposal for a buffer stock scheme (Keynes 1938), his approach to the use of buffer stocks was entirely original, differing also from other schemes which were being put forward in those years, according to which the managers of the buffer stock were obliged to intervene whenever the price of the commodity hit given limits. Indeed, Kahn's analysis and experience of the workings of commodity markets persuaded him that the managers of buffer stocks could only be successful if they were endowed with much greater freedom of action than Keynes had envisaged, without following any predefined rule. A buffer stock with limited resources could exploit speculation to its own advantage only if speculators were left permanently in doubt about the next decisions of the buffer stock managers. Being subject to no automatic rule for intervention, these managers should aim at increasing the uncertainty under which speculators acted and stabilize prices by influencing market expectations and exploiting bearish or...
bullish sentiments (the similarity with the arguments developed in Kahn's liquidity preference article is undeniable). In other words, the managers of buffer stocks should become speculators among other speculators, not for their own profit, but in the general interest. Kahn's monograph, never completed nor published, for reasons that have yet to be clarified, is a good example of his approach to economics, where mastery of Marshallian partial equilibrium analysis, Keynesian interest in rational decision making under uncertainty, and direct observation of markets are combined into an original analysis with relevant policy implications (Rosselli 2012).

Kahn addressed the institutional aspects of the international payments system extensively years later, working from 1965 to 1969 as a member of the UNCTAD team of experts. He took a hand in the drafting of four reports on the reform of the monetary system to cope with the economic growth needs of both the developing and the developed countries. He contributed to these issues with important papers, reconstructing the design and implementation of the new international monetary system that came into being in the aftermath of the Second World War. His essays 'International Regulation of Trade and Exchanges' (Kahn 1952b), 'The International Monetary System' (1973), 'Remarks' (Kahn 1974), and 'Historical Origins of the International Monetary Fund' (Kahn 1976d) offer examples of his rare ability to combine detailed knowledge of institutional arrangements and accuracy of historical reconstruction with concern for the policy implications of institutional choices.

5 Kahn as a Cambridge Economist

In an earlier work we characterized the Cambridge economists in the interwar years as a group whose identity stemmed from motivations, values, life-styles and work-styles, leaving room for reciprocal respect, overriding many contrasts, and keeping the sense of belonging alive. . . . the points of theoretical division, precisely because they generated discussion, did not break the group up but served to form a connective tissue; . . . precisely because there was no common corpus of accepted ideas to defend, the characteristic feature seems rather to have been elitism—a system of cooption based on characteristics that were neither ideology nor exactly academic performance or success, but rather the features of a moral and intellectual aristocracy (Marcuzzo et al. 2008: 583).

Kahn fits this description perfectly and, although not a prolific writer, he had an extraordinary influence. This can be seen in the two most important books produced by Cambridge economists in the 1930s, Keynes's General Theory and Robinson's Economics of Imperfect Competition.

Kahn contributed more significantly than anyone else in the circle around Keynes to the Keynesian revolution. The relations between Keynes and Kahn were strong, continuous, and fertile, with an apparently paradoxical inversion of roles: it was the pupil who intervened to correct, tidy up, and sound out the master's rationale. There are aspects independently worked on by Kahn that Keynes subsequently incorporated, adapting them to his aims and format, which eventually became part of The General Theory, readjusting the framework upon which his Treatise on Money had rested. The major points where Kahn's influence can be better appreciated are short-period analysis and the application of aggregate demand and supply to determine price levels and equilibrium quantities. Within this framework, the multiplier principle and the supply schedule for output as a whole were tools that proved particularly productive in building the new theory.

The other intellectual and indeed strong personal relationship which was pivotal in Kahn's life was with Robinson. There is hardly a theoretical work by Kahn in which mention is not made, with approval, of the ideas of Robinson, showing how the work of one would be carefully read and commented upon by the other, even when their main fields of research and approaches diverged, as they soon did after their joint work on imperfect competition and Pigouvian themes in the early 1930s. Their collaboration started during the writing of Robinson's Economics of Imperfect Competition. The collaboration probably proved congenial from the outset because they both shared a method of analysis based on meticulous classification of all the possible combinations of two or more elements, the reasoning often going: if X can be A or B and Y can be C or D, let us examine all four combinations AC, AD, BC, and BD. Behind this method of reasoning there were, however, probably two different needs. Robinson had no other analytic tools at her disposal. She knew absolutely nothing of calculus, and headway could only be made in a rigorous manner by breaking the problem down into simple cases which might be examined one by one. Kahn had been educated as a physicist and this method satisfied his need for order, his love for taxonomies, as well as paving the way to pinning real cases corresponding to the theoretical cases examined. However, since Kahn had mathematical demonstration at his command, we cannot tell whether his choice in suggesting to Robinson that she use geometry instead of calculus for the proofs in the book was dictated by a personal preference for the graphically representable or the decision to use only such tools (high school geometry,

1 Kahn published only one volume of collected essays, Kahn (1972).
trigonometry) as were accessible to Robinson and the average economist (see Rosselli 2005). After the Second World War, their interests somewhat diverged since Kahn did not take part in the capital controversy of the 1960s and 1970s and was more involved in active economic policy, but many intellectual ties continued to unite them: the fight for Keynesian ideas and against laissez-faire policies, both in the public arena and in Cambridge academic life.

Kahn's relations with both Keynes and Robinson, although obviously different in kind, epitomize the kind of intellectual collaboration that was typical of Cambridge: a sharing of time and space, which 'also entailed a sharing of knowledge and the habit of exchanging rather than possessing ideas' (Marcuzzo and Rosselli 2005: 10).

Finally, mention should be made of the influence on Kahn of Gerald Shove, since it is often neglected. Shove, who became Lecturer in Economics in 1923 and only in 1926 was made Fellow of King's College, published very little; he worked for years on a book which was never finished and all his papers were destroyed after his death in accordance with his will. However, we know that he was an excellent teacher and all his students preserved fond memories of and admiration for him. Kahn was no exception. He learnt his Marshallian economics from Shove, attending his lectures, and in his Fellowship dissertation he acknowledges his debt to Shove. Respect and affection lasted over the years; it was Kahn who wrote Shove's obituary for the King's College Annual Report in 1947 and, in his article on Shove for the Palgrave Dictionary, he called him a 'dauntless thinker'. The apparatus of Marshallian partial equilibrium, on which Kahn's reasoning rested all his life, was part of Shove's enduring legacy to him.

6 Conclusion

In the House of Lords, where Kahn made his maiden speech on 28 July 1966, he intervened on various economic matters more than 30 times over 10 years, initially under Wilson's first Labour government, then under Heath's Tory government, and finally under Wilson–Callaghan's Labour governments, making his last speech on 26 January 1977. This was the period in Britain and elsewhere of two-digit inflation following the oil shock and the wage disputes which hit most industrialized countries, accompanied by the rise of monetarism and the attack on Keynesian theories and the expansionary Keynesian policies of the 1950s and 1960s.

If we ask ourselves what Kahn's legacy is, a good answer may perhaps be found in his parliamentary speeches of the mid-1970s, in which he argued out his strong beliefs on the specific issues of unemployment and inflation and the general approach to economic policies. Contrary to Friedman's dictum, Kahn objected to the doctrine that inflation is always and everywhere a monetary phenomenon; it is rather the outcome of the growth of money wages and increases in the price of imported commodities. It follows that the proposed monetarist 'cure' of reducing the growth of the money supply misses the point, since it has neither a direct nor an indirect impact on prices through an increase in unemployment following a monetary restriction (unless unemployment reaches politically unacceptable levels). Kahn was highly critical of the expectations-augmented Phillips curve, arguing that there was no evidence of an inverse relationship between the rate of growth of money wages and increases in the rate of unemployment (House of Lords speech, 30 July 1974). Against the money illusion behind the demand for higher money wages, he denounced the pernicious leapfrog effect which would follow, keeping real wages lagging behind money wages. Thus, the role of government is to carry out an incomes policy, reassuring the trade unions that employers would not take advantage of wage moderation to increase prices in order to reap higher profit margins, while at the same time guaranteeing employers that the increase in productivity brought about by their investments will not be wiped out by demands for wage rises and labour disputes.

The propelling fuel for the economy, according to Kahn, is not consumption deriving from high wages, but rather investment which is necessary to boost productivity and thus competitiveness. For him, restrictive monetary policies discouraged both. Profits, or rather the expectation of profits, in favourable economic conditions are the recipe for growth. It follows that expansionary public expenditure is not always the solution, as simple-minded Keynesianism would have it. True to the spirit of his mentor—Kahn prided himself on being remembered as 'a disciple of Keynes' in the last interview he gave (Kahn 1988)—he favoured a middle way between action by the government and market incentives: the former to check unemployment, the latter to generate investment.

References

Works by Richard Kahn

Other Works Referred To

