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The Keynesian Revolution: A Research School Analysis

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Name: Robert A. Cord

College: St Edmund's

Department: History and Philosophy of Science

Supervisor: Dr G.C. Harcourt

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Preface

My special thanks go to Dr Geoff Harcourt, my supervisor at Cambridge, who, as always, provided extensive advice and guidance during the writing of this thesis. Thanks also go to Dr Jon Agar and Professor John Forrester for their many useful suggestions. Responsibility for any errors is mine and mine alone.

I dedicate this thesis to my wife, Doris, for her love and support throughout. I would also like to thank my mother and my friends for their encouragement.

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except where specifically indicated in the text.

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Summary

Various explanations have been put forward as to why the 'Keynesian' Revolution occurred. Some of these point to the temporal relevance of the *General Theory* while others highlight the importance of more anecdotal evidence, such as Keynes's relations with the Cambridge 'Circus'. However, no systematic effort has been made to bring together these and other factors under one recognised framework of analysis. This thesis attempts to fill this gap by making use of a well-established tradition of work within the history of science literature devoted to identifying the factors which help to explain why certain research schools are successful and why others fail. This body of work is based primarily on the ideas of Jack Morrell and Gerald Geison. More specifically, Morrell and Geison make use of a combination of 14 intellectual, technical, institutional, psychological and financial factors which, they argue, help determine the relative performance of research schools.

We apply the research school approach to the development very specifically of macroeconomics in the 1930s and 1940s. Our findings suggest that it does indeed provide a reasonably coherent explanation as to why the revolution in macroeconomics witnessed during this period was specifically labelled 'Keynesian', this despite the fact that Keynes was far from being the only economist attempting to gain dominance for his ideas. Thus, as well as Keynes, we apply the same research school analysis to the cases of Hayek and Kalecki and use it to explain why they were overshadowed by Keynes. On a final note, although it is clear that Keynes independently possessed a number of the attributes necessary to establish a successful and sustainable research school, the thesis also identifies the theories and activities of Marshall as providing an important foundation from which Keynes was able to mount his own revolution.

The Keynesian Revolution: A Research School Analysis

Section 1. Introduction

'The Keynesian Revolution is one of the most remarkable episodes in the entire history of economic thought: certainly never before and perhaps never since has the economics profession been won over so rapidly and so massively to a new economic theory' (Blaug 1991: 171).

'[N]o sign in the pre-1936 literature warned how quickly and completely Keynesian economics would come to dominate the discipline' (Laidler 1991: 295).

Historians of economic theory have posited a variety of explanations in their attempt to account for the success of John Maynard Keynes's (1883-1946) The General Theory of Employment, Interest and Money (1936). These range from its supposedly revolutionary nature to the idea that the timing of the General Theory's appearance was fortunate as it took place when the world was struggling with the 'most severe and widely diffused...contraction of modern times' (Friedman and Schwartz 1963a: 299). Other accounts rely on more anecdotal evidence. For example, stress is often placed on the relationship between Keynes and the 'Circus', a group of able, young Cambridge economists who dissected Keynes's ongoing work over a number of months from November 1930 to the spring of 1931 and whom, some argue – although it has been a matter of some controversy – played a key role in helping Keynes to develop crucial ideas in the years leading up to 1936. This emphasis on anecdote has been influenced by the 'oral tradition' at Cambridge, 'a style which relies heavily on allusion to and caricaturization of the work of a few eminent contemporaries and predecessors rather than on meticulous documentation of sources' (Johnson and Johnson 1974: 261).

Taken together, these explanations should, one might hope, provide a reasonably coherent account of why, in the 1930s and 1940s, the emerging Keynesian School centred on Cambridge, England, but with prominent outposts, notably in the United States - was successful and thus why the revolution in macroeconomics which took place during this period was specifically labelled 'Keynesian'. However, little attempt has been made to bring these explanations under one analytical framework. The main aim of this thesis is to provide such a framework. To do this, it is necessary to adopt a more innovative approach than those typically employed by historians of economic theory. More specifically, we will use the body of work pioneered by Jack Morrell (1972) and formalised by Gerald Geison (1981) within the history of science literature which examines why 'research schools' succeed or fail. Morrell-Geison (as it shall be referred to) draws together a range of intellectual, technical, institutional, psychological and financial factors that help determine the relative performance of a school. Despite its heuristic appeal, the application of Morrell-Geison as a means of better understanding the 'rapid and massive' success of Keynes's masterpiece has received almost no attention from those interested in the history of economic theory.¹

We will proceed as follows. Section 2 reviews the existing literature which has attempted to explain why Keynesian economics emerged when it did and why it rose to prominence in such a relatively short period of time. Even though there are overlaps between the evidence presented in Section 2 and in the main section, it is clear that there is no pre-existing systematic and convincing account of why Keynes was successful. Section 3A very briefly identifies links between economics and 'science', while Section 3B details the research school approach before discussing the development of the relevant literature since Morrell-Geison.

Section 4 is the main focus of the thesis. It explains each of the criteria postulated by Morrell-Geison and shows how, when considered as a whole, they provide a coherent explanation of why the Keynesian School was victorious in the 1930s and 1940s. (The thesis does not attempt to apply the Morrell-Geison criteria outside of the period in

¹ Coats (1993: 55) suggests the possible utility of the research school approach in helping to explain key episodes in the history of economic theory but stops short of any further analysis. Harry Johnson (1975: 95-97) and Walker (1986) look at various intellectual and sociological factors behind Keynes's success; however, there is no attempt in either case to present these factors within a unified whole.

question, although it is acknowledged that the ideas of Hayek and Kalecki have become more prominent over recent decades.) As will become clear, a key element in Keynes's success was the many research school-type benefits conferred on him and his immediate followers by the work and activities of Alfred Marshall (1842-1924).

The Morrell-Geison approach also helps to explain why research schools fail. Taking this a step further, where a school is emerging and may have a chance of succeeding, it is vital for any competitor thinkers to not only establish their own school but a successful one if they are to have an improved chance of challenging the emerging school. This is important in the Keynesian case as the 1930s were 'the years of high theory' (Shackle 1967) for macroeconomics, underpinned by a burst of theoretical innovation partly driven by the inability of classical theory to provide a convincing explanation of and solution to the mass and sustained unemployment created by the Great Depression.² In Kuhnian terminology, the existing paradigm had been 'both accentuated and laid bare' (Sweezy 1953: 258), thereby opening the way for new theories to battle it out until one became dominant. Keynes was but one participant in this battle, and, as it happened, the 'winning economist' (Klein 1966: 94).

The work of Friedrich August von Hayek (1899-1992) and Michal Kalecki (1899-1970) was also important at the time. Both men conceived their own theoretical systems. With regard to Hayek, his appointment to a professorship at the London School of Economics (LSE) in 1931 had an added resonance as he was there in part to 'fight Keynes' (Hayek in Kresge and Wenar 1994: 77). This formed part of a wider battle between Cambridge and the LSE for supremacy in English economics, a battle which, during the period under consideration here, was unambiguously won by the former. Within the context of research school analysis, the Hayek case is therefore particularly interesting given his failure to establish a rival school to the Cambridge Keynesians.

As he was mostly a lone thinker during the early years of his career, the case of Kalecki is more difficult. Despite producing a system which anticipated and was

 $^{^{2}}$ As Shackle (1967) notes, 'the years of high theory' were marked not only by significant changes in macroeconomic theory but also by innovations in value theory and the theory of imperfect competition.

technically superior to that contained in the *General Theory*³ and although he amassed something of a following in later years, Kalecki seems to have made little effort to establish a research school in the 1930s and 1940s. In such circumstances and up against a man with the influence and authority of Keynes, it is little wonder that Kalecki was overshadowed. Nevertheless, he is a good example of the dangers of being outside the academic mainstream. The implication of the analysis to be offered here is that Kalecki's ideas failed to stimulate a revolution because he did not enjoy the benefits conferred by a successful research school. Had he benefited from the various personal, social and institutional advantages enjoyed by Keynes, there is some reason to believe that it would have been Kalecki's name on the lips of subsequent generations of economists rather than Keynes's.

Section 5 will summarise the performance of Keynes, Marshall, Hayek and Kalecki as measured against the Morrell-Geison criteria and conclude by examining potential avenues for future research.

Section 2. Review of the Literature

The existing literature which attempts to explain the emergence and rapidity of the Keynesian Revolution is somewhat haphazard, the consequence being that there continues to be considerable debate over the issue. Before we attempt to consolidate these explanations, it is worth reviewing the literature in question. This will not only help to set the scene but will also highlight the advantages of employing research school methodology as a means of more properly separating out the various factors which contributed to the Keynesian story.

A key focus for explanations of the Keynesian Revolution has been on the appropriateness of the policy prescriptions supposedly implied by the *General Theory*. This springs from the fact that the book appeared just a handful of years after the

³ Harcourt (2006a: 163) argues that Kalecki has 'a strong claim to be regarded as the greatest all-round economist of the twentieth century', citing not only his anticipation of the *General Theory* but also his work on planning in democratic socialist countries and on development.

onset of the Great Depression.⁴ Some basic facts highlight the severity of the downturn: in the United States, unemployment equalled 8.7% of the non-agricultural labour force in 1930, well up from 3.2% in 1929, while consumer demand collapsed, with sales of new cars falling from nearly 4.5 million in 1929 to around 1.0 million in 1932. At the sectoral level, iron and steel output declined by 59% between 1929 and 1932 (Badger 1989: 18, 20-22). The situation in Europe was just as bad: in Britain, national income contracted by 3% a year between 1929 and 1931 (M. Thomas 1994: 343). On the Continent there were bank collapses in a number of countries and significant monetary contractions in Austria and Germany (ibid.).

Given the broadly temporal correspondence between the Depression and the appearance of the General Theory, the 'policy appropriateness' argument has become the leading explanation of the Keynesian Revolution. Amongst those who place a significant emphasis on this factor, one of the most succinct is Deane (1978: 184): 'No doubt the principal reason why the General Theory had such a powerful impact...was that the time was ripe. Its abstractions seemed more relevant to the conditions of the 1930s than the competing theories.' Others who attach a similar importance to this explanation include Shackle (1967), Winch (1969) and Clarke (1998). Shackle argues that the 'profound intellectual shock' (ibid., 128) of the Depression was one of the catalysts not only for Keynes, but also Kalecki and, more contentiously, Myrdal, of the Stockholm School.⁵ Winch (ibid., 171) identifies some of the theoretical novelties contained in the General Theory and whether any of them were the motive force behind Keynes's success. Amongst these supposed innovations was Keynes's 'proof' of underemployment equilibrium, his treatment of saving and investment, and his emphasis on changes in output rather than changes in prices. Winch argues that the underlying importance of the General Theory lies in the link it makes between saving and investment and how this enabled Keynes to construct his theory of income determination and effective demand from which policy prescriptions could be derived. Finally, Clarke (ibid., 185) notes that Keynes is 'often accused by monetarists (led by Hayek) of writing the General Theory 'as a tract for the times' - a

⁴ The causes of the Depression have been well documented. Important treatments include Friedman and Schwartz (1963b), Galbraith (1955), Kindleberger (1973), and Temin (1976).

⁵ Laidler (1999: chap. 3) considers in detail the development of Swedish macroeconomic theory during the 1930s.

legitimation of his immediate policy proposals in the context of the mid 1930s but without real theoretical significance.' Clarke inverts this argument by suggesting that Keynes was, in fact, 'tactically unwise' (ibid.) to publish when he did: if the *General Theory* did have any theoretical importance, it was bound to be diluted as governments concentrated on its implications for policy. As far as the analysis in this thesis is concerned, our main focus will be on the primary role played by the multiplier and stable forms of IS-LM in the forging of the revolutionary status secured by the *General Theory* in the 1930s and 1940s. At the same time, it will also become clear that during this same period, major objections to IS-LM emerged, not least from some of Keynes's closest followers, who argued that IS-LM failed to properly account for factors such as uncertainty and expectation formation, a view which, in turn, has, over the years, arguably got the upper hand against that which sees stable forms of IS-LM in particular as central to the Keynesian Revolution.

As we have seen, Keynes's theories far from enjoyed a monopoly position when it came to explaining and addressing the Depression. Hayek's *Prices and Production* (Hayek 1931a) was a major work in the field of business cycle theory. Laidler (1991: 299) goes as far to argue that, for contemporary observers, Hayek's ideas represented 'a line of inquiry at least as likely to come to dominate the discipline as anything being developed at Cambridge.' There were important similarities between *Prices and Production* and the *General Theory*, including a concern for the place of monetary theory within orthodox economic theory and a stress on the importance of historical time and uncertainty. But these theoretical connections were overshadowed by contrary stances on approaches to policy: whereas Keynes provided policy-makers with a rationale for intervention, Hayek's position was that the authorities should be 'hands off'. Given the economic conditions of the 1930s, it is hardly surprising that a 'theory that taught that the [D]epression simply had to be waited out could [not] withstand the arrival of Keynesian analysis' (ibid., 319).

It goes without saying that the policy appropriateness argument is a very important and interesting one, and, as a result, it should be afforded due consideration in any serious examination of the nature and causes of the Keynesian Revolution. But even given these sentiments, the issue of temporal relevancy does leave a number of questions unanswered. Despite the 1937 downturn in the United States, the worst effects of the Depression had been ridden out by 1936.⁶ Moreover, as with some of its theoretical claims, many of the policy initiatives associated with the *General Theory* – even if they were not explicitly mentioned in its pages, itself a reflection of the fact that the book was primarily a theoretical investigation, with policy considerations being secondary – had a long history prior to Keynes. Most notable was the call for government to institute public works programmes. As far back as 1924, Lloyd George had advocated greater government involvement in the economy through increased spending on infrastructure; cheap money was another idea with a pre-Keynesian provenance. Meanwhile, in the United States, Leon Keyserling and Herbert Stein, both former heads of the Council of Economic Advisers, have argued that the *General Theory* had little or no impact on fiscal policy in the years following its publication (see Salant 1988: 61). Instead, under the auspices of the New Deal, policy was driven by the 'political and humanitarian necessity to provide relief for labor and agriculture' (Smithies 1951: 596).

It would, of course, be churlish to completely reject Keynes's theoretical framework on these grounds, not least because of its important role in helping to bring more attention to ideas previously suggested by others, notably the effective demand or under-consumption theories of Malthus and Hobson.⁷ Nevertheless, the arguments above make it more difficult to assign to Keynes a major role in helping to relieve the worst effects of the Depression either in Europe or the United States. Instead, there seems to have been a feedback mechanism at work between the *General Theory* and the economic conditions of the time, the same being true of *Prices and Production* and Kalecki's theories: each of these sets of ideas was a *response* to the slump and provided guidance on what should be done when *another* recession or depression occurred. Evidence from the sociology of science literature provides some explanation

⁶ Krugman (2007: xxxvii) makes the point that: 'It would be a wonderful story if [the] *General Theory* showed the world the way out of depression. Alas for romance, that is not quite what happened. The giant public works programme that restored full employment, otherwise known as the Second World War, was launched for reasons unrelated to macroeconomic theory.'

⁷ Keynes considered Malthus to be the 'first of the Cambridge economists' (Keynes in *The Collected Writings of John Maynard Keynes* (hereafter CW) X: 107). Blaug (1994: 1,210) notes that 'what Keynes took from Malthus was a name for a new concept – effective demand – in the effort to invent a pedigree for his own ideas.'

for this feedback process, Robert Merton (cited in Simonton 2004: 10) maintaining that 'discoveries and inventions become virtually inevitable (1) as prerequisite kinds of knowledge accumulates in man's cultural store; [and] (2) as the attention of a sufficient number of investigators is focused on a problem – by emerging social needs, or by developments internal to the particular science, or by both.'

The parts played by Keynes, Hayek and Kalecki in this unfolding story were wholly different. Keynes was the archetypal insider, a man at home both at Cambridge and in Whitehall, even if he did combine this with a reputation for being an establishment maverick. Unusually for an economist, he also had a high public profile, founded on the controversy that surrounded *The Economic Consequences of the Peace* (1919) as well as his journalism. Meanwhile, on the back of his growing reputation in Austria and with the support of Lionel Robbins – who had become head of the LSE's Department of Economics in 1929 – Hayek made the journey to London with the aim of becoming a world authority on the cycle. Hicks (1967: 203) confirms the part played by Hayek: 'When the definitive history of economic analysis during the nineteen-thirties comes to be written, a leading character in the drama (it was quite a drama) will be Professor Hayek... [T]here was a time when the new theories of Hayek were the principal rival of the new theories of Keynes.'

The Keynes/Hayek rivalry also 'enveloped their respective institutions...and...determined the research programmes of their colleagues' (McCormick 1992: xi). As a result of Marshall's earlier endeavours, Cambridge had become England's leading centre for economics teaching and research. It was not surprising then that teaching at the LSE had come to be dominated by Marshallian theory: even if Professor Edwin Cannan – the School's most eminent economist before the Robbins/Hayek era – did not always agree with Marshall, he was at heart a Marshallian (see Maloney 1985: 72). All the same, his retirement in 1926 meant that there was an opportunity to challenge Cambridge.⁸ In fact, the first salvo in the LSE's

⁸ Even if there was an emerging rivalry between Cambridge and the LSE, this did not stop the establishment in 1923 of the London and Cambridge Economic Service (LCES). It was founded by the economics departments at Cambridge and the LSE with the aim of improving the measurement of business indicators. Based at the LSE, the LCES was for a number of years overseen by an executive committee made up of Keynes and Henderson from Cambridge and Beveridge and Bowley from the

doomed assault on Cambridge had been fired the year before when Robbins had attacked Keynes's views on monetary policy (see O'Brien 1988: 106). Robbins realised relatively early on that he had to create a new tradition of thinking, one that would establish the LSE as an institution with different ideas from Cambridge. It was this realisation which provided much of the motivation behind Hayek's recruitment.

Meanwhile, Kalecki was working more or less alone in Poland, seeming to have 'sprung, full-grown, from his own brow' (Solow 1975: 1,331). Asimakopulos (1976: 365) goes further in describing Kalecki's contributions to understanding the cycle: '[His] achievement would have been remarkable in any case, but that it came from a young man who had been unable to complete his formal education, and who was largely self-taught in economic theory, makes it awe-inspiring.' While Hayek's description of the economic situation during the 1930s was unquestionably distinct from Keynes's, Kalecki was 'independently approaching the same goal' (A. Robinson 1947: 42) as Keynes. This was one of the first formal recognitions of Kalecki's work coming, as it did, more than a decade after his articles on the cycle were published in Polish and French. Klein (1951: 447) also helped to put Kalecki on the map, arguing that he had created theories that contained 'everything of importance in the Keynesian system, in addition to other contributions', while Joan Robinson (1952: 159) provided further ammunition for Kalecki's case.⁹ But even if Kalecki was not in direct competition with Keynes in the same way as Hayek, 'How did it happen that [he] remained relatively obscure, hidden behind Keynes for so long despite his originality?' (Steindl 1981: 596). In trying to answer this question, Steindl identifies Kalecki's personal background (the fact that he was 'a Jew, a newly arrived "outcast" from the east') (ibid.), his lack of influence on the powers that be (academic and governmental), and his reformist socialist zeal, as being important.

LSE, and continued operations right through the Keynes/Hayek period. The detailed history of the LCES is still to be compiled.

⁹ The question of whether Kalecki anticipated Keynes has received extensive coverage (see, for example, Asimakopulos 1983 and Chapple 1991). This body of work was triggered mostly by Patinkin (1982), which itself partly draws on Merton's (1957, 1961) ideas on how recognition influences the reward system in science and the role of multiple discoveries respectively. The preponderance of opinion appears to favour the view that Kalecki did indeed independently discover the principal propositions contained in the *General Theory* (see Harcourt 2006a: 63).

Returning to Keynes, given that the influence of the *General Theory*'s theoretical innovations was limited by the fact that some of them had already been suggested, it must have been the case that other factors were important in explaining the 'Keynesian avalanche'. Leijonhufvud (1968: 397) acknowledges this when he states that if we accept the basic premise that the Keynesian Revolution was indeed a revolution – itself a contentious claim – 'the Sociology of Economic Knowledge would seem to acquire a priority on the efforts of economists that one would be loath to accord it.'

Not all practitioners have been as reluctant as Leijonhufvud to draw on other disciplines. One of these is A.W. Coats, whose work strongly reflects a recognition of the interaction between economics and sociology. Despite its length, the following passage from Coats (1993: 25) sums up both the significant lacuna that remains to be filled in the sociology of the history of economic theory and why, regarding the development and influence of macroeconomics in the 1930s and 1940s, such a subject is worthy of more attention: 'In the case of economics...even such hackneved subjects as the Ricardians, Marxians, Austrians, and Keynesians, have not yet been examined from a systematic sociological standpoint, partly because historians of economics have usually been unwilling to go beyond the conventional history of ideas. Consequently, even in such a heavily worked-over topic as J.M. Keynes and Cambridge, on which there is a vast literature of theoretical analysis, interpretation, and textual exegesis, casual empiricism, obiter dicta, and personal reminiscence have tended to predominate in accounts of the origins, evolution, reception, influence, and scientific importance of the General Theory, although it is widely acknowledged that a fascinating combination of personality, beliefs, behaviour, social background, academic location, career experience, sociopolitical attitudes, colleagues in Cambridge, and contemporary events, all played a significant part. If, as seems clear, there has been no comprehensive and systematic investigation of the historical and sociological, as well as the intellectual context of the most important single economics book published in [the 20th] century, the case for the sociology of economic science requires no further support.'

Section 3A. Some Common Ground between Economics and Science

If we are to employ a recognised methodological approach from the history of science to explain an important episode in the history of economic theory, it is worth briefly considering whether there is any existing common ground between economics and science. At least three such connections can be identified: i. At a very basic level, various authors have claimed that economics is, in fact, a science. Thus, there is Thomas Carlyle's famous coining of the term "dismal science" to describe economics in the context of the Malthusian population hypothesis. At the other extreme is the position adopted by, for example, Simon (1981) who argues that as the Earth's population has increased, per capita consumption of food has also risen as a result of technological advances. Economics should therefore be known as the "happy science". Keynes stopped short of putting economics on the same footing as the natural sciences, describing it instead as a "moral science" (see *The Collected Writings of John Maynard Keynes* (hereafter CW) XIV: 297). Contrast this with the word "Scientific" to be found in the title of Paul Samuelson's Collected Papers (e.g. Samuelson 1966).

ii. A second and more sophisticated link relates to the investigative methods used by economists and scientists. The closest economists come to thinking about their subject as a science is when they ask *positive* questions, i.e. questions about *how* the economy actually works. But economists are also concerned with policy-making. The primary methodological objective for those who devise policy is to achieve as much alignment between positive economics and *normative* economics, the latter being judgements about what *should* be rather than what is.

There is a strong chance that economics will never achieve the status of a natural science, rigorously employing empirical investigative methods to accept or reject theories. Some might argue that economics is almost an exact science alongside, say, physics: both use speculation, observation and experiment to explain aspects of the world. However, physics wins out against economics as it has identified 'objective' laws, something that still eludes economists. There have been attempts to establish greater objectivity in economics, an example being Kaldor's 'stylised facts' in relation to growth theory. Perhaps more controversially, at least from a methodological point

of view, is Friedman's (1953) claim that a solid economic theory is one which makes good predictions and that the realism of any assumptions underlying these theories should only be of secondary importance. Of course, there are those who might hold that the chance of making good predictions is directly correlated with the presence of realistic assumptions. However, this is not a matter for this thesis. What we can at least say here is that if the likelihood of the discovery of objective laws is directly related to the time a particular discipline has been in existence, the chances of such laws being found in economics would appear to have already receded to zero. Economics may, after all, have to settle for being a moral science.

iii. The two links noted above are important insofar as they have encouraged debate within and between economics and the sciences. Recent efforts specifically aimed at bringing the history of economic theory and the history of science closer together have concentrated on actual intellectual crossovers. Weintraub (1992: 185) states that: 'The two subdisciplines, each somewhat marginalized within their respective larger scholarly communities of historians and economists, are beginning to meet in journal issues, cross-citations, and conferences.' At a sociological and philosophical level, Schabas (1992: 198-199) adds that this merging process constitutes an important step in the Comtean-style evolution of the history of science literature: dedicated research in the field began in the 1950s with work on the history of the exact sciences, followed by a focus on the history of chemistry. The history of biology became a distinct discipline in the second half of the 1960s, followed by a greater interest in evolutionary theory in the 1970s and 1980s. Finally, the 1980s saw the emergence of the history of the social sciences.¹⁰ The work of Philip Mirowski, among others, can be viewed as part of this last trend. In discussing the marginalist revolution of the 1870s, Mirowski (1984: 364) notes the 'unity of technique [between] physics and economics', but also argues that economics suffers from 'physics envy' (see Mirowski 1989).

¹⁰ If the case for historians of economic theory to make greater use of the methods employed by historians of science is accepted, then the application of research school analysis to the history of economic theory can also be seen as a valuable addition to the recent increase in interest in "interdisciplinary" studies. As Weingart and Stehr (2000: xi-xii) point out: 'Observers note a growing pluralism both in the locations of knowledge production and in the patterns of initiation, production, and use of knowledge as well as its disciplinary combinations.'

Mirowski was not the first to argue the case for a close link between economics and physics: Osiatynski (1999: 262) notes how Kalecki believed that 'economic laws could be formulated similar to laws in thermodynamics' and that, in the late 1920s and early 1930s, Ragnar Frisch 'sought general analogies between economics and physics' (ibid.). However, with the contents of economics journals looking increasingly like exercises in pure mathematics, a more accurate view is that of Hodgson (2001: 5), who asserts that economics 'suffers perhaps more from mathematics envy rather than physics envy.'

Section 3B. Research School Analysis

The lineage of the research school literature is an important one. As Schabas (2002: 210) notes, the study of the history of science up to the 1970s was characterised by an internalist approach. The subsequent abandonment of internalism, however, brought with it the disadvantage of largely ignoring the content of scientific theories, although a simultaneous recognition of the importance of institutional factors, as exemplified by research school analysis, was one of the more useful outcomes of this shift in focus. Another rebalancing then took place which synthesised the earlier emphasis on scientific theory with broader explanations from the social sciences – notably sociology and philosophy – as to why the sciences have developed as they have.

i. Research School Analysis: Morrell and Geison

The use of the word "school" to describe collective research has a long history. Servos (1993: 5) points out that, 'Among those scientists and observers of science who used the term *school* in the nineteenth and early twentieth centuries, none was fonder of it than...Scottish polymath John Theodore Merz. His *History of European Thought in the Nineteenth Century*...deploys the term promiscuously.' Prior to Morrell, little attempt was made to systematically study research schools, surprising given the growth in their popularity in 19th century science.

At a broader level, the study of research schools is surely a worthwhile endeavour as it teaches us that the work produced by such collectives generally has 'a better chance of surviving and flourishing in the crowded environment of modern intellectual life than do the ideas put forth by individual "mutant" scientists, whether cranks or geniuses' (Geison 1993: 234). Moreover, 'some research schools are bound to lose out in competition with others. The point...is to identify which factors are responsible – and to what extent – for these differential outcomes' (ibid.). Enter Morrell.

Morrell's opening remark in Section 1 of his 1972 groundbreaking paper on research schools sets the scene for what is to come: 'In trying to postulate and analyse the most propitious conditions under which a laboratory-based research school could flourish in the first half of the nineteenth century, we must clearly take account of the chief elements of such an on-going [sic] enterprise whether they were intellectual, institutional, technical, psychological, or financial' (Morrell 1972: 3). The methodological approach adopted by Morrell is a simple one: he uses relevant evidence to compare the chemistry schools created by Justus von Liebig at the University of Giessen and Thomas Thomson at the University of Glasgow. Utilising a mixture of factors, Morrell is able to provide a convincing explanation as to why Liebig's school succeeded and Thomson's failed.

Morrell's work was made more formal and extended by Geison (1981). Geison identified a set of 14 criteria which he then applied to nine different research schools, including Liebig's and Thomson's, but also Michael Foster's school of physiology at Cambridge in the late 19th and early 20th centuries and Enrico Fermi's school of nuclear physics at Rome, which existed from the mid-1920s to the mid-1930s. As Geison argues, Morrell's work did not represent a finely tuned 'model' for the assessment of schools. However, it was the case that it could be 'quite easily converted into a sort of checklist of factors' (ibid., 26) for such an assessment. The result is that Geison is able to demonstrate that the relative success or failure of a school can be approximated by how many of the 14 criteria it fulfils, with a school meeting all 14 criteria classified as "ideal". (For reasons of readability, the 14 criteria are listed in the opening part of Section 4.)

ii. Research School Analysis since Morrell and Geison

The research school literature has been significantly expanded and strengthened since Morrell-Geison. Morrell (1993: 124) himself has described surprise at the fact that his

original article has secured a reputation 'as one of the most influential publications in history of science in the last twenty years.' The surprise should not be so great: his 1972 paper provided a means of deciphering the history of science in a way that was 'historically sensitive and eminently teachable' (Servos 1993: 9) whilst also presenting rich pickings as it implied numerous avenues for further research.

One such avenue has been a focus on how the term "school" should itself be defined and deployed. Broadly speaking, a school can mean one of two things, identified by Rocke (1993: 77) as the *institutional* type or the *cognitive* type of school. Research in an institutional school is carried out in a locality, usually a university department. All the workers know each other and regularly interact. Conversely, cognitive schools are characterised by workers who support the school's research programme but are geographically dispersed; the scope for interaction is naturally much lower than in an institutional-type school.

We will see when we look at some of the Morrell-Geison criteria – for example, 'Leader with institutional power' – that the distinction between institutional and cognitive schools is a useful one regarding the Keynesian Revolution as Keynes enjoyed the benefits of both types in the 1930s and 1940s: his institutional school was based at Cambridge, England, while his cognitive school encompassed important centres of support at both the LSE and Oxford in Britain as well as in the United States (especially at Harvard) and Canada. Hayek, on the other hand, only ever had the very limited initial support (if that) of an institutional school at the LSE, while Kalecki had neither an institutional school nor a cognitive school. In spite of Geison's (1993: 230) claim that 'such close attention to matters of terminology can become an obsession', the obsession can sometimes yield meaningful results.

Another terminological debate revolves around the use of "research school" to describe small collectives of research. Some historians of science, notably Fruton (1990: 1-2), prefer the term "research group" on the grounds that "research school" is often used to describe a group of scientists geographically dispersed but driven by a common research interest. Thus, according to Rocke's categorisation noted previously, Fruton's focus is more on cognitive schools. In operational terms, it seems to make little difference whether we employ "research school" or "research group" to

describe what we are interested in as the criteria identified by Morrell-Geison are sufficiently all-encompassing and malleable to largely preclude the possibility of any other major criteria from being ignored or forgotten. That said, there are some areas which, although not specifically relevant to the case studies considered by Morrell-Geison, are identified in this study as being important in explaining the Keynesian Revolution, Keynes's influence at the political level being one of these.

The relative importance of the 14 criteria outlined by Geison is a further point of interest. Geison (1981: 24) simply lists each criterion, starting with "Charismatic' leader(s)' and ending with 'Adequate financial support', with no attempt being made at a ranking. However, it is clear that some factors are more important than others. Geison himself has subsequently acknowledged that a school's leader plays a key role in determining its success: 'When a research school is led by a talented, effective, and charismatic individual..."institutional" advantages are vastly more likely to come its way' (Geison 1993: 235). Conversely, the absence of such a leader dramatically reduces the chances of success. Keynes's magnetic personality played an important part in his triumph, but it was by no means the only factor at work. Discipleship also played a decisive role. The general point is that while charismatic leadership will more often than not play a leading role in influencing the performance of research schools, it may sometimes be difficult to predict which of the other criteria will be important in determining success or failure.

On a penultimate note, Morrell's original study was concerned chiefly with laboratory-based research schools. Subsequent investigations have, however, also focused on schools which operate outside the confines of the laboratory. As part proof of this, a major review of the state of research school analysis published in the journal *Osiris* in 1993 contained three detailed case studies of non-laboratory-based schools. Furthermore, one of the most notable investigations into research schools post-Morrell – Secord's (1986) analysis of the British Geological Survey in the mid-19th century – is set outside the laboratory.

A final aspect of research school analysis not considered by Morrell but which has been a welcome subsequent addition to the literature is an emphasis on the characteristics of the students or workers around a leader. For instance, Hagen (1993: 178-179) explains that, 'In the abstract an ideal student must be sufficiently independent to nurture and develop the leader's nascent ideas. By doing so the student expands the scope of the research program, perhaps extending it into areas that the leader never imagined at the outset.' Here again, there is some relevance to the Keynesian case, Joan Robinson, in particular, meeting many of the characteristics of the "ideal student", even though Keynes had a closer intellectual relationship with Richard Kahn.

Section 4. Research School Analysis: Keynes, Marshall, Hayek and Kalecki

Having established the pedigree of the research school literature, we now turn to our main focus of attention. Our primary objective here is to consider the Keynesian Revolution within the framework of the Morrell-Geison criteria and to show that they do, in fact, provide a coherent explanation of that revolution. As part of this, we will also examine to what extent Marshall – again from the viewpoint of the Morrell-Geison criteria – laid the groundwork for Keynes's success. Our other main goal will be to assess the work and careers of Hayek and Kalecki in the years prior to and after the publication of the *General Theory*. (As a cautionary note, Kalecki's early career in Poland has not been well documented. A number of useful observations can still be made about his life and work during this period, but they are necessarily more limited than those relating to Keynes, Marshall and Hayek.)

We will proceed as follows. Immediately below are the 14 criteria identified by Geison as a result of his and Morrell's work on research schools. Each criterion will be considered in turn: To begin with, there will be a short explanation of the criterion being examined. This is followed by an examination of Keynes, Marshall, Hayek and Kalecki respectively within the context of that criterion. Concluding each criterion will be a short summary drawing out the main aspects and results of the preceding discussion.

The 14 criteria cited by Geison (1981: 24) as determining the success or failure of research schools are as follows:

- i. 'Charismatic' leader(s)
- ii. Leader with research reputation
- iii. 'Informal' setting and leadership style
- iv. Leader with institutional power
- v. Social cohesion, loyalty, *esprit de corps*, 'discipleship'
- vi. Focused research program
- vii. Simple and rapidly exploitable experimental techniques
- viii. Invasion of new field of research
- ix. Pool of potential recruits (graduate students)
- x. Access to or control of publication outlets
- xi. Students publish early under own names
- xii. Produced and 'placed' significant number of students
- xiii. Institutionalization in university setting
- xiv. Adequate financial support

i. 'Charismatic' leader(s)

'The creation, maintainance and growth of [a] school's loyalty, cohesion and confidence [depends]...on the director's charismatic powers, which at best [reinforce] his institutional power' (Morrell 1972: 6).

As well as the above, Morrell also notes how a charismatic leader is able to attract a large number of high-quality students which, in turn, increases the chances of a research school becoming self-sustaining. Once part of the school, students often display fanatical devotion to the leader, especially during times of intellectual disappointment. This helps to reinforce the school's identity and cements the teacher-pupil relationship when the teacher successfully leads his pupils into areas of intellectual endeavour not previously explored.

On a more abstract note, it remains the case that charisma is a notoriously slippery concept. Despite attempts to define it (see, in particular, Weber 1947 [1922]), 'Few personality traits are more resistant to precise definition than is charisma. To be

charismatic is to possess some mysterious attribute that provides the foundation of exceptional influence, whether that influence is exerted in intimate interpersonal contacts or before immense crowds of people' (Simonton 1984: 121). Charisma therefore appears to be one of those personality traits which it is hard to describe, but which is nevertheless recognisable when we come across it.¹¹

Keynes:

Although Keynes's various personality faults – most notably, his intellectual arrogance, particularly in the early years of his career, and his snobbishness – are known about, there is little doubt that he possessed charisma. Keynes had a broadly benign approach when dealing with students and members of the Circus. His attitude towards colleagues was, however, often more combative, reflecting his view that they "should know better." Even though it would be difficult to disagree with Klein's (1966: 224) point that, 'The dramatic weight of Keynes' personality undoubtedly added much to the speedy acceptance of [the *General Theory*]', it is clear that he was not always sweetness and light. Among his supposed friends, Leonard Woolf 'did not really like him' (Skidelsky 1992: 708) while Woolf's wife, Virginia, was 'constantly critical of JMK, and his relationship with Lydia [Lopokova], in her diary' (ibid.). The joint opinion of the Woolfs was that although Keynes had a 'brilliant, even great, mind', he was of 'bad character – selfish, domineering, unreflective' (ibid.).

It was not only Keynes's friends who found fault. Subsequent observers have noted his less engaging side. Harry Johnson (1972: 419) describes thus Keynes's approach to financial negotiations with the United States shortly after his appointment as head of the newly formed 'A' Division at the Treasury in early 1917: '[H]is haughtiness and impatience toward the Americans, which sometimes had to be restrained by his official and political seniors, gave him a reputation for rudeness that made him less effective than he might have been', a reflection of Keynes's belief that 'he was always right' (E. Johnson 1974: 100). At the same time, this 'haughtiness and impatience'

¹¹ For an interesting attempt to examine the role played by charisma in the advancement of science, Thorpe and Shapin (2000) looks at how J. Robert Oppenheimer's charisma was brought to bear on the Manhattan Project.

does not, for the most part, seem to have carried over into Keynes's dealings with students after the war. For example, we have Austin Robinson's portrayal of Keynes's behaviour in the Political Economy Club around 1919-1920: 'It would be easy to say that Keynes dominated those meetings. But I think that would be wrong, or at least very much too simple. It was never impossible for us undergraduates to argue with him. He did not lay down the law and frighten us into agreeing with him... If he dominated us, it was in quite a different way. We gradually came to see things very much as he would see them...' (A. Robinson 1975: 10). What is apparent here is Keynes's awareness, even at this early stage of his career, of the importance of building a following amongst the student population, an awareness that would pay off in later years. Moreover, Robinson has argued that Keynes 'seemed to mellow over the later twenties' (A. Robinson 1947: 28). His marriage to Lydia in 1925 undoubtedly played a part in this mellowing process and also helped to release the 'energies of a truly creative original thinker/genius' (Harcourt and Turnell 2005: 4,933). It is also worth noting that this softening in Keynes's personality occurred before he started to interact with the Circus. This was in stark contrast to A Treatise on Money, which was more or less 'composed in solitude' (Skidelsky 1992: 282) from 1924 to 1930. Two of Keynes's strongest critics, Robertson and Hawtrey, spent significant periods away from Cambridge during the 1920s; moreover, in contrast to the 1930s, Keynes had 'no graduate students able or willing to engage with him on points of theory' (ibid.) whilst he was writing the *Treatise*.

Even if Keynes had an exceptionally powerful personality, he was not always able to convince his colleagues that his thoughts and ideas were correct. He would often fail to win the day when arguing intellectual points with Pigou and Hawtrey, even if Pigou, for one, did eventually acknowledge the importance of Keynes's contribution (see Pigou 1950). However, it was the breakdown of Keynes's relationship with Dennis Robertson which was the most telling instance of personality failing to succeed where pure brain power had failed. Despite his absences from Cambridge, Robertson was Keynes's main intellectual stimulus during the 1920s and thereby became the keeper of Keynes's conscience when it came to economics. Having been the first person outside of Keynes's immediate circle to receive the proofs of the *General Theory* in 1935, Robertson broadly rejected its ideas, regarding them as an explanation only of a one-off slump and not a 'general' theory of macroeconomics.

Robertson was also 'extremely confused as to Keynes's definitions of terms, making much heavier weather of the problems in Keynes's draft than would a sympathetic critic' (Moggridge 1973: 84). These disagreements led to a souring of the friendship between the two men, even though in later years, Keynes was still generous towards Robertson, commenting that, 'It was an absolute blessing to have one person [at Bretton Woods] with a completely first-class mind' (Keynes in A. Robinson 1975: 14). Further reflecting his respect for Robertson, Keynes had stood aside in 1944 to allow Robertson to be elected as Pigou's successor as Professor of Political Economy at Cambridge (see Moggridge 1992: 603).

Keynes liked high standards and, in contrast to popular perceptions, he possessed a marked degree of self-doubt regarding his own work. Kahn (1978: 550) writes: 'Keynes was not a man who easily got worried or lacked confidence in himself. But without allowing his spirits, which were normally buoyant, to be affected, he was at no stage satisfied with his accomplishment.' Part confirmation of this was Keynes's view that *A Treatise on Money* was an 'artistic failure', while in a reply to a letter from Joan Robinson shortly before the completion of the *General Theory*, Keynes stated that he felt that he had 'not been worthy of [his] task' (ibid.). Notwithstanding all of this, Keynes never seemed to have had qualms about publishing, realising that the sooner he got his ideas into print, the more likely that they would be discussed and, where appropriate, modified, often by Keynes himself. Keynes and Marshall could not have been further apart in this respect, Marshall's procrastination in publishing probably costing him an even greater reputation than the one he actually secured.

Despite his inherent self-confidence, Keynes was not averse to calling on others when he needed intellectual assistance, somewhat contradicting Elizabeth Johnson's view that Keynes thought that 'he was always right'. First of all there was Keynes's relationship with the Circus, and we shall examine this in more detail later on. Then there were those more specific examples which highlighted Keynes's weaknesses in certain areas. To take one of these, in the following extract we find him writing to his brilliant Cambridge colleague, Frank Ramsey, in which he displays his limitations as a mathematician, despite the fact that he had once been a Wrangler: 'The point about Maxwell I find more difficult. If he can deduce his result without assuming that F(v) is the probability of v, but some unknown function, then I have certainly misunderstood him. But I have not got Bertrand [Russell] here, and must wait until I get to Cambridge to look it up. In the meantime, could you tell me how from Q(x)Q(y)Q(z)=F(v) you deduce $Q(x)=be^{-K2 x^2}$ (Keynes to Ramsey, 1 February 1922, Keynes Papers (hereafter JMKP) (King's College, Cambridge) TP/1/1/98).¹²

On a penultimate note, the evidence documenting the beguiling effect of Keynes's personality is plentiful. Most telling in this respect are the views of Keynes's intellectual opponents, not least Hayek. In spite of their academic rivalry, the two men remained on good personal terms, much of which, it has to be said, was the result of Keynes's generosity of spirit: he helped Hayek to find a house in Cambridge during the Second World War and supported his election to the British Academy. For his part, Hayek was in no doubt as to the strength of Keynes's personality and the part it played in delivering the Keynesian Revolution: '[T]he magnitude of [Keynes's] influence as an economist is probably at least as much due to the impressiveness of the man, the universality of his interests, and the power and persuasive charm of his personality as to the originality or theoretical soundness of his contribution to economics. He owed his success largely to a rare combination of brilliance and quickness of mind with a mastery of the English language in which few contemporaries could rival him' (Hayek in Caldwell 1995: 227-228). Hayek was also fond of saying how Keynes's voice was 'bewitching' and 'musical' and how people became 'enchanted by merely listening to his words' (Hayek in Kresge and Wenar 1994: 92).

Other economists were not immune to Keynes's magnetism. Of these, Schumpeter's (1946: 504) comments are interesting as he hints at the fact that even though Keynes could be abrasive, he was also courteous and gave the overwhelming impression of a warm, gregarious individual: 'He was affectionate. He was always ready to enter with friendly zest into the views, interests, and troubles of others. He was generous, and not only with money. He was sociable, enjoyed conversation, and shone in it. And,

¹² It is perhaps not surprising that Keynes was happy to approach Ramsey with such problems given the friendship between the two men and Ramsey's reputation as was one of the most intellectually gifted individuals of his generation. In a life spanning just 26 years, he made important contributions to mathematics, economics, and philosophy.

contrary to a widely spread opinion, he could be *polite*, polite with an old-world *punctilio* that costs time.'

The power of Keynes's personality grew over the years, extending to his work as Britain's chief representative during financial negotiations with the United States in the latter part of the Second World War, this despite increasing problems with his health. An extract from the diary kept by Robbins at Bretton Woods provides us with an almost poetic vision of Keynes in action: 'Keynes was in his most persuasive mood; and the effect was irresistible. At such moments I often find myself thinking that [he] must be one of the most remarkable men that has ever lived – the quick logic, the birdlike swoop of intuition, the vivid fancy, the wide vision, above all the incomparable sense of the fitness of words, all combine to make something several degrees beyond the limit of ordinary human achievement' (Robbins in M. Keynes 1975: xiv). These words are impressive enough but become even more so when we remember that Robbins had a history of tensions with Keynes, including quarrels in the early 1930s over free trade on the Economic Advisory Council's (EAC) Committee of Economists. What is more, Robbins's opinion of Keynes did not seem to be diminished by the passage of time. In his 1971 autobiography, Robbins, like Hayek, noted the irresistible 'cadences of [Keynes's] voice' and the 'life-enhancing quality of his presence' (Robbins 1971: 193).

Part of Keynes's attractiveness lay in the inherent optimism which underpinned his work. Most strikingly, the *General Theory* argued that governments need not be helpless in the face of downturns and that economic policy could be pro-actively used to induce a recovery. Even after the tumult of the Second World War, Keynes was confident that the ravaged British economy could quickly get back on its feet (albeit with the help of American and Canadian money). This would be followed by a 'golden age', characterised by 'increased leisure, more holidays (which are a wonderfully good way of getting rid of money) and shorter hours' (Keynes in CW XXVII: 323). Even if the future was uncertain, Keynes maintained, 'the best policy is to act on the optimistic hypothesis until it has been proved wrong' (ibid., 446).

Finally, on a more light-hearted theme, Keynes had a mischievous side to his character – witness his 1905 remark to Lytton Strachey that he would like to 'swindle

the investing public' – and was not averse to poking fun at others, this sometimes turning into personal attacks à *la* Bloomsbury. For example, in a January 1919 note to Sir John Bradbury, the Joint Permanent Secretary at the Treasury, Keynes wrote: 'The blockade on fats to neutral countries is being raised and Germany is to receive fat supplies on a very generous scale... [T]he underlying motive of the whole thing is Mr. Hoover's [US president 1929-33] abundant stocks of low-grade pig products at high prices which must at all costs be unloaded on someone... When Mr. Hoover sleeps at night visions of pigs float across his bedclothes...' (Keynes to Bradbury, 14 January 1919, JMKP RT/1/39-40). Here then, we get a foretaste of what was to come just a few months later with the publication of the *Economic Consequences*, where Keynes was at his ridiculing best in his portrayals of the Allied chiefs at the Paris Peace Conference.

Keynes's charisma is not in dispute. What is perhaps more difficult to pin down is what Keynes thought of himself. One of the more melancholic descriptions we have in this respect is that of Keynes's biographer, Robert Skidelsky. He argues that there was 'a lot of self-hate in Keynes. He was not a man at peace...and rather than be alone with himself, he preferred any stage, any occupation, however trivial. I have a vivid image, to my mind very sad, of the great and fascinating Keynes sitting alone in the King's College Combination Room playing patience, night after night, often until past midnight, 'very much bored and unable to stop' as he himself described it' (Skidelsky 1988: 159). This depiction of Keynes constantly in search of stimulation certainly rings true with his habit of changing his mind over important issues and always wanting to rewrite his latest theoretical offering. If we accept that Keynes did not indeed like certain aspects of his personality, the suggestion that he worked incessantly as a means of distraction does not seem to be too far-fetched.

Marshall:

Alfred Marshall was a different personality from Maynard Keynes, the differences between the doyen of British economics and his most famous pupil being greater than the similarities. A key focus of Marshall's life was to establish economics as a subject worthy of serious study. Given some of his personal characteristics, the success he attained in this process of professionalisation might come as something of a surprise. According to Keynes (1924: 345) in his obituary of Marshall, 'Economics all over the world might have progressed much faster and Marshall's authority and influence would have been far greater, if his temperament had been a little different.' What Keynes was referring to was first, Marshall's tendency, as we have already noted, to delay the publication of his work – the late appearance of his theory of money was the most notable manifestation of this – and second, his dislike of controversy. This latter aspect did not have much impact on Marshall's influence at Cambridge, but it did mean that he had a much lower public profile than might otherwise have been the case. This, his associated desire to please and a 'rather disdainful hauteur' (Maloney 1985: 51), meant that his influence on the public mood was sometimes blunted when he was asked for his view on important issues, such as free trade.

One of the best examples of Marshall's desire to avoid confrontation is to be found in his response to comments made by reviewers of the first edition of his *magnum opus*, the *Principles of Economics* (Marshall 1890). Maloney (ibid.) makes the point that it must have been hard to take on a man who could write: 'I can only express briefly my thanks for the goodwill, fairness and generosity of interpretation of those who on the whole condemned the book (as well as of those who on the whole approved it).' It has been suggested that Marshall 'might have found controversy irresistible' (Collard 1990: 167) had he been in his prime in the 1920s, a time, much like the 1930s, when economics was having some fierce internal debates. This is a valid point, although what might have been more interesting would have been Marshall's reaction to the Keynesian Revolution and how he would have dealt with Keynes's attack on classical theory, especially the ideas of Pigou – Keynes's straw man¹³ – whom Marshall thought very highly of. Unfortunately, Marshall's death in 1924 precluded this possibility.

Even though he did not possess Keynes's magnetism, it would be wrong to categorise Marshall as a shy and retiring academic. Maloney (ibid., 24) draws on Weber's (1947) [1922] concept of the routinisation of charisma as an important part of the

¹³ Ambrosi (2003) convincingly shows that, contrary to common belief, Keynes's attack on Pigou was not an unfair one (see also Harcourt 2006b) and that Keynes was correct when he claimed that it was his theory which was the general case while classical theory was only a special case.

professionalisation process to suggest that historians of economic theory should 'never [be] in a moment's doubt as to whose charisma stood to be routinised' in late 19th century economics, i.e. Marshall's. Even if this is probably an exaggeration of the positive features of Marshall's personality – in the charisma stakes, he was not in the same league as either Arnold Toynbee or T.H. Green, his contemporaries at Oxford who 'won the hearts as well as the minds of a generation of undergraduates' (Coats 1993: 109) – it was still very much the case that without Marshall's drive in establishing the Economics and Politics Tripos at Cambridge and his optimism as to the uses to which economics could be put, it would have been far more difficult, as we will see, for Keynes to have achieved his own success.

As with Keynes, Marshall had differing relations with his colleagues on the one hand and his students on the other. With regard to his peers, Marshall's personality is seen at its worst. In fact, his 'talent for generating antagonism among his contemporaries [was] remarkable. [John Neville] Keynes, Cannan, Nicholson (and latterly) Foxwell – four economists all of whom to varying degrees aligned themselves with Marshall's conception of what economics was, and should do – [adopted], respectively, notes of boredom, hostility, condescension and bitterness towards Marshall the man' (Maloney ibid., 65). One instance of this was Cannan telling C.R. Fay, one of Marshall's favourite pupils, that 'I'll show up Marshall before I've done' (Cannan in ibid., 72). Meanwhile, Nicholson's view of Marshall as condescending was driven to some extent by Marshall's tendency to moralise in his writings. Levitt (1976: 435) goes as far to say that 'Marshall unhesitatingly intruded normative and moral prescripts into his discussion... [T]hey show again that Marshall, each time he faced an impasse...was forced, and had no hesitation in returning, to strictly personal judgments of moral rightness and social oughtness.'

The evidence from Marshall's relationship with Neville Keynes is particularly damning. Marshall regarded Maynard Keynes's father as 'one of the two or three best students he had ever had' (Skidelsky 1983: 13). However, these generous feelings were not reciprocated. Neville Keynes was irritated by Marshall's attempts to persuade him to move to Oxford, no doubt suspecting that Marshall hoped that, once there, Keynes would propagate the Marshallian gospel. Keynes was also disturbed by Marshall's shenanigans in administering economics at Cambridge: 'No careful reader

of Keynes' diaries can fail to conclude that he disliked Marshall as much as Marshall liked him. Irritation with Marshall's behaviour on committees is a constant theme' (Maloney ibid., 64), Keynes describing Marshall as 'a dreadful bore', 'exceedingly irrelevant' and 'the most exasperating talker I know' (J.N. Keynes 1894, 1899). As hinted at above, Marshall was also a 'schemer who relentlessly pressured his disciples to structure their careers and plan their lectures in ways that would promote the new economics that he aspired to develop' (Deane 2001: 231). At the same time, he must have been aware that he could get away with such behaviour given his unrivalled prowess in theoretical economics, a situation which held true in the final decades of the 19th century and for the first two decades of the 20th. No other economist from this period had the competence to seriously question him.

If Maynard Keynes's recollections are anything to go by, Marshall's relations with his pupils were somewhat better than those with his colleagues. Granted, Keynes (1924: 366) states that, 'It must not be supposed that Marshall was undiscriminating towards his pupils. He was highly critical and even sharp-tongued.' But Keynes adds that Marshall 'managed to be encouraging' (ibid.) and was to his pupils 'a true sage and master, outside criticism, one who was their father in the spirit and who gave them such inspiration and comfort as they drew from no other source' (ibid., 365). Sadly, as we shall see, it seems that Marshall's interest in his pupils only stretched to the male of the species, his derogatory attitude towards women being well documented (see McWilliams-Tullberg 1975, e.g. 125).

Hayek:

Hayek is again different from both Keynes and Marshall. Hayek's was a complex personality, which Caldwell (1998: 567) has described as 'formal and reserved' but 'hiding many layers beneath' (ibid.). Milton Friedman confirms this view: '[Hayek] was by no means a simple person. He was very outgoing in one sense but at the same time I would say very private. He did not like criticism, but he never showed that he didn't like criticism' (Friedman in Ebenstein 2001: 269). One is minded to recall here the quote from Austin Robinson above where he mentions that, 'It was never impossible for us undergraduates to argue with [Keynes]': it remains an open question what Hayek thought of those undergraduates who may have had the temerity to

question his authority. Another clue to Hayek's personality is to be found in his writing. While Keynes maintained that words should be a little "wild", Hayek's approach was more reserved. Thus, Schumpeter described The Road to Serfdom as 'a polite book that hardly ever attributes to opponents anything beyond intellectual error' (Schumpeter in Harcourt 1984: 491). The similarity here between Hayek and Marshall is notable and is arguably an instance of taking the concept of academic gentlemanly conduct too far; one can certainly never imagine Keynes adopting such a tone. Besides, Keynes's published work did not have the inherently pessimistic feel which often features in Hayek. For instance, reviewing one of Hayek's later works, Law, Legislation and Liberty, Gordon (1981: 486-487) remarks that, 'There is a heaviness of spirit which pervades [Hayek's] writings, not merely because his style is devoid of grace or wit or because of his pessimism concerning western civilization, but because his own ideal society wears a grim-God aspect.' Given the noble causes that Hayek stood for and amply displayed in his writing – perhaps most famously in The Road to Serfdom – pessimistic interpretations of his work are unfortunate, but, nevertheless, justified.

On a different note, Hayek's former LSE student, George Shackle, once described him as 'aristocratic in temper and origins; physically, morally and intellectually fearless' (Shackle in Ebenstein 2001: 284-285). Hayek's time as a soldier in the First World War goes some way to account for his physical fearlessness, and, possibly, his moral and intellectual courageousness. This last feature of Hayek's personality may also help to explain his bravery – or arrogance? – when he so harshly attacked Keynes's *A Treatise on Money*. But there were other, more obvious reasons: Hayek saw an opportunity to take on arguably the world's most famous economist in the hope of strengthening the credibility of his own theories. Moreover, it should be remembered that Hayek was still a relatively young man when he first went up against Keynes, his intellectual daring also being reflected in the private correspondence he had with Keynes concerning the *Treatise*.

Meanwhile, Hayek's relations with his colleagues at the LSE may have started off well only to gradually worsen. The existing staff must have been pleased with Hayek's arrival in 1931 as he gave the Department of Economics a chance to shine rather than having to constantly live in Cambridge's shadow; the popularity amongst both staff and students of the four lectures that Hayek delivered in the last week of January 1931 and which helped him secure the Tooke Professorship were an early testament to this. But despite his undoubted talents as an economist, Hayek's often domineering personality was instrumental in alienating his colleagues. Given this and the difficulty that many had in understanding his convoluted theories, it becomes easy to see why the other participants in the 'Robbins-Hayek' Seminar may have been put off by Hayek. A microcosm of this was Nicholas Kaldor's strained relations with Hayek, Kaldor describing how Hayek became 'frightfully annoyed with [him]. At first he was terribly for me. But then when I discovered he was so silly I sort of teased him, made him look ridiculous, contradicted him in seminars' (Kaldor in ibid., 63). It is difficult to imagine Keynes being subjected to the same kind of treatment at Cambridge – or anywhere else for that matter – as that dished out by Kaldor to Hayek. As will become clear later on, some of the students at the LSE were also less than complimentary about Hayek.

Despite Hayek's dominance of the seminar that he and Robbins presided over, any leadership credentials that can be (generously) assigned to him were more a reflection of the intrinsic sophistication of his theories – when they were understood – as opposed to his ability to persuade others through the power of personality. In fact, it was Robbins who was the charismatic leader amongst the LSE economists: 'It was inevitable that those of us who were fortunate to have been among his [Robbins's] first pupils – and there were barely a dozen of us then specialising at LSE in the subject of "analytical economics" – should fall completely under his spell (Kaldor 1986: 4). But despite the strength of his own personality, Robbins failed to assert intellectual leadership at the LSE, to a certain extent due to the fact that, by his own admission, he made 'no outstanding intellectual discoveries' (Robbins 1971: 11).

Clearly, the ideal combination of intellectual originality and personal charisma which seem to play a key role in determining a leader's influence and, as a result, a research school's success or failure, were split at the LSE between Hayek and Robbins respectively. The combination of these two characteristics in a single individual – be it Hayek, Robbins, or anyone else in the Economics Department at the School – would have made the clash between London and Cambridge much more interesting and equal.

Kalecki:

The evidence relating to Kalecki's personality paints a strong picture of integrity combined with a streak of terseness; charisma is not a predominant feature. Kalecki is often presented as a role model of academic uprightness, a man who sacrificed a number of promising career opportunities for the sake of taking a stand against governments and his other employers who had either treated him or his colleagues unfairly. Josef Steindl, who was Kalecki's friend for a number of years and one of his most important followers, has noted how Kalecki could be 'quite uncompromising when his convictions were involved. Witness to this were the clashes with personalities and institutions which led to disruptions in his life and entailed heavy personal cost' (Steindl 1981: 595).

Possibly the clearest demonstration of Kalecki's integrity was his silence after the publication of the *General Theory* about his own very strong claim of having discovered the essentials of the Keynesian system before Keynes. At the same time, we can try to explain the lack of acknowledgement afforded to Kalecki for his work on the cycle by citing Joan Robinson's (1966: 339) point that 'the "Keynesian Revolution" in Western academic economics is rightly so called. For without Keynes' wide sweep, his brilliant polemic, and, above all, his position within the orthodox citadel, in which he was brought up, the walls of obscurantism would have taken much longer to break.' This is a powerful argument and one Kalecki himself recognised. Nevertheless, it seems that Keynes and his inner circle still have a case to answer regarding Kalecki's achievements. Bland (1976: 333) makes an accurate assessment, claiming that 'Kalecki's reticence, and his acceptance that Keynes's name would "sell" [the new] ideas better than an unknown spinner's son from Lodz, contrasts with the failure of Keynes's clique to grant Kalecki any recognition at all in the Englishman's lifetime.'¹⁴

¹⁴ Although Keynes and Kalecki did not have any correspondence relating to the *General Theory* or Kalecki's early work on the cycle, Keynes did express irritation with Kalecki's unexplained assumptions, as Keynes saw them, in an article on technical progress submitted by Kalecki in early 1941 for publication in the *Economic Journal*: the annoyance is seen in Keynes's correspondence with Joan Robinson and Nicholas Kaldor after he had asked them for their opinions on the submission (see CW XII: 829-841). Keynes eventually rejected the piece and it appeared instead in the *Review of*

Personal integrity was to play an important part in Kalecki's and Keynes's respective careers, especially regarding the institutional power that each man was able to command. It was clear that Kalecki had 'no wish to ingratiate himself with any of the powers that be' (Steindl ibid.) even though, it has to be said, a little ingratiation would probably have got him a long way. This contrasts with the young Keynes, whose behaviour in the period leading up to the First World War and in its opening months 'present[s] him in a not altogether attractive light as a young man anxious to obtain an important job in wartime economic management and not too scrupulous about taking sides with the Treasury and the Bank of England against the commercial banks and the City of London to further his ambitions' (H. Johnson 1972: 418; see also CW XVI: 20). Keynes's association with the Treasury during this period was, of course, to provide the springboard for the later activities which helped to make him a household name.

To a certain degree, Kalecki's less appealing personality traits overshadow his reputation for integrity. The views of Joan Robinson and Piero Sraffa are instructive here. Granted, Cambridge cared enough about Kalecki to find him a job in the late 1930s, whilst Keynes himself described Kalecki as "something of a genius". On the other hand, Robinson (1977: 8) found that Kalecki 'cared little for party manners or small talk and plunged directly into the subject.' Sraffa, on hearing Kalecki described as a difficult man, defined a difficult man as one who does not want to do what he is told to do (see Feiwel 1975: 16).

In a somewhat similar vein, Sraffa wrote the following to Robinson in December 1938: 'We have a board of directors, of which Maynard is chairman, and Austin, Kahn, Kalecki, Champ [David Champernowne] and myself members...¹⁵ Kalecki does not take too much notice of [its] resolutions' (Sraffa to J. Robinson, 28 December 1938, Robinson Papers (hereafter JVRP) (King's College, Cambridge) vii/431/50). Brzeski's (1976: 618) description of Kalecki as 'blunt and stubborn' confirms Sraffa's view.

Economic Studies in June 1941. Keynes did, however, accept other articles submitted by Kalecki, notably Kalecki (1937).

¹⁵ Sraffa is referring here to the *Cambridge Research Scheme of the National Institute of Economic and Social Research into Prime Costs, Proceeds and Output.*

On another point, Feiwel (1970: 28), whilst noting that Kalecki 'often electrified his interlocutors and commanded boundless respect (even from people of opposite opinions) for the iron-clad logic of his arguments', highlights the fact that Kalecki was also 'laconic, austere, and concise in his presentation.' This reflected itself in his writing, which made significant use of mathematics, an approach which, during the 1930s and 1940s, limited his appeal amongst those economists (the majority) with little or no mathematical training. Kalecki's enthusiasm for employing mathematics contrasted with Keynes's distrust of it, at least within the realm of economics, a difference that is intriguing given that both men had an educational background in which mathematics played a very strong part.

There is other evidence regarding Kalecki's personality. On the positive side, we have Sraffa commenting in the same letter to Joan Robinson cited above that Kalecki had 'settled down to work quite happily, with his two research students (Tew and Hsu, of whom only one is a Chinese): he certainly is a great success with them, and they are very devoted to him' (Sraffa ibid., 50-51). It is important to note that Sraffa's observation was written more than two and a half years after the publication of the General Theory. As such, the emergence of any Kaleckian disciples at this stage would have come too late to stop the Keynesian onslaught. Also, Kalecki's relationship with Tew and Hsu seems to have been more or less a one-off, even if Tew, for one, regarded Kalecki as a role model for economists. For example, whilst he was in Sweden in 1936, Kalecki 'kept himself apart partly due to his character, but also because he was "angry with the bourgeois attitude of the economists in Sweden" (Lundberg in Targetti and Kinda-Hass 1982: 244). Given that he had specifically travelled to Sweden to work with Gunnar Myrdal and Bertil Ohlin on the theory of economic crises and business cycles, this was an ideal opportunity for Kalecki to have made a name for himself and to propound the work he had already published. However, his character again seems to have got in the way, a matter of some regret for the Swedes, Erik Lundberg noting that he could see the greatness of Kalecki's contribution ex post but not ex ante (see Lundberg 1996: 120).

On a final note, Bronfenbrenner (1976: 466) declares that, later on in Kalecki's career in the mid-1940s, his prospective students at Chicago were wary of him: 'It is my distinct impression that...graduate students contemplated with extreme dread the
possibility of Kalecki's appointment to a professorship...to replace his gentle, affable, helpful and tolerant fellow countryman Oskar Lange, then on leave as Polish ambassador in Washington.¹⁶ The students at Chicago must indeed have been aware of Kalecki's reputation for being unforgiving in discussing economics. Against this background, it is not surprising that Solow (1975: 1,335) described Kalecki as 'an outsider to the end.'

Summary:

In summary, Table 1 shows how Keynes, Marshall, Hayek and Kalecki perform with respect to the criterion "Charismatic' leader(s)'. As is clear, Keynes comes out on top. Although the evidence with respect to Marshall is more ambiguous, he is still ahead of both Hayek and Kalecki.

 Table 1. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell

 Geison criterion 'i. 'Charismatic' leader(s)'

<u>Criterion</u>	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
i. 'Charismatic' leader(s)	+	±	-	-

Note: 1 + 2 means that this feature is present; -2 means that this feature is absent; and 2 ± 2 means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

Charismatic leadership is arguably the most important of all the Morrell-Geison criteria. Regarding our own analysis, it is hard to disagree with Blaug (1994: 1,206) when he says: 'If we want to explain the Keynesian Revolution, the astonishing speed with which Keynesian economics won professional approval, it would be difficult to deny that Keynes's personal biography was extremely relevant' and that 'Keynes's siren-like charisma had much to do with his professional success and to deny it is just puritanism of an intellectual sort' (ibid., 1,207). There were less favourable aspects to Keynes's personality, but as he matured, these were outweighed by the positives.

Meanwhile, even though he did not enjoy Keynes's charisma, Marshall possessed enough charm and determination to command the respect of both his colleagues

¹⁶ Lange was Polish ambassador to the United States from 1945 to 1947.

(albeit with major caveats) and his pupils. Additionally, both Marshall and Keynes were broadly optimistic in outlook and were confident that economics could solve many of the world's ills. Anyone doubting this with respect to Marshall must provide a plausible explanation as to why he dedicated so much time and effort to professionalising the subject.

In contrast, it was difficult to find evidence of charisma when we considered Hayek and Kalecki. In Hayek's case, it is true that he 'exerted considerable influence through his profound knowledge of economic theory, the example of his own high standards of scholarship, and the power of his ideas' (Coase 1994: 210). But one wonders how much greater this influence might have been had Hayek possessed a more likeable personality. His often gloomy outlook was reflected in his writing, his 'dark, sobering, sober' (Caldwell 1995: 48) view of the world giving rise to his advocacy of minimal policy intervention during the Depression, this at a time when the advanced world was crying out for a pro-active solution to the worst economic decline it had ever seen. Lastly, Kalecki's extremely strong moral code and sometimes gruff manner meant that it was harder for him to form lasting bonds with colleagues and students. As a result of this and other factors, his independent discovery of the main propositions contained in the *General Theory* never received the recognition it deserved and partly explains why the revolution in macroeconomics in the 1930s and 1940s never had a chance of being known as 'Kaleckian'.

ii. Leader with research reputation

'Generally speaking the most favourable situation [is] one in which the director's reputation in his subject advance[s] neither in front of nor behind his ambitions for his school' (Morrell 1972: 4).

According to the research school literature, a leader with a research reputation often secures such a position in his early years of research, thus making this period crucial to the success of the research school that he later becomes associated with. Without a research reputation, a leader may be subject to sustained attacks on his authority and ability. In turn, a crucial determinant of whether a research reputation is seen to be properly established centres on a leader's publication record. Publication in respected and widely disseminated research journals and in books could turn a well-known local researcher into a figure with an international standing.

Keynes:

Keynes's reputation as a leader with a serious research agenda was already beginning to take shape as early as 1909 when he secured a Fellowship (at his second attempt) at his beloved King's College, Cambridge.¹⁷ His Fellowship dissertation, which had actually been written in 1907, dealt not with economics but with the principles of probability and supported the objectivist theory that knowledge is not the property of an individual but rather has a separate existence. The impact of Keynes's theory is apparent from a written comment made by one of his examiners at King's, the noted mathematician and philosopher, Alfred North Whitehead: 'Mr Keynes' dissertation is a contribution to knowledge of great importance. It is not a mere academic exercise, and when published, will seriously affect future investigations in the subjects with which it deals. If Mr Keynes publishes much other work of this character, he will attain considerable eminence as a man of science' (Alfred North Whitehead, 1909, JMKP TP/4/8). Keynes's work was the first serious attempt at a new theory of probability since John Venn's The Logic of Chance (1866), a fact which aroused the interest of statisticians. Even though Frank Ramsey would convincingly argue that Keynes had overemphasised objectivity at the expense of subjectivity, the objectivist perspective reached a wider audience as a result of it being discussed in Bertrand Russell's The Problems of Philosophy, published in 1912. The first building block of Keynes's research reputation had been put in place.¹⁸

Keynes's intellectual audacity was clear even at an early stage: 'One of the most striking things about the [Fellowship] dissertation was the boldness of Keynes's claims. Implicit in his argument was the view that probability should be rightly considered as the *general theory* of logic, of which deductive logic was a special case,

¹⁷ Apart from attending Eton, Keynes spent all of his early years in Cambridge. As such, he was 'completely a product of Cambridge' (A. Robinson 1947: 2).

¹⁸ See Aldrich (2008) for a detailed examination of Keynes's contributions to statistics.

applying only to cases of certainty' (Skidelsky 1983: 184). This particular enthusiasm for 'general' over 'special' theories was an early manifestation of a tendency that would reveal itself once again in the *General Theory*, where Keynes would maintain that it was *his* theory which provided an explanation of why output in the short period is sometimes significantly below that which occurs at full employment, with the classical explanation being merely a special case. This has led to speculation that Keynes's preference for big picture theories was influenced, in particular, by Einstein's general theory of relativity which appeared in 1915, not beyond the realms of possibility given the worldwide prominence of Einstein's ideas.¹⁹

Keynes was never one to sit on his laurels. Just two weeks after he started lecturing at Cambridge in January 1909, he made a note to himself (see JMKP A/09/1) outlining the research problems and issues he wished to address going forward. Granted, economics was still very much a developing subject – this despite the fact that Adam Smith's *The Wealth of Nations* had been published over 130 years previously – with a number of areas ripe for investigation. Keynes's note shows that he had already set a high bar for himself:

Papers to be written

The 'Long Run' in Economics

[The element of doubt in the determination of value]

The Indian Gold Standard Reserve Proposals for an International Currency Mathematical Notes on the Median English Gold Reserves The Logical Basis of the Theory of Correlation A plea for a new official index number of prices The Riskless Rate of Interest Monographs

The Method of Index Numbers

The Theory of Crises and Commercial Fluctuations

¹⁹ Togati (2001) looks at the intellectual links between the *General Theory* and Einstein's theory of relativity.

[Papers to be written contd]

Treatises

The Principles of Probability Methods of Statistics

Textbooks

The Principles of Money The Mathematical Organon of Economics

Keynes's constantly changing interests meant that his research focus inevitably shifted over the years. His predilection for big projects was nonetheless something that remained with him throughout his life. O'Donnell (1992: 769) presents an extended version of Keynes's 1909 list based on Keynes's subsequent ideas for books together with approximate dates as to when he thought of them:

Essays on the Economic Future of the World	[early 1920s]
Prolegomena to a New Socialism	June 1924
An Examination of Capitalism	
First version	November 1924
Second version	April 1926
A Programme of Economic Change	[1927]
Footnotes to the General Theory	August 1936
An Introduction to Economic Principles (10 vols)	[1938]

O'Donnell (ibid., 769-770) observes that the two lists can be conveniently split by the First World War. In the first list, Keynes's concern is more with academic publications, such as monographs and treatises, formats which would not usually be read by the general public, suggesting, in turn, that Keynes was not yet concerned about influencing popular opinion. The change in his thinking to an approach more likely to get him noticed outside of academia was brought about by events at the Paris Peace Conference, his resignation from which prompted the writing of the *Economic Consequences*.

Before we consider the *Economic Consequences* in greater detail, it is worth examining Keynes's writings and activities relating to India. Keynes's first contact

with Indian economic affairs came in 1906 when he secured a job as a clerk at the India Office. Despite serving less than two years, the time Keynes spent working on Indian matters played an important part in helping to establish his reputation as a serious economist. This was initially demonstrated in May 1910, when Keynes, who had already left Whitehall, delivered a series of lectures at the LSE entitled, 'Currency, finance and the level of prices in India'. The lectures reflected Keynes's inside knowledge of the workings of the Indian economy and were the inspiration for a speech on the Indian currency question given by him at the Royal Economic Society in May 1911. More importantly, his exposure to Indian issues provided the backdrop for his first book, *Indian Currency and Finance* (1913).

Indian Currency and Finance marks the beginning of Keynes's ascent as an important economist. As the following extract from a review in the 1 November 1913 issue of *The Spectator* shows, this climb was, from the beginning, founded not on speculation on Keynes's part but by his careful and objective consideration of the evidence: '[Keynes] is to be congratulated [for] submitting his theories to the criticism of practised administrators and men of business, nor are his colleagues to be less congratulated on having the help of a theorist who keeps an open mind and is fully aware that monetary developments must be adapted to the habits and even to the prejudices of ordinary men... His careful and disinterested study of the monetary facts of twenty years, and his methodical marshalling of facts and figures, will be useful even to those, and they will probably be few, who are not convinced by his reasoning' (JMKP IC/9/2-3). Sayers (1972: 591) confirms the often sophisticated nature of the book, describing some of its chapters as 'extraordinarily mature'.

In spite of its maturity, *Indian Currency and Finance* sold less than a thousand copies in its first year. More importantly, however, Keynes's analysis, whilst giving little indication of his later 'brilliance and cleverness' (Klein 1966: 2), was enough to attract the notice of the appropriate authorities and led to him being asked in 1913 to join the Royal Commission on Indian Currency and Finance, headed by Austen Chamberlain, a previous Chancellor of the Exchequer and future leader of the Conservative Party. The fact that Keynes was the Commission's youngest member – he was just 29 when it first sat – and was in bad health for part of its deliberations, made little difference: he took up his appointment with gusto, quickly outshining his older colleagues. In fact, in some instances, he was the only questioner of the expert witnesses called to give evidence. This was not just youthful exuberance, as the rest of the Commission ended up accepting many of Keynes's arguments. At a broader level, Keynes's position on the Commission gave him an excellent opportunity to build a network of political contacts, a network which he would be able to call on in subsequent years when he became more heavily involved in government work.

Keynes's Fellowship dissertation and his work on India were important in establishing his early credentials. But it was the *Economic Consequences* which was to make his name recognisable to a popular audience. The book was a strongly worded protest against the reparations settlement agreed between the Allies at Paris. By publishing, Keynes must have been aware that he was putting his growing reputation at risk, although this was not enough to stop him. In wider terms, the *Economic Consequences* also marked the arrival of Keynes's 'full moral and intellectual maturity' (Harcourt and Turnell 2005: 4,934).

Somewhat inevitably, the book generated plaudits and criticism, a steady flow of the latter leading Keynes to publish A Revision of the Treaty in January 1922. His opponents focused on Keynes's alleged political naivety and his supposed pro-German sympathies. However, nobody seemed capable of mounting a serious challenge to his economic arguments. Indeed, a convincing broadside had to wait a quarter of a century and the appearance of The Carthaginian Peace, or the Economic Consequences of Mr. Keynes (1946), written by the French economist Étienne Mantoux, whose father had been Prime Minister Clemenceau's interpreter at Paris. Mantoux showed that Keynes had been wrong on a number of counts, especially with respect to his predictions about Germany's coal, iron, and steel production after the First World War and its level of national saving. Particularly striking was Germany's capacity to massively rearm under Hitler, suggesting that it had been in a stronger position to pay reparations than made out by Keynes. Of course, Mantoux's attack came far too late to do any real damage to Keynes's reputation: the Economic Consequences had quickly become an influential book and cemented Keynes's growing reputation 'not just in Britain but all over Europe and in the United States' (Blaug 1994: 1,207). Of the many accounts of the Paris talks which appeared at the time, it is the only one which has 'not sunk without a trace' (Skidelsky 1983: 399).

Important theoretical work flowed from Keynes's pen over the following years. A *Tract on Monetary Reform* was published in 1923 – a book thought by some (notably Milton Friedman) to be Keynes's best – followed in 1930 by A *Treatise on Money*. Keynes's output during the 1920s was characterised not only by books but also pamphlets and newspaper articles. Thus, *The Economic Consequences of Mr Churchill* (1925) was important as it again demonstrated Keynes's enthusiasm for controversy – even though he and Churchill were on friendly terms – this time over the future prime minister's decision to return Britain to the Gold Standard at pre-First World War parity. Keynes argued that the pound would be too strong and that exporters would suffer as a result. Although it took six years, Keynes's prognosis proved right and Britain paid the price by being forced off gold in September 1931.

Meanwhile, in May 1929, Keynes co-authored Can Lloyd George Do It? with Hubert Henderson, a former pupil and then editor of The Nation and Athenaeum, a magazine part owned by Keynes. Keynes had made the case for public works as a remedy for unemployment in the mid-1920s, although his analysis had been hampered by the widely held 'Treasury view', which, in its *simple* form, asserted that the supply of savings and, in turn, capital was limited and that any effort to create jobs through a capital injection would, as a consequence, crowd out private investment; the sophisticated 'Treasury view' argued that any increase in investment carried out by the government would be sub-optimal as the public sector is less efficient, in economic terms, than the private sector (see Harcourt and Turnell 2005: 4,938 and Clarke 1998: 81-83). But in a sign that his research was taking him in a new direction, Keynes (and Henderson) maintained in Can Lloyd George Do It? that a 'cumulative force of activity' would occur on the back of an injection of government investment: successive rounds of spending would be generated which would increase effective demand and lower unemployment. Keynes would not have to wait long for Kahn's multiplier article (Kahn 1931), where the 'cumulative force of activity' was given a quantitative framework.

Although Keynes sometimes had extensive discussions on matters of economic theory with, for example, Dennis Robertson during the 1920s, *A Treatise on Money* was, as we have already noted, written virtually in isolation: Keynes was still a long way from founding a Keynesian School at Cambridge and beyond. Besides the *Treatise* being an

artistic failure according to Keynes, it was certainly not revolutionary. It did, nevertheless, contain some novelties (e.g. liquidity preference, animal spirits, the banana plantation parable), which helped to further raise Keynes's profile amongst his peers. All the same, Hayek, for one, took exception to the book, and embarked on what turned out to be a rather bitter exchange of views with Keynes in the pages of *Economica*, Keynes calling up reinforcements in the shape of Sraffa to attack *Prices and Production* in the *Economic Journal*. Within the context of the Keynesian Revolution, it nevertheless remained the case that Keynes was still over-emphasising the role of prices and, as a result, had not dealt adequately with those factors which 'determine changes in the scale of output and employment as a whole' (Keynes in CW VII: xxii). The intuitive leap to a variable output model would have to wait until the *General Theory*.

In his early career, Keynes was still very much a Marshallian. For instance, Klein (1966: 2) points out that Keynes's analysis in *Indian Currency and Finance* was 'derived entirely from classical theory.' At the same time, it is difficult to agree with McCormick's (1992: 3) view that the 'rumblings [of revolution began] with [A] *Treatise on Probability* (1921) – with its critique of Hume and its heavy emphasis upon a logical theory of probability'. A more accurate assessment would be that Keynes had indeed built a solid research reputation in the years leading up to the *General Theory*, but that any inkling of revolution was not apparent until *Can Lloyd George Do It*? at the very earliest, an inkling that would turn into something more concrete with the appearance of Kahn's work on the multiplier.

Testament to Keynes's research reputation as of 1936 and subsequently was the large degree of interest generated by the appearance of the *General Theory*. Over 125 English-language reviews had appeared by the end of 1936 (see Backhouse 1999: 2) in a host of academic and literary journals and newspapers. Whilst some reviewers were positive, others were less complimentary. The communist *Morning Star* ran its review under the title, 'What *Does* Mr Keynes Want – Poison Gas?' (ibid., 26-28), accusing Keynes of supporting British imperialism; others were bemused by Keynes's suggestion that people could be put to work by digging up bottles filled with money. On a more serious note, not all of Keynes's economist colleagues were convinced that he was a master of his own subject. Notable in this respect was Hayek, who was of the

opinion that Keynes was neither 'a full master of the body of economic theory then available [i.e. in the 1930s], nor really cared to acquaint himself with any development which lay outside the Marshallian tradition' (Hayek in Caldwell 1995: 248). On reflection, Hayek was no doubt unhappy that his own theories had not received the kind of recognition he thought they deserved. Notwithstanding this, Hayek's assessment of Keynes as not being a very good economist is a little harsh given Keynes's achievements. At the same time, Hayek may have something of a point regarding the breadth of Keynes's economic knowledge. To begin with, Keynes's formal training in economics was very much restricted to Marshall and Jevons. Second, there is Shove's well-known observation about Keynes not bothering to take the twenty minutes required to master the theory of value (see Patinkin 1980: 22); had he done so, his dismissal of Marx may not have been so outright. Finally, Keynes played little part in the imperfect competition revolution that was taking place in Cambridge in the 1930s, this despite Joan Robinson and Richard Kahn being at its forefront. Indeed, the General Theory assumed perfect competition, Keynes maintaining that he did not see 'how on earth' (Keynes in CW XIV: 190) imperfect competition entered into his schema (see also Hayes 2008, Marris 1997 and Shapiro 1997). In fact, Kalecki was of the same view with respect to his own work on the cycle (see Targetti and Kinda-Hass 1982).

Marshall:

Marshall's research reputation is beyond doubt. His early promise as a mathematician – he was Second Wrangler in the 1865 Mathematical Tripos behind John Strutt, later Lord Rayleigh – and his subsequent groundbreaking work in economics made him not only one of the world's most important economists during his own lifetime but of any period since Adam Smith. For the purposes of our own analysis, the important issue is what part this reputation played in helping to buttress the Keynesian Revolution. There are two ways of answering this. The first concerns Marshall's 'Organon' or research programme. Marshall's aim was to provide future generations of economists with an 'engine of analysis' by which they could resolve economic problems. As Keynes (1924: 345) acknowledged, 'The building of this engine was the essential achievement of Marshall's peculiar genius'. The Organon was many faceted and included an acute concern for 'core theory, its motivation and style, its professional

orientation, its ability to discover "concrete truth" and finally, its method of propagation' (Collard 1990: 165). Marshall's *Principles* was his own, very successful attempt at laying down the foundations of the Organon. His research reputation was, in addition, built on his innovation of certain analytical techniques, including elasticity and quasi-rent, as well as his popularisation of others, notably supply and demand curves and producer and consumer surpluses. It was also no coincidence that Keynes himself was to be the founder of a research programme which would fill in one of the gaps in the Organon.

A second way in which Marshall's research reputation aided the Keynesian Revolution (albeit indirectly) was his achievement in getting economics recognised as a Tripos at Cambridge in 1903. Without Marshall's status as a brilliant theorist coupled with his quiet tenacity and persistence, it is highly unlikely that economics would have secured its own Tripos when it did. Although it took time, the new Tripos increased the profile of economics teaching and research within the University which, in turn, helped to produce a clutch of students who would go on to provide Keynes with crucial support in the construction of the *General Theory*.

Hayek:

In contrast to Keynes, Hayek did not have the benefit of learning economics at the feet of the master Marshall. However, this is not to say that Hayek's training in economics was in any way rudimentary. On the contrary, the University of Vienna was one of the 'three best places to study economics [in the 1920s] (the others being Stockholm and Cambridge, England)' (Craver 1986: 2). As part of his training, Hayek would have been fully aware of the Austrian School's reputation for controversy and its preference for alternative research programmes. This was a legacy of the School's founding father, Carl Menger, whose *Principles of Economics* (1871) was the cornerstone of subsequent Austrian analysis. Tieben and Keizer (1997: 3-4) identify some of the main controversies involving the Austrians and other schools, including: Menger and Schmoller over methodology; Böhm-Bawerk and the Marxists over the Marxian theory of value; Mises/Hayek and various socialists over economic calculation in a socialist society; Hayek and neoclassical economists over methodology and epistemology; and, finally, Hayek and Keynes over business cycles

and government intervention. Concerning the last of these, the Austrian School's attempt to set the agenda for cycle research went back to at least 1927 when another great Austrian, Ludwig von Mises, created the Austrian Institute for Business Cycle Research in Vienna. The Austrian star was very much in the ascendant during this period, such that by 1928 Mises was confident enough to claim primacy for the Austrian explanation of the cycle. Hayek joined the Institute when it was founded in January 1927, becoming its first director; other well-known staffers included Gottfried von Haberler and Oscar Morgenstern. Hayek's own reputation as a leading authority on the cycle was underpinned by the publication in 1929 of a set of his essays on the subject entitled *Geldtheorie und Konjunkturtheorie*.²⁰ Published in German, the essays drew interest from beyond Austria, most notably in the guise of Lionel Robbins.

With his research reputation growing, Hayek cemented his status by 'essentially [writing] a new book' (Vaughn 1994: 47) for his audience at the LSE and beyond, which would be published as *Prices and Production*. Thus, after seven years of research in Austria, becoming an authority on the analysis of cycles, and building the Austrian Institute for Business Cycle Research into a 'European center for...cycle research' (Leube 1984: xix), Hayek arrived at the LSE in 1931.

Kalecki:

When considering Kalecki's research reputation in the 1930s and 1940s, it is important to note that he had few, if any, of the benefits enjoyed by Hayek and especially by Keynes in the early part of their careers: in particular, there was no major tradition of economic analysis in Poland and, as a result, no recognised school of thought that Kalecki could attach himself to (although he had read Marx, Luxemburg and Tugan-Baranovsky). This meant that he was unable to derive any of the advantages that often flow from being the pupil of a noted master.

Regardless of this, Kalecki's early writings meant that he still had enough of a reputation to secure a place as a speaker at the September-October 1933 meeting of

²⁰ Geldtheorie und Konjunkturtheorie was published in English in 1933 under the title Monetary Theory and the Trade Cycle.

the Econometric Society in Leyden in the Netherlands. This meeting could have changed the history of economic theory as it provided Kalecki with an excellent opportunity to present his innovative ideas on the cycle to an audience which included, amongst others, John Hicks, Nicholas Kaldor, Oscar Lange, and Jan Tinbergen. But Kalecki's paper – which was subsequently published in French (Kalecki 1935a) and then shortly after in English (Kalecki 1935b) and was a reworking of material he had already published in Polish in 1933 (Kalecki 1933) – arguably did not receive the attention it deserved, in part, because it was highly technical.²¹

It would appear therefore that Kalecki's reputation as an important economist during this period was accompanied by a proclivity for over-sophistication: despite his analysis being more rigorous than that which would appear in the *General Theory*, Kalecki's less technically able colleagues, not to mention policy-makers, were put off by the relatively advanced level of mathematical understanding needed to 'translate' his work. Moreover, Kalecki was still very much in the 'lone thinker' phase of his career and so had little claim to being a leader. It is also interesting to note that Kalecki had to wait until 1938 before any of his contributions to economics 'first reached a wide audience' (Harcourt 1992: 1,266), when he published an article in *Econometrica* dealing with the factors that determine national income distribution (Kalecki 1938). Tellingly, this piece was a lot less mathematically sophisticated than his 1935 contribution in the same journal.

Summary:

Each of Keynes, Marshall and Hayek perform relatively strongly with respect to the 'Leader with research reputation' aspect of research school success or failure, while Kalecki, notwithstanding his presence at the meeting of the Econometric Society in the latter part of 1933, was often hampered in this regard in the early part of his career.

²¹ Although it is not entirely clear, it is possible that Kalecki may have delivered his paper to the Econometric Society in French, a factor which would have further hindered understanding for a significant part of the audience.

Table 2. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'ii. Leader with research reputation'

<u>Criterion</u>	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
ii. Leader with research reputation	+	+	+	±

Note: 1 + 2 means that this feature is present; -2 means that this feature is absent; and 2 ± 2 means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

While the presence of a leader with a research reputation is, it seems, not as crucial as a leader with charisma, it is still an important element in determining the relative success of a research school. In Keynes's case, his reputation as a serious researcher began with his Fellowship dissertation, was helped by Indian Currency and Finance and membership of the Royal Commission on Indian Currency and Finance, was further bolstered by his editorship of the Economic Journal (an issue which we will cover in more detail later on), and by the appearance of the *Economic Consequences*, the Tract and A Treatise on Money. Without this track record, it is possible that had the General Theory been Keynes's first book, 'it would probably have been dismissed as the work of a clever but pretentious crank. Recognition would certainly have been much slower' (Winch 1969: 177). At the same time, Marshall's Organon demonstrated to Keynes that certain areas of economics were still in need of development. There is also a case for arguing that Keynes benefited from Marshall's own research reputation insofar as Marshall's success in establishing the Economics Tripos at Cambridge subsequently provided Keynes with a group of students who were to play a key part in the Keynesian Revolution.

Hayek's educational background was a fundamentally strong one, firmly based, as it was, in the Austrian tradition of economics. This led on to a productive early professional period in Austria, where Hayek made his name as a leading business cycle theorist, the result being an invitation to work at the LSE and the publication of *Prices and Production*. Kalecki's reputation was such that, although he was able to present his ideas to an influential audience in 1933, he was otherwise isolated partly because he had not been part of a formal school or the pupil of a master economist. Any research reputation which he may have had in the years leading up to 1936 was, moreover, overshadowed by the excessively mathematical nature of his theoretical output.

Broadly speaking then, Keynes and Hayek had the upper hand over Kalecki when it came to research reputations in the early 1930s, while Keynes would, in turn, quickly pull away from Hayek in the following few years. Of course, this is not to say that Keynes had it all his own way – far from it. For example, on the Committee of Economists he failed to achieve a consensus over how the government should best proceed in its efforts to overcome the Depression.

Nevertheless, Keynes was able to go on and generate a revolution in economic thinking not very long thereafter. It seems that he may have been the beneficiary of what sociologists of science have referred to as the 'Matthew Effect'. This phenomenon, first identified by Merton (1968: 58), is derived from a quote in chapter 25 of the Gospel According to St. Matthew: "For unto every one that hath shall be given, and he shall have abundance: but from him that hath not shall be taken away even that which he hath." Roughly translated, this says that the rich get richer and the poor get poorer. With respect to macroeconomics in the 1930s and 1940s, the Matthew Effect meant that the *General Theory* had a greater chance of succeeding as it was proposed by a leader who, *inter alia*, already possessed a solid research reputation.

iii. 'Informal' setting and leadership style

'Liebig's influence on his laboratory students was exerted through close physical and mental contact with them in an informal atmosphere and situation. These were propitious conditions in which his charisma could operate: matters would have been different had Liebig from the start been an encapsulated professor whom his students rarely met or saw' (Morrell 1972: 37).

Keynes:

There is a considerable body of evidence supporting Keynes's preference for informality, especially in his dealings with the Circus and some of his closer colleagues. At heart, Keynes was a social animal, preferring to be around others but also loving the limelight. By way of example, meetings of the Political Economy Club took place on Monday evenings during term in his rooms at King's, where talented students with something sensible to say were allowed to speak without fear of being made to look like an upstart, unlike Keynes's colleagues who, as we have noted, were frowned upon by Keynes if they advocated beliefs which he considered to be extreme or plainly wrong. Over the years, the Club became part of the established landscape at Cambridge, providing generations of students with the chance to cut their teeth in front of both their peers and their seniors, all the while presided over by the benign Keynes.

Meanwhile, even though he was not part of the Circus's inception, Keynes quickly accommodated the informal manner in which its ideas and suggestions were fed back to him and vice versa, Kahn taking on the role of 'messenger-angel'. The Circus formed in November 1930 to discuss *A Treatise on Money* and its meetings, which grew bigger and more formal, continued every week until May 1931.²² The way in which Keynes accepted the Circus said a lot about the man: he had just spent six years working on a book which most economists would have been happy to consider as their *magnum opus* and was also still involved in government work. Under such circumstances, it would not have been surprising had Keynes given the Circus the cold shoulder on discovering that they were dissecting the finer points of his latest publication. However, Keynes knew that the *Treatise* was faulty and that the Circus contained enough brainpower to be of some considerable help in overcoming these faults. As Moggridge notes, Keynes saw the Circus as an opportunity and 'picked up [its] ideas, sometimes only after extensive discussion, incorporated them into his own thinking and went ahead' (Moggridge in CW XIII: 342).²³

²² Even though meetings of the Circus ceased in May 1931, its core members continued to hold Keynes to account. Thus, Richard Kahn, Joan Robinson and Piero Sraffa 'spied' on Keynes at a lecture he gave at Cambridge on 25 April 1932, prompting them and Austin Robinson to send Keynes a 'Manifesto', which raised a number of theoretical issues which they felt he had to answer (see CW XIII: 376-380 and CW XXIX: 38-48).

²³ Keynes's pro-active approach to the Circus was in stark contrast to how some notable others in Cambridge viewed it. According to Joan Robinson, Dennis Robertson attended only one meeting and looked on it with some sarcasm (see Feiwel 1989: 40) while Pigou regarded the Circus as nothing more

In addition to the informality which characterised some of his close intellectual ties at Cambridge, Keynes also liked to use this way of working when he was away from the town. He would regularly invite colleagues down to Tilton, his country home near Lewes in East Sussex. Richard Kahn was the most frequent guest, he and Keynes '[talking] over problems as they arose, whether in the study or over the morning's task of picking vegetables for lunch' (Clarke 1988: 298). Keynes was extremely grateful for these tête-à-têtes, describing one of Kahn's visits in September 1934 as 'extraordinarily helpful' (Keynes in CW XIII: 484). This close working relationship between the two men was underpinned by a vast written correspondence, with a total of 611 letters exchanged between them from 1928 to 1946 (see Marcuzzo 2002: 422).

Keynes also had no qualms about extending his informality to others not within his immediate Cambridge group. We see evidence of this in a September 1935 letter from Keynes to Roy Harrod: 'I am content! If the classical theory could not be made, even by you, to make more coherent sense than that, it does not deserve very many compliments. However, you must see my re-draft... It would be very nice if you could come to Tilton this weekend, the 28th' (Keynes to Harrod, 25 September 1935, CW XIII: 561). Keynes displays the same relaxed approach in a June 1930 letter to Hubert Henderson, this after Henderson had sent him a note proposing the need for the British government to secure a large new revenue source to finance a programme of capital expenditure: 'Your argument is too much of an affair to deal with in a letter. You will have to come down to Tilton for a weekend for us to thrash the whole matter out' (Keynes to Henderson, 3 June 1930, JMKP EA/1/19). Henderson replies in the same vein: 'Many thanks for your letter. I should be very glad to thrash the whole question out at leisure' (Henderson to Keynes, 5 June 1930, JMKP EA/1/25).

Keynes would make every effort to convince others of his argument. When he failed to make headway against his opponents, he would sometimes ask for the informal opinion of members of the Circus as to whether he was right or wrong on a particular issue. In the following, Keynes writes to Joan Robinson regarding a difficult ongoing correspondence he was having with Ralph Hawtrey over drafts of the *General Theory*:

than 'adolescent frivolities' (Moggridge in CW XIII: 338) and ignored it with 'Olympian detachment' (ibid.).

'Unless it would bore you, I would be rather grateful if you would look through this voluminous correspondence with Hawtrey... By the time you have got to the end of it, you will see that we are recurring over and over again to two or three points where I am indisposed to give way... I should rather like to know whether, looking at it impartially, you feel that there are any further concessions which he can justly claim from me' (Keynes to J. Robinson, 29 November 1935, CW XIII: 612).

Unusually for an academic, Keynes was happy to discuss his ideas with the general public. This to some extent confirms our picture of Keynes as a man of action. Based on letters written, Keynes's most extensive correspondence with the public was probably generated by How to Pay for the War, which was popularised by a radio broadcast made by Keynes on 11 March 1940. In connection with this, the following two notes display his willingness to listen and sympathise with the common man: 'Dear Sir, Thank you for your letter and the copy of your own scheme. I consider it much more important that there should be a drastic remedy than that my particular scheme should be adopted. And I am glad to say that in that matter we are in agreement. Yours faithfully [Unsigned]' (Keynes to Trott, 18 March 1940, JMKP HP/5/147). And: 'Dear Sir, In my opinion, anyone whose income has been reduced by 20 per cent or more since the war should be exempt from my scheme. I hope this will meet your case. Yours faithfully, JMK' (Keynes to Couldery, 21 March 1940, JMKP HP/5/109). Keynes's informality also extended to when he was conducting official business for the British government: 'The missions which he led [to the US] were all happy parties... He was utterly informal, almost without sense of hierarchy, approachable by everyone who had a problem on which to brief him, or a difficulty in his own particular negotiations' (A. Robinson 1947: 67-68).

To the uninitiated, the danger exists that the evidence above may present Keynes in a light which portrays him as perhaps being over-casual in his dealings with others, with little underlying sense of urgency. But nothing could be further from the truth. Granted, the *General Theory* could probably have been written more quickly had Keynes not made the effort to seek out the judgment of others. However, it is likely that without its long gestation period, the *General Theory* would have been a lesser book and it is questionable whether it would have created the revolutionary stir that it did. Moreover, any doubt as to Keynes's commitment to hard work should recall

Robbins's depiction, upon the occasion of Keynes's death, of him literally giving 'his life for his country, as surely as if he had fallen on the field of battle' (Robbins in Skidelsky 2000: 472).

How can Keynes's informality be explained? His natural gregariousness no doubt played a part. But he was also part of Cambridge's 'oral tradition'. More specifically, Cambridge economists were known for their preference of passing on knowledge to pupils through the medium of discussion rather than via textbooks. Marshall in particular had an enthusiasm for this means of communication and it was through such a channel that many of his views on economic theory were first disseminated. (This aspect of Marshall's persona helps, in part, to account for his procrastination in getting his ideas down on paper.)

Nor was Marshall the only one partial to informality. For instance, Pigou tutored Keynes over breakfast once a week. This preference for informal relations persisted down the generations at Cambridge. Thus, even when debating *A Treatise on Money* and Keynes's subsequent ideas, the Circus's deliberations were so informal that 'scant written material has survived to document the group's activities' (Marcuzzo 2002: 430).

Marshall:

From what we have learnt so far about Marshall's character – his reserve, his disdain for controversy, and his procrastination – it would be easy to assume that he somehow preferred formality over informality when it came to leadership. But this is not the whole picture. As we have just seen, Keynes's education at Cambridge was influenced by the oral tradition, Marshall being a keen supporter of the tradition, which resulted in him putting the Organon 'in the hands of his pupils long before he offered it to the world' (Keynes 1924: 345).

A key aspect of the oral tradition during Marshall's time was the 'at homes' that took place at his Cambridge residence, Balliol Croft, between the hours of four and seven on two afternoons each week. The more promising of Marshall's students would be invited to sit with the master whilst he poured forth on a host of subjects, including ideas for research, reading suggestions and 'above all warnings and exhortations' (Becattini 2006: 613). Keynes was one of these students and he would go on to write affectionately about what it was like to visit Marshall in his proverbial ivory tower: 'The pupil would come away with an extraordinary feeling that he was embarked on the most interesting and important voyage in the world... The young man was presented with a standard of intellectual integrity, and with it a disinterestedness of purpose, which satisfied him intellectually and morally at the same time. The subject itself had seemed to grow under the hands of master and pupil, as they had talked' (Keynes ibid., 366). Although Marshall must have dominated the discussions, there seems to have been little hierarchical delineation, everything being 'friendly and informal' (Sanger in ibid.).

Marshall's use of the oral tradition produced a number of results. First, it meant that he was able to get his ideas over to his pupils much more quickly than through a book. Second, the knowledge that Marshall imparted through oral teaching and discussion gave his pupils a sense of 'privilege and superiority' (Coats 1993: 109). Not surprising, then, that Pigou and many others became disciples and considered themselves to be the guardians of Marshall's legacy. Third, the oral tradition provided a smokescreen for Cambridge economists, Harcourt (2001: 337) pointing out that it was 'a good ploy to fall back on, especially when on dangerous ground.'

Less positively, the oral tradition seems to have played at least some part in Marshall's publication delays. Having regaled students with his latest thinking, Marshall no doubt believed that this would be enough to keep the Marshallian tradition going, at least, that is, until his next book appeared, whenever that might be. Although there is little evidence of it happening, the danger of Marshall's approach was that his views could be misinterpreted or misused in some way – even if his students believed they understood them – before he was able to provide a written explanation. In addition, Marshall's lectures became less and less systematic in the latter part of his teaching career, leading Keynes to complain that by 1906 they had become so informal that he found it 'impossible to bring away coherent notes' (Keynes 1924: 359). It would seem therefore that, in his later years, Marshall may have placed too much emphasis on the oral tradition as a means of communicating his ideas.

Hayek:

Anecdotal evidence suggests that Hayek could be rather formal and stuffy. Some further insight on this point can be drawn from the Robbins-Hayek Seminar. The motivation behind its founding is unclear, but it may have been driven by an attempt to emulate Keynes's Political Economy Club at Cambridge on the one hand and to gather a wider following for Hayek's ideas on the other. Meetings of the brightest and best had already been a theme in Hayek's career.

Most notable was his part in the establishment of a small discussion group of likeminded thinkers in the early 1920s in Vienna and his attendance at the famous Mises Seminar. The former group held its first meeting in 1921 and was made up predominantly of social scientists but with representatives from other disciplines also in regular attendance. What was most striking about these gatherings was the glittering array of those who took part. They included the economists Fritz Machlup and Oscar Morgenstern, the historian Friedrich Engel-Janosi, the philosopher Felix Kaufmann, and the mathematician Karl Menger. Meanwhile, the Mises Seminar ran for 14 years from 1920 to 1934 and was held in Mises's private office. As with the Political Economy Club at Cambridge, the atmosphere at the Mises Seminar has been described as one of 'genial toleration' (Vaughn 1994: 63).

Hayek, it seems, was keen to reproduce at the LSE something akin to his experiences in Vienna. The Robbins-Hayek Seminar was held every week to discuss matters of broad interest and usually involved a few staff members and between 30 to 40 students – not in itself particularly conducive to informality, it has to be said. Nevertheless, '[t]here was no hierarchy' once the meetings began as '[s]taff and students alike were a band of eager seekers after truth [with] the order of prominence [depending] upon the excellence of performance' (Robbins 1971: 131). Notwithstanding its description as the 'Robbins-Hayek' Seminar, Robbins was usually chairman, possibly a reflection of his greater popularity among the students as well as Hayek's generally more introverted character. For Hayek, this nevertheless gave him more freedom to concentrate on the issues being discussed, an area where he had a distinct advantage over Robbins, especially when economic theory was involved.

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In spite of its size, the seminar managed to preserve an 'intimate character' (Caldwell 1995: 56), helped by the forming of an inner group or 'front bench' (ibid.), consisting of staff and some of the more able students, who would be the main contributors to the proceedings. For their part, students would have been grateful for the opportunity to get closer to their teachers given that they had 'very little personal contact with members of...staff, many of whom were themselves part-timers' (Coats 1993: 374). This would have been in stark contrast to the situation at Cambridge, where the supervision system facilitated close and regular interaction between staff and pupils.

Kalecki:

Of the evidence that exists on Kalecki's mode of working, the general picture is one of relative formality. This is not to say that he was immune to informality. For example, his sense of humour was legendary and, more importantly, there is some support for the argument that Kalecki may have favoured a more informal approach to leadership in the latter part of his career (see Sachs 1977: 49). But, during his earlier years, Kalecki's formality was predominant. One is tempted to make the assumption that this aspect of Kalecki's personality was a function of his training as an engineer, the nature of which tends to promote precision and meticulousness. However, this argument does not always hold: Keynes's undergraduate degree was in mathematics, yet he had a fondness and an exceptional talent for using words as a means of communication over numbers and equations. Indeed, so good was he at textual exposition – the *General Theory* excepted – that it is sometimes easy to lose sight of the fact that he is writing about economics!

Returning to Kalecki, it is nevertheless reasonable to argue his training did have an impact on his particular means of written presentation. Even though his clipped style has meant that there has never been 'any great controversy about what Kalecki actually meant' (Johansen 1978: 162), it may have been a 'barrier to comprehension for some' (Dobb 1976: 370), especially those with little or no mathematical training. Moreover, this formality could spill over into Kalecki's discussions with others, Lipinski (1977: 74) noting how 'A conversation with Kalecki really was an effort; it was dialectics as Zeno would have understood it', his attitude to those who did not agree with his views being, at best, one of 'forbearance' (ibid.).

Summary:

"Informal' setting and leadership style' again sees Keynes scoring positively. As with "Charismatic' leader(s)", there is qualified support for Marshall when measured against informality, with Hayek and Kalecki seemingly trailing him as well as Keynes.

Table 3. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'iii. 'Informal' setting and leadership style'

Criterion	Keynes	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
iii. 'Informal' setting and leadership				
style	+	±	-	-

Note: 1 $^{+}$ means that this feature is present; $^{-}$ means that this feature is absent; and $^{\pm}$ means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

Morrell-Geison emphasises the importance of close teacher-pupil relations, especially in terms of physical proximity. The importance of this is clear when we consider the charisma and informal leadership criteria side by side: even if a leader has charisma, his effectiveness in establishing and maintaining a successful research school seems to be reduced if he is physically distant and formal.

We saw how Keynes had a preference for informality, this especially being the case when he interacted with the Circus and with certain of his colleagues. One explanation proffered for this was that Keynes had grown up in the oral tradition promoted by Marshall. Marshall himself is something of a contradiction in the formality stakes: he disliked public disagreements, was generally cautious, and was a perfectionist, all of which would suggest a significant degree of formality. However, he was also prepared, through the oral tradition, to pass his ideas on to pupils through discussion, a seemingly dangerous practice for someone so concerned with clarity.

Hayek attempted to recreate at the LSE the atmosphere of the meetings and seminars he had attended in Vienna, but his leadership style was predominantly founded on his intellectual abilities rather than the force of his personality, the role of charismatic leader being left to Robbins. Finally, reports of Kalecki's often forbidding personality coupled with observations about his written style point to a somewhat formal approach to leadership. The issue of writing styles, in particular, is an interesting one as it highlights one of the essential differences between Kalecki and Keynes. Even if he is not referring directly to Kalecki and Keynes, Shackle sums up this crucial difference as follows: 'I think there are two kinds of economics. One of them aims at precision, rigour, tidiness and the formulation of principles which will be permanently valid: an economic science. The other is...rhetorical...often used disparagingly... The rhetorician employs reason...appeals to logic, but...is a user of language at its full compass, where words are fingers touching the keyboard of a learner's mind. I do not believe that human affairs can be exhibited as the infallible and invariable working of a closed and permanent system' (Shackle in Harcourt 1984: 504). It is easy to see which of Shackle's categories best describes Kalecki and which Keynes.

iv. Leader with institutional power

'[F]or a potentially valid intellectual programme to be implemented, power [is] necessary. Quite simply the director [has] to possess or be rapidly gaining sufficient power within his institution to realize his ambitions' (Morrell 1972: 6).

For a leader to be effective, he has to have a sufficient level of control over the institutional forces that may influence the success of his research school. In the absence of this power, the leader is more likely to get waylaid by administrative issues. Additionally, if the particular academic discipline which the leader is involved in is considered to be marginal within the wider university curriculum, battles over preserving institutional status for both himself and his students could become a significant drain on time. One additional aspect that is relevant for our analysis but which Morrell-Geison does not pick up on is the leader's institutional power outside of the university setting. The more power a leader has in this respect, the more likely it is that he will be able to propagate the findings of his school to a wider audience. As we shall see, Keynes's accomplishment in getting his ideas accepted in Whitehall in the 1940s played an important part in helping to ensure the success of his research agenda.

Keynes:

The fact that Marshall had already established the Economics Tripos at Cambridge meant that Keynes's institutional power was much greater than it would have otherwise been and certainly gave those involved in the teaching of the subject a higher profile within the University. But the new Tripos also brought with it considerable administrative commitments. In Keynes's case, there is some evidence to suggest that in the mid- to late 1920s and the very early 1930s, his various duties – both within and outside Cambridge – were excessive, even if some of them were of his own making.

To begin with, Keynes's responsibilities as an economics lecturer at Cambridge were at first fairly substantial. In 1909, even though he was typically lecturing to audiences of just 15 students, his lecture load was heavy, standing at about one hundred hours a year (see Skidelsky 1983: 211). Moreover, the Economics Tripos was becoming increasingly popular with students. On top of teaching and supervisions, Keynes had also been made a Fellowship Elector at King's in 1912, which involved him reading a host of dissertations, many of which had nothing or very little to do with economics or mathematics. There was still the occasional gem, however, such as Alan Turing's work on probability in 1935. Unlike Keynes, Turing secured a Fellowship at his first attempt.

Despite the added burden of work that teaching and supervising foisted on to Keynes's shoulders in the early years, it should be remembered that these activities gave him a very good opportunity to develop Cambridge's best economics students. As time went on, it is doubtful whether people like Richard Kahn would have become part of the Cambridge firmament without Keynes's encouragement. In this sense, Keynes's institutional responsibilities indirectly helped him to achieve his revolution. Saying this, although he would teach some very talented students in the interim, such as Dennis Robertson, it would still be over two decades from when Keynes first started lecturing at Cambridge to when the Circus was formed.

Keynes's heavy administrative load at Cambridge continued up until the First World War. There was a brief respite after 1920 due to his resignation from his University lectureship and because the students whom Keynes and others had taught before the war were now being appointed to posts in the Faculty, thereby making them available to take some of the lecturing load from their more senior colleagues. After he resigned his lectureship, Keynes's only official link to Cambridge University was his King's Fellowship. However, he did continue to give a handful of 'remarkably inspiring' lectures (A. Robinson 1947: 26) every year, focused on the research he happened to be involved in at the time. In fact, Keynes ended up lecturing in only one term of each academic year.

Subject	Years taught	Number of terms	Number of
		(1 term=8 weeks)	hours per week
Money, Credit and Prices	1908/09-1909/10	2	2
The Stock Exchange and the Money Market	1909/10-1913/14	1	1
The Theory of Money	1910/11-1913/14	1	2
Company Finance and the Stock Exchange	1910/11-1912/13	1	1
Currency and Banking	1910/11-1913/14	1	2
The Currency and Finances of India	1910/11	1	1
Money Markets and Foreign Exchanges	1910/11-1912/13	1	1
Principles of Economics	1910/11-1913/14	3	2
The Monetary Affairs of India	1912/13	1	1
Source: CW XII: 689			

Table 4. Keynes's lectures at Cambridge, 1908/09-1913/14

Keynes was also heavily involved in the financial affairs of King's College. He first became acquainted with the College's finances in 1909, before being made a member of the Estates Committee in 1911. This was followed by his appointment as First Bursar in 1924. Apart from three brief periods during which his investments on behalf of King's performed relatively poorly, Keynes proved to be an inspired choice as bursar, his knowledge of the stock market helping to put the College on a much stronger financial footing.

By the mid- to late 1920s the toll of administrative life began to tell even on the workaholic Keynes. He realised that if he was going to make any major contributions to economics, his 'other' responsibilities had to be scaled back. These were considerable and included his 'Activities',²⁴ as they are referred to in the *Collected Writings*, his work on gold and Russia in 1925, and his ongoing commitments to the

²⁴ In his *Collected Writings*, Keynes's 'Activities' take up no less than 13 volumes.

Liberal Party: 'Despite his efficient work habits [and his resignation from the 'Chinese torture' of the University Council in early 1927], it is small wonder that he lost the thread of his ideas, [leaving] chapters [of *A Treatise on Money*] mouldering for months unread at Tilton' (Skidelsky 1992: 285).

Elsewhere at the institutional level, Keynes's influence in Whitehall waxed and waned, even if his various roles made him a national and international figure, attaining a public profile achieved by very few, if any, economists. As we have seen, Keynes started to build his research reputation in part as a result of serving on the Royal Commission on Indian Currency and Finance. What followed were a series of important appointments spanning over three decades. One of the first occurred in 1915 with Keynes's entry into the wartime Treasury. His reach within the Treasury was, for the most part, extensive, even from a relatively early stage: only two weeks after taking up his first posting, he became secretary of a committee of the cabinet headed by then Prime Minister Herbert Asquith. Later on in the First World War, he was appointed head of 'A' Division, which dealt with all matters concerning Britain's external finance: '[A]ll the money we either lent or borrowed passed through my hands' (Keynes in CW XVI: 3). During this period, he also had direct access to the Chancellor and future Prime Minister, Andrew Bonar Law.

Of course, the culmination of Keynes's involvement at the Treasury around this time was his appointment in January 1919 as its principal representative at the Paris Peace Conference following the end of hostilities. Despite his eventual resignation from the British delegation, Keynes had cemented his position as a leading figure in the civil service, his protests against reparations at the same time indicating his willingness to put at risk any political power base that he may have had. Saying this, Keynes still tried to influence inside opinion by sending copies of the *Economic Consequences* to, amongst others, Austen Chamberlain and Bonar Law, the latter of whom had dismissed Keynes's advocacy of a complete cancellation of inter-Allied war debt as 'too altruistic' (Bonar Law in Markwell 2006: 36).

The *Economic Consequences* was important within the context of the Keynesian Revolution partly because it brought into sharp focus Keynes's subsequent relationship with the Treasury. Much has been written on this subject, notably by Harrod and Skidelsky. Harrod's view (1951: 283) was that Keynes's onslaught against the Allies meant that he was 'in the wilderness' for many years thereafter; as far as the Treasury was concerned, Keynes's appeal 'against the authorities to a wider public' meant that the 'official world could no longer use him' (ibid.). The key problem with this is that Harrod provides very little supporting evidence. Granted, there is some foundation to the argument that Keynes's influence in the Treasury suffered a gradual decline during the 1920s. For example, the change of senior personnel in key Treasury departments as the decade wore on meant that Keynes's network of contacts inside government was scaled back. Moreover, as Keynes was no longer a Treasury official, he was excluded from ongoing discussions between the British, the Americans and the French over post-war financial arrangements. But this does not mean that Keynes was completely impotent as far as his influence over policy-making was concerned and it certainly does not mean that he was frozen out of the Treasury altogether, as depicted by Harrod. Indeed, only a few months after the appearance of the Economic Consequences, Keynes was being sounded out by Chamberlain for his views on the conduct of monetary policy 'as though he had never left the Treasury' (Skidelsky 1992: 19). He was also consulted on what to do about the high level of unemployment which Britain faced after the war. Thus, even though it might be pushing the envelope to argue that Keynes 'never left the Treasury', it was difficult for Whitehall mandarins to ignore his advice in the years immediately after the *Economic Consequences*, a situation that was nevertheless astonishing in itself given the general level of hostility in the Treasury towards the book. There were, of course, limits to this influence. For instance, Keynes failed (albeit only just) to convince Churchill not to return Britain to the Gold Standard in 1925. All the same, the problems faced by British exporters in the second half of the 1920s due to the strong pound meant that Keynes's star was again in the ascendancy, his full return to the fray confirmed in 1929 when he was appointed to the Royal Commission on Finance and Industry (or 'Macmillan Committee') by the Labour government of Ramsay MacDonald. In a repeat of the Royal Commission on Indian Currency and Finance, Keynes dominated the Committee's proceedings as he brought to bear the analysis he was developing in A Treatise on Money.

In spite of this dominance, Keynes was frustrated by the workings of the Macmillan Committee's EAC, driving him to write to MacDonald in July 1930 on the subject of setting up a Committee of Economists, with a specific remit of producing a set of anti-Depression policy recommendations. MacDonald decided to follow Keynes's advice and the Committee held its first meeting on 10 September 1930, with all the appointees that Keynes had suggested, including Pigou, Robbins and Robertson; Kahn acted as joint secretary. However, the Committee also proved to be something of a mixed blessing for Keynes: on the one hand, he had demonstrated his institutional power by getting it set up in the first place, but on the other, the Committee's deliberations were often characterised by dissent, the most notable example being Robbins's opposition to a proposal to introduce an emergency import tariff; Keynes eventually had to give way and allowed Robbins a minority report. Moreover, when it came to it, the Committee's findings were buried by the Cabinet as they were allegedly too general to be of any practical use. This, coupled with '[t]he relative meagreness of [his] public activities in the early 1930s' (Skidelsky 1992: 436) and the associated 'collapse of his networks of persuasion' (ibid.) meant that Keynes's institutional influence during this period and for much of the rest of the 1930s was clearly not as extensive as he would have wished, even given his belief only a few years beforehand that his ideas were beginning to be taken more seriously in official circles. (The view that Keynes's influence on Treasury thinking was limited in the 1930s is supported by Middleton (1982, 1983 and 1985), Peden (1980, 1983, 1984) and Tomlinson (1981; see also Booth 1989: 24), who instead point to the importance of political and administrative constraints on economic policy-making during this time.) Apart from all this, Keynes suffered a major heart attack in May 1937 and despite attempts to exert some kind of influence from his hospital bed, he was, in reality, almost totally removed from officialdom for a significant part of the decade.

Nevertheless, with another conflict looming, it was inevitable that a man of Keynes's talents would be found a place in the Whitehall machinery. His rehabilitation had its roots in a brace of articles he published in *The Times* in mid-November 1939 which would go on to form the basis for *How to Pay for the War*. The *General Theory* had dealt primarily with an economy faced by a lack of effective demand and possible deflation. But Keynes was able to turn this analysis on its head and apply it to the booming conditions of wartime. In particular, he knew that the economy would be at full employment during the war and that this could give rise to inflation as producers would be unable to increase supply and so would try to increase prices instead. In

response, Keynes advocated rationing and a scheme of compulsory saving which would serve to defer consumption until after hostilities had ended. These proposals were picked up by Whitehall and, in July 1940, Keynes was given a room at the Treasury and a few months later was made a member of the Chancellor's Consultative Committee.

Even if his return to the Treasury came too late to influence Chancellor Sir John Simon's main budget of April 1940 and his supplementary budget three months later, Keynes made a considerable impact on the July 1941 budget presented by Simon's successor, Sir Kingsley Wood. Apart from Keynes, Hubert Henderson, Dennis Robertson and Lord Catto were also at the Treasury, although it should be remembered that the role of economists in Whitehall was still extremely limited, a situation which probably played into Keynes's hands as it made it easier for him to influence Wood without having to compete against other centres of power within the civil service.²⁵ All the same, it was clear to Churchill that a well-run domestic economy would be vital to Britain's war effort, this forming the basis of his decision to divide the Central Economic Information Service into two parts, the Central Statistical Office and the Economic Section (ES), in January 1941.

Recruits to the ES were usually young and had, more often than not, been heavily influenced by the *General Theory*; James Meade, a one-time core member of the Circus, was one such individual. In June 1940, he had returned to Britain from a posting at the League of Nations in Switzerland, this after Austin Robinson had asked him if he would help set up a system of national accounts for use in the Wood budget. But despite the increased profile enjoyed by economists in government as a result of the creation of the ES, working conditions were far from easy for Meade and his co-workers, as the following, almost quaint, description demonstrates: '[Meade] drew up a complicated and comprehensive system of balancing tables; a young Cambridge graduate in the Ministry of Economic Warfare, Richard Stone, was sent over to help him with the statistics... Stone joined Meade in his tiny room with its single desk, established himself on a corner of the desk with a quill pen and a hand calculator, and

²⁵ In what would turn out to be one of his less accurate forecasts, Keynes was of the view that the Treasury would never need more than two economists!

gradually moved from the corner of the desk to the centre, while Meade turned the handle of the calculator' (Howson 2008). In spite of their extremely limited resources, Meade and Stone had, by late 1940, succeeded in producing double entry accounts for a whole country. The fruits of their work, 'National Income, Saving and Consumption', was circulated by Keynes to Treasury officials in December 1940 and it would go on to have a major impact on the budget of July 1941 (the 'Keynes budget') via the 1941 White Paper entitled *An Analysis of the Sources of War Finance and an Estimate of the National Income and Expenditure in 1938 and 1940*. Chancellor Wood was impressed and was happy to be the messenger for one of the first major steps in what turned out to be a revolution in national income accounting; Wood's additional approval of a tax burden in excess of the level recommended by Keynes in order to keep a lid on inflation was further testament to Keynes's influence at this time. With inflation falling significantly between 1940 and 1943, Keynes was, it seems, proved right: his ideas had already become highly influential, only a few years after the appearance of the *General Theory*.

There is another side to this story however. When considering Keynes's impact on official thinking in the 1940s it is worth remembering that the level of awareness of technical economics amongst the Treasury's senior personnel was, for the most part, not particularly high. Granted, there were some outstanding economists working in government. Ralph Hawtrey was one of the most notable, but because he spent much of the war collecting material for a history of war finance, he had little or no influence on policy (see Peden 2006: 110).

Hawtrey's talents contrasted sharply with what could sometimes be a severe deficiency in economics training amongst the mandarins. A good example was Wilfred Eady. Eady had secured a First Class degree in Classics from Cambridge and became Second Secretary to the Treasury in 1942. His economic adviser was none other than James Meade. Eady felt at a distinct 'disadvantage in discussions with the young professional adviser' (Clarke 1998: 170), reflecting the fact that he had had no formal schooling in economics. For his part, Meade was astonished that such a situation could prevail: 'When one looks at it objectively, what a state of affairs it is when the man chiefly responsible for internal and external financial policy has had no technical training. I am sure that in our grandchildren's days this will be considered

very odd' (Meade in ibid.). What with all this together with the fact that Keynes already knew many of the senior officials in government from his Eton and Cambridge days, one has to question how difficult it really was for him and his acolytes to bring Treasury officials round to their way of thinking. Indeed, this is an aspect of the Keynesian Revolution which probably deserves a greater level of attention.

Marshall:

Despite his eminence, it took Marshall more than a decade of campaigning to bring the Economics Tripos into existence, a period in which he suffered from 'frail health and limited energies' (Levitt 1976: 439). Moreover, with the formation of the Tripos coupled with wider changes in teaching practices that were happening in Cambridge,²⁶ Marshall's lecturing and administrative responsibilities were to 'absorb much of his energy...frustratingly so' (Whitaker 1996: xix). On the other hand, his teaching load should be seen in some context. Keynes (1924: 358) states that Marshall gave 'two lectures a week in a general course, and one lecture a week on special theoretical difficulties; but he lectured, as a rule, in only two terms out of three, making about forty-five lectures in the year.' Of course, Marshall spent many additional hours supervising. But in terms of the number of hours dedicated to lecturing, his load was around half that compared to Keynes's when the latter was at his most active at Cambridge in the years prior to the First World War but also when the Economics Tripos was much expanded.

Much has been made of Marshall's alleged lack of participation in activities outside Cambridge. In the years leading up to 1890 much of his time was taken up by the writing of the *Principles* and it would not have been a surprise if Marshall had decided that, with the *Principles* out of the way, his life's work was done (even if the first edition was suggestively subtitled 'Volume I'). His external activities do indeed pale in comparison to those of the hyperactive Keynes and he never attained the close proximity and influence over senior political figures enjoyed by his famous pupil.

²⁶ For example, '[i]t was no longer possible for [Marshall] to give his few required lectures to 'Poll men' (ordinary degree students)...as Fawcett had done' (Whitaker 1996: xix).

Then again, Marshall was far from averse when it came to providing advice and guidance when he thought it appropriate. He gave evidence to five official commissions, including the Gold and Silver Commission (1887), the Commission on Local Taxation (1897), and the Indian Currency Commission (1899). Most importantly, Marshall served on the Royal Commission on Labour, which sat from 1891 to 1894. The Commission had been convened by the Salisbury Administration, which was worried about increasing levels of industrial conflict. Marshall took an active part in questioning witnesses and used his position to test his emerging theories on wages and employment (see Lawlor 2006: 48). Unfortunately, the time that Marshall spent on official business, especially the Labour Commission, together with the work required to get the Tripos in place meant that there was less time for more theoretical work in the 1890s, notably a second volume of the *Principles* (see Groenewegen 2006: 88).

Hayek:

During the 1930s and 1940s, Hayek's institutional power was restricted due to a combination of factors, one of the most important of which was that he never became involved in British economic policy-making at central government level. At best, there may have been an opportunity for him to exert some influence through the EAC's Committee of Economists, but Robbins's efforts to get Hayek to give evidence to the Committee failed, Keynes no doubt wary of introducing any further complications into the proceedings; an appearance by Hayek would surely have upset the apple cart even further.

There was certainly no question over Hayek's credentials. As previously noted, he had risen to become director of the Austrian Institute for Business Cycle Research, a position which catapulted him on to a bigger stage. But the ability of the Institute to influence policy-making in Austria was compromised by the fact that its founder, Mises, was a Jew and was known for his outspoken liberal views. Both of these factors would have been 'indisputable barriers to advancement' (Vaughn 1994: 63) in Vienna in the 1920s and 1930s. There is also some evidence to suggest that Mises was not the easiest man to get on with. All the same, the work Hayek produced at the Institute was enough to secure him a post at the LSE, and although it was still

overshadowed by the ancient universities, the LSE had already become a leading institution within British academia by the 1930s.

Kalecki:

Whilst Keynes and Hayek were attached to two leading academic institutions in the 1930s, Kalecki's institutional presence was very limited during this period. Granted, his meticulous work as an economic journalist did play an important part in his securing a post at the Polish Institute of Research on Business Cycles and Prices in 1929. But the Institute cannot be said to have had anything approaching the reputation enjoyed by either Cambridge or the LSE. Even when Kalecki moved to Cambridge in the late 1930s, Keynes's presence and reputation loomed larger than ever at the University, underpinned by the stir created by the *General Theory*. Moreover, as we have seen, Kalecki would probably have never made it to Cambridge had it not been for the intervention of Keynes and his close circle.

In fact, it was only from around 1940 that Kalecki was able to start making a name for himself at an institutional level when he went to work at the Oxford Institute of Statistics. Not one to waste time, Kalecki quickly became 'the guiding spirit' of the Institute, 'which consisted mainly of people with left-wing (Labour Party) sympathies' (Steindl 1981: 591). But even if Kalecki's later proposal that all consumer goods should be rationed during the Second World War did receive a lot of attention, it was already far too late for his earlier revolutionary ideas on the cycle to have any meaningful impact.

The rest of Kalecki's career was mostly characterised by disappointment after disappointment whenever institutional interaction was involved. There were his failed attempts as an economic advisor to the governments of Cuba, India and Israel, his difficulties at the United Nations as a result of the McCarthy witch-hunts, and his multiple resignations. Even when he had the opportunity to spread his ideas, Kalecki's high moral standards often intervened, forcing him, for instance, to turn down what must surely have been a tempting job offer from Stanford University on the grounds of his opposition to the United States's controversial military involvement in Vietnam.

Indeed, if Kalecki was going to have any institutional impact one would expect it to have been later on in his career when he returned to his native Poland in 1955, by which time he had already made something of a name for himself in the West. By the mid-1950s, his 'penchant for *doing* economics [had] developed into a near-passion' (Brzeski 1976: 617), partly driven by his close association with Hilary Minc, a senior minister in the communist government that came to power in Poland after 1945. It was through Minc that Kalecki was able to work at the Polish Planning Commission. However, despite Kalecki's hopes for the future, his network of influence began to disintegrate after Minc's exit from the political scene in 1956. In truth, Kalecki's job at the Commission was not all it was cracked up to be. According to Brzeski (ibid., 619), a fellow worker, Kalecki 'had no regular duties... He had no decision-making power whatever. Most revealing of his status: he had no staff. The Commission of the Perspective Plan of which he was the Chairman...was an *ad hoc* group, with poorly articulated authority, and insufficient control over planning activities... [I]ts substance and procedures were subject to a hierarchy of which Kalecki, though nominally in charge, was not a part.' Eventually, realising his ineffectiveness and frustrated by major disagreements over investment policy with Ladislaw Gomulka, head of the ruling Polish United Workers' Party, Kalecki resigned from the Commission in 1961.

In the years following these events, Kalecki made a successful return to academic life at the Polish Academy of Sciences. Once again, he became the leading light, this time in the Department of Economics and was a key force behind the establishment in 1962 of the Centre of Research on Underdeveloped Economies (CRUE), of which he was chairman. But by then, of course, the revolutionary contributions that Kalecki had made to macroeconomics three decades previously had long been eclipsed by the Keynesian Revolution.

Summary:

We have seen how Keynes's performance in terms of his power at the institutional level was not as clearly positive as with the preceding three criteria, although there were still some affirmative aspects; Hayek was in a similar position in this category. Institutional power was again largely absent in Kalecki's case. Finally, Marshall can be said to have outperformed each of the other three on this measure.

Table 5. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'iv. Leader with institutional power'

Criterion	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
iv. Leader with institutional power	±	+	±	-

Note: 1 '+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

Morrell-Geison argues that a research school is more likely to be successful if its leader has a significant degree of institutional power. More often than not, the institution in question is a university. In an extension of Morrell-Geison, however, we have seen how institutional power outside of academia can also play a crucial part in determining research school success or failure. More specifically, the British civil service – in particular the Treasury – and government were key battlegrounds in the first half of the 1940s in the fight to get Keynes's ideas officially accepted.

Keynes's relationship with officialdom was a topsy-turvy one. Granted, he was consulted by both Liberal and Conservative chancellors of the exchequer. On the other hand, his resignation from the British delegation at Paris meant that he was not in the front line of economic policy-making in the 1920s, while the writing of the *General Theory* and illness limited his influence during the 1930s. Moreover, his admission to British MPs in 1931 that over the previous 12 years he had had 'very little influence, if any, on policy' (Keynes in CW XX: 611) was an acknowledgement that, amongst other things, he had failed to win the day on the Committee of Economists, this despite being its 'central figure' (Patinkin 1982: 204). Had the *General Theory* been in circulation at the time of the Committee's deliberations, Keynes's influence in Whitehall would probably have been much greater. Instead, he had to wait until the July 1941 budget before his ideas first had a major impact on British economic policy.

After this, the 1942 *Social Insurance and Allied Services* report, otherwise known as the Beveridge Report (Beveridge 1942), which assumed that the government could run the economy along Keynesian lines, provided further institutional support for Keynes's theories, while the 1944 White Paper on Employment Policy incorporated a political commitment to maintain full employment through Keynesian-inspired
policies. Notwithstanding the fact that demand management continued to be something of a blunt instrument, the foundations which Keynes, Meade and others had put in place meant that it became an accepted part of policy-makers' armoury within a relatively short period of time. On a related note, the work of Meade and Stone in particular can be seen as a vital extension of the original Keynesian School at Cambridge and is, as such, a nod in the direction of the cognitive type of research school identified by Rocke (1993).

At Cambridge, Keynes's institutional power was bolstered by the Economics Tripos. Granted, Tripos duties meant that in the early years of his academic career, Keynes's teaching load was onerous. Nevertheless, he was still able to reduce these duties from 1919 onwards and by the early 1930s was institutionally powerful enough to cancel some of his Cambridge lectures which, together with a sloughing off of other administrative calls on his time, meant that he could devote more time to writing the General Theory and to fostering ties with those sympathetic to his cause. Later on, by the middle of the Second World War, Keynes seems to have been happy to let his revolution run its course in the knowledge that it was, in any case, gaining a full head of steam, both at Cambridge and in Whitehall. Given what we know about Keynes's sometimes multifarious institutional entanglements, one is left wondering how much more 'impressive' - for want of a better word - his intellectual output might have been had he not been burdened by his activities away from theoretical economics. At the very least, his hyperactivity played a major role in his premature death: had he lived a few more years, he would surely have had the opportunity to fully develop and publish his 'notes' on the General Theory which, in turn, would have helped to eliminate much of the subsequent confusion over what he actually meant. Conversely, the ambiguity of the General Theory was indeed part of its attraction for economists; any attempt at clarification may have reduced such ambiguity which could have diluted the impact of Keynes's revolutionary ideas.

Meanwhile, both Hayek and Kalecki had little institutional power in the 1930s and 1940s. Neither was successful during this period in promoting their ideas at governmental level, either in Britain or abroad. Hayek was undoubtedly influential at the Austrian Institute for Business Cycle Research, which played a major part in establishing his reputation as a serious economist and in securing him an appointment at the LSE. But his closest confidant at the LSE, the charismatic Lionel Robbins, was not powerful enough to provide the necessary support for Hayek in his battle against Keynes, Robbins's failure to secure an opportunity for Hayek to give evidence to the Committee of Economists being one manifestation of this.

Whilst Hayek had the benefit of being employed in a recognised academic institution, Kalecki's access to institutional power in his early career was virtually non-existent. At a broader level, Kalecki 'spent most of his adult life bounced about between Josef Pilsudski's anti-Semitic fascism, Oxbridge's snobbish condescension, Joe McCarthy's populist witch-hunting, and Ladislaw Gomulka's relapse into neo-Stalinism' (Bronfenbrenner 1976: 464). By the time Kalecki had reached Oxford, where he was able to exert some institutional influence, the *General Theory* had already been in print for four years. What is more, whilst Kalecki was at Oxford, Keynes was at the Treasury, overseeing a revolution in fiscal policy. Even in later life, Kalecki's access to institutional power was constrained by his high moral code and by his failure to establish close and lasting relations with senior politicians.

v. Social cohesion, loyalty, esprit de corps, 'discipleship'

'Social cohesion, loyalty, *esprit de corps*, and 'discipleship'' often flow from the other criteria identified by Morrell-Geison. For example, loyalty to a research leader is sometimes the result of that leader possessing charisma. Since Morrell's and Geison's original articles, their analyses of social cohesion and loyalty have been extended in three crucial ways. First, Geison himself has noted that different disciplines can, by definition, generate more or less opportunity for cohesion. He focuses on the distinction between research schools in the field sciences, such as entomology, and laboratory-based schools: 'In the latter the research director and his apprentices [work] cheek by jowl in the same physical and instrumental setting, day in and day out. In the field sciences, by contrast, the members of a research school...are...spatially dispersed at least part of the time' (Geison 1993: 233).

Second, Hagen (1993: 194) highlights the fact that the loyalty generated by a research school, both towards its leader and between its members, can act as an "intellectual

buffer" between the group and non-group researchers. Consequently, when a school comes under external attack, its members are more likely to rally to its support when such a buffer exists.

Finally, Hagen (ibid., 178-179) also shows that the presence of a so-called 'ideal student' in the research school can be important in underpinning group loyalty. Hagen argues that an ideal student must be in possession of a number of qualities, including the ability to independently develop the leader's ideas in directions which enable the school's research programme to be extended in ways not necessarily imagined by the leader. In pursuing these other lines of enquiry, the ideal student must simultaneously possess enough loyalty to the leader so that the integrity of the wider school's research programme is kept intact. Hagen notes that '[s]uch a balance of intellectual qualities is not often found' (ibid., 179).

Keynes:

Keynes did not achieve the commanding heights of the *General Theory* on his own. He received crucial help and input primarily from the Circus, a small group of young economists at Cambridge who began to meet on an informal basis in late 1930 to discuss Keynes's evolving ideas. Over the subsequent few months, the group's meetings expanded to include some of the more promising economics undergraduates although, highlighting its exclusive nature, attendance at Circus gatherings was only granted to those who passed a stern interview with some of the senior members. The core of the Circus was made up of Richard (later Lord) Kahn (then aged 25), Joan Robinson (27), James Meade (23) and Piero Sraffa (32); Joan Robinson's husband, Austin (33), was also part of the group, but did not contribute 'directly to Keynes's thinking' (Cairncross 1994: 906).²⁷

For the purposes of providing some background, it should be noted that arguably the most important outcome of the Circus's discussions was to persuade Keynes to 'recast his analysis in terms of changes in output' (Moggridge 1973: 78), a stark difference

²⁷ Other peripheral members of the Circus included R.B. Bryce, C.H.P. Gifford, A.F.W. Plumptre and L. Tarshis.

from the focus on changes in prices which had dominated his analysis in *A Treatise on Money*. Other important issues identified by the group included the fallacy of the widow's cruse in conditions of unemployment, and the clarification of definitions, accounting identities and causal relationships (see Feiwel 1989: 39). Still, the Circus's contribution should probably not be overstated. Austin Robinson notes the following: 'I think the Circus put together *some* of the ingredients. But many of the ingredients were there already and Keynes was aware of them. He only had to be reminded of them' (A. Robinson 1985: 57). Kahn supports this position, adding that 'it did not occur to any of us that we were doing more than adding glosses and embroideries to Keynes's work. Any further advance was made by Keynes' (Kahn in ibid., 49). Given these comments, Joan Robinson's assertion that the Circus sometimes had 'trouble in getting Maynard to see what the point of his revolution really was' (J. Robinson 1979a: 170) appears to be something of an exaggeration.

Keynes's interaction with the Circus reflected his broader preference, especially as he got older, for group-orientated intellectual activity. There was a precedent for this type of behaviour, albeit not linked to economics. Keynes was a member of the Bloomsbury Group, a coterie of artists and scholars which came together in the opening years of the 20th century and which remained intact, in one form or another, until the Second World War. Mini (1991: 159-160) argues that Keynes's Bloomsbury connection must have been 'of great support...enabling him to withstand the criticism of his economic and political ideas by outsiders who did not share his premises, and to that extent Bloomsbury not only encouraged him to continue but strengthened his appreciation of the value of solidarity.' In this sense, then, Bloomsbury provided a buffer for Keynes in his efforts to get his economic ideas accepted.²⁸ Of course, there were important differences between the functioning of Bloomsbury and the Circus, most importantly the fact Keynes never attended Circus meetings, this a reflection of his not wanting to overawe other attendees linked, no doubt, with a desire to avoid generating possible irritation amongst those not able to keep up with the speed of his mind. Nevertheless, the Circus can be viewed as a microcosm of Bloomsbury at Cambridge insofar as it too provided an intellectual crutch for Keynes.

²⁸ At a broader level, Goodwin (2006: 236) argues that Bloomsbury made Keynes 'both a more ethical human being and a more ethical economist.'

Even though the other core members of the Circus were Keynes's close associates and friends, there can be little doubt that he had a special affinity with Richard Kahn. It was in Kahn's lodgings at King's College that the Circus's meetings began, before they were moved to a more spacious room at Trinity. The strong intellectual link between Keynes and Kahn had already begun to take shape a couple of years earlier when Kahn was a 22-year-old economics student. Skidelsky (1992: 287-288) sets the scene: 'Keynes had had good economics students before... But...Kahn was the first who was able and willing to help him in his own work... On 29 April 1928, Keynes wrote to Lydia, 'Yesterday my favourite pupil Kahn wrote me one of the best answers I have ever had from a pupil – he must get a first-class''. Once Kahn's place in Keynes's affections was secured, the two were a force to be reckoned with, especially when it came to criticising the work of others: ""Why is there such obstinacy and wilfulness in error?" [Keynes] asked about Gottfried Haberler's *Prosperity and Depression* [1937], which he got Kahn to savage in the *Economic Journal*' (Skidelsky 2000: 7).

The contribution that Kahn made to the *General Theory* has been a matter of some contention (see Harcourt 1994 and Marcuzzo 2002). Moggridge (1992: 532) and others claim that Kahn himself was of the view that he and the Circus played a major part in guiding Keynes's thinking while Schumpeter (1954: 1,172) suggests that Kahn's contribution 'cannot have fallen very far short of co-authorship'. Granted, Kahn was Keynes's most important bulwark against technical mistakes. Indeed, the meticulous nature of Kahn's mind was legendary, a point not lost on Keynes: 'I am now engaged in trying to write out...a really detailed, but nevertheless popular, account of the relation between primary and secondary employment. I hope I don't make any bloomers, – I wish you were here to look over my shoulder' (Keynes to Kahn, 24 March 1933, CW XIII: 413).

In addition to the above, we also have Keynes's reporting of the 'stiff supervisions' (Keynes in ibid., 422) which Kahn gave him during the drafting of the *General Theory* and how this led to a 'paradoxical "inversion" of roles' (Marcuzzo ibid., 444) between the two men, with the 'pupil [intervening] to correct, tidy up, and sound out the master's rationale' (ibid.). Finally, there was Kahn's seminal article on the multiplier, which gave Keynes's system a greater degree of theoretical respectability.

Against all of this evidence, however, must be weighed Kahn's own clearly stated opinion that he (and the Circus) provided nothing more than 'glosses and embroideries' to Keynes's work. Given this, it seems that those who assign a greater role to Kahn have decided, unjustifiably, to overrule the evidence of the person best qualified to comment on the matter. Moreover, it was also the case that Kahn and Keynes did not always see eye-to-eye on theoretical matters. Thus, Kahn has described how Keynes's notion of voluntary unemployment left him 'very cold' (Kahn 1976: 23) and that, as a result, he 'took no interest in the wording of Chapter 2 of the *General Theory*' (ibid., 24).

The second key member of the Circus was Joan Robinson, a woman of 'outstanding brains, personality and looks' (Skidelsky 1992: 287). If Robinson allegedly only feared Sraffa when it came to debating economics (see Harcourt and King 1995: 39), she clearly also held Keynes in great respect, as the following letter from her to him demonstrates: 'It has just occurred to me that I have been being extremely dense. The point of our [the Circus's] supply curve business is that it steps into what is admittedly the breach in your method, i.e. the effect on output of the redistribution of profits between industries... I feel very much ashamed of giving you trouble by not saying where our method dovetails into yours and allowing you to think that our tools were quite different from yours. The only difference is that you use a box spanner and we use an adjustable one' (J. Robinson to Keynes, 11 May 1932, CW XIII: 379). But Robinson need not have been ashamed: Keynes saw her as integral to his intellectual endeavours and, fortunately, did not take the same dim view of women economists as Marshall.

While Robinson may not have been quite as intimate with Keynes as Kahn was, Keynes was confident enough in her abilities to ask for her comments on various draft versions of the *General Theory*: 'Here is a first instalment, namely Book I... I shall be extremely grateful for any criticisms of form or substance' (Keynes to J. Robinson, 8 June 1935, ibid., 638). Keynes went on: 'Could you and Austin dine with Lydia and me in King's on Thursday...and come with us to the Handel afterwards?' (ibid.). What we see here, then, is not only the strong intellectual relationship between Keynes and Robinson, but also evidence of how close they were socially. (Incidentally, Robinson had to decline Keynes's invitation to attend the Handel concert as she and her husband had already been invited to the same event by Keynes's mother!)

On a different occasion a few months later, a letter from Robinson to Keynes arranging a meeting to discuss the drafts of the final chapters of the *General Theory* highlights her awareness of the need to protect Keynes's ideas from prying outsiders whilst also trying to minimise the influence that those who were not part of the Circus might be having on Keynes. It is a good example of Hagen's intellectual buffer: 'Thursday at 8 will be fine. It is possible Austin may have to be away, but I won't ask anyone in, in case you would like to talk about the book. I will keep my notes on these chapters until then... I hope you won't let Roy [Harrod] intimidate you about [chapter] 26. I think it is very important to have it, and it is very enjoyable to read. I don't think you have overstated matters at all' (J. Robinson to Keynes, 7 September 1935, ibid., 651).

The buffer was not always effective however. Robinson and Kahn were extremely critical of IS-LM. This supposed simplification of the General Theory received its first major public airing at a meeting of the Econometric Society at Oxford in September 1936, a gathering which Young (1987: 3) has justifiably described as 'one of the most important in the history of modern economic thought', but which neither Robinson nor Kahn attended. Despite Keynes's own ambivalence towards IS-LM, his two protégés categorically claimed that it was not a fair representation of the General Theory's central message which, they maintained, was, in fact, the fundamental role played by uncertainty and expectations in determining economic fluctuations. However, this view started to be edged out at the Oxford meeting, with IS-LM getting the initial upper hand (although the Robinson-Kahn view has arguably won the day over subsequent decades). Whether things would have turned out differently had Robinson and/or Kahn been in Oxford is a matter of speculation, although given that IS-LM gave policy-makers a more determinate framework to work with than the often highly ambiguous General Theory coupled with the fact that Harrod, Hicks, Meade and others had simultaneously developed variations of IS-LM-type models, it seems doubtful that attendance at Oxford would have made much difference.²⁹

²⁹ It nevertheless remains unclear why Kahn and/or Robinson failed to make an appearance at Oxford.

Putting the above to one side, Joan Robinson's contribution to the Keynesian Revolution did not stop at her involvement with the Circus and her comments on drafts of the General Theory. Her contemporaneous and subsequent written output on Keynesian themes was extensive. To begin with, she penned two articles in 1933 which were updates of Keynes's latest ideas: one was 'A Parable on Savings and Investment' (J. Robinson 1933a), which appeared in the February *Economica* and was an attempt – albeit an ultimately unsuccessful one – to mediate between Keynes and Hayek in their dispute over A Treatise on Money, whilst the second, 'The Theory of Money and the Analysis of Output' (J. Robinson 1933b), was published in the first volume of the Review of Economic Studies. In this article, Robinson sought to explain - in a mood which, it has to be said, was at times rather critical of Keynes - the revolutionary nature of the switch from analysing changes in prices to analysing changes in output which the Circus had been urging Keynes to adopt. This was followed by the appearance of her Introduction to the Theory of Employment (J. Robinson 1937a), a "told to the children" version of the General Theory. Keynes's positive reaction to Robinson's book gave a strong indication that he was aware of the difficulties readers were having in trying to understand the General Theory: 'You've been very successful, I think, in simplifying and have skated round the complications beautifully' (Keynes to J. Robinson, 20 November 1937, JVRP vii/240/14). In 1937 Robinson also published her Essays in the Theory of Employment, where her stated objective was to 'apply the principles of Mr. Keynes' General Theory of Employment, Interest and Money to a number of particular problems' (J. Robinson 1937b: v), notably the Marshallian long period. Finally, in her magnum opus, The Accumulation of Capital (J. Robinson 1956), Robinson attempted to extend Keynes's system further to account for growth and capital accumulation, all the time fighting against 'bastard Keynesianism', as she saw it (see J. Robinson 1962a).³⁰

Apart from Richard Kahn and Joan Robinson, there were two other prominent members of the Circus. The first was James Meade. Meade took part in the group's discussions while spending a postgraduate year at Cambridge in 1930/31. Keynes

³⁰ Given his prominent role in the origination of IS-LM, Hicks became the target for much of the criticism levelled by those, including Joan Robinson but also Paul Davidson and Hyman Minsky, who were of the view that IS-LM misrepresented the *General Theory* (see Coddington 1983: 67). See also Leijonhufvud (1968: 49).

considered him to be of considerable promise and the two got on socially, Keynes inviting Meade to dine with him at High Table at King's and taking him to meet his parents at Harvey Road (see Howson 2000: F124). For his part, Meade considered Keynes to be 'God'. Decades later and long after Keynes's death, Meade described how he was still under Keynes's 'magic spell' (Meade 1983: 263). (Interestingly, out of all the Circus members, both in the core and on the periphery, Meade was the only one to receive the Nobel Prize, sharing the 1977 award with Bertil Ohlin for contributions to international trade theory.)

Meade's role in the Circus has arguably been overlooked by historians of economic theory, who have instead preferred to concentrate on the roles played by Richard Kahn and Joan Robinson. However, Meade was 'more active than any of us' (A. Robinson 1977: 33), not least because of the amount of spare time that he had at his disposal due to his postgraduate status. This aside, given that Meade was still only 23 together with the fact that the other main participants in the Circus were already well on their way to becoming reputable economists, his contribution becomes even more impressive.

Meade's work was often underpinned by mathematics (albeit not overly so) and even Keynes, who was rarely stumped on technical matters, was puzzled and 'looked around the room for 'Mr Meade's Relation' on first acquaintance' (Clarke 1988: 249; see also Meade 1993). At the same time, Meade maintained that he had the basic elements of what was to become the General Theory in his head when he returned to teaching duties at Oxford in the autumn of 1931. This appears to be an over-simplistic assessment given that Keynes was to toil for another four or so years on the book. Either way, there is little doubt that Meade was sympathetic to the original Keynesian system and that this sympathy was to play a crucial role in subsequently shaping British economic policy: Meade promoted Keynes's ideas through the New Fabian Research Bureau in 1933 when 'many of Labour's future economic policies were...being thrashed out' (ibid., 286). Together with Colin Clark, Meade was thereby instrumental in the conversion of the Labour Party's younger economists to Keynesianism by the end of the 1930s (see Howson 2000: F125). Then there was Meade's work within the ES, which gave him a further excellent opportunity to exert influence on policy. Booth goes as far to say that, 'If Keynes was the dominant intellectual power behind wartime discussions of postwar external policy, the driving force in the shaping of postwar macroeconomic domestic policy was James Meade... [H]e managed to persuade the [ES] to unite behind a Keynesian programme which slowly but surely worked its way through the Whitehall committee structure' (Booth 1989: 93). But Keynes and Meade, as with Keynes and Kahn, did not always agree. During the war, as part of the National Debt Enquiry, Meade's support of interest rate flexibility was directly opposed to Keynes's preference for low and stable interest rates. Despite a stout defence by Meade, the cheap money option was adopted by Chancellor Hugh Dalton. Meanwhile, having assumed the directorship of the ES in 1944, Meade decided to leave in 1947 due to a mixture of frustration and poor health. He eventually returned to Cambridge in 1957 as Robertson's successor as Professor of Political Economy, but even though he remained at Cambridge for 11 years, his experience was marred by the cool reception he received from the Cambridge 'Keynesians', who regarded him as too neoclassical (see Howson ibid., F137).

The final prominent member of the Circus was the Italian, Piero Sraffa. Wanting to escape Mussolini's Fascist government, Sraffa settled in Cambridge in 1927 and soon became close friends with Keynes. Socially, the two could often be found visiting Cambridge's antiquarian bookshops on the lookout for a bargain, Keynes affectionately referring to this as "Pottering with Piero". Sraffa was someone whom Keynes 'liked to worry about. He was negligent about his clothes [and] had a horror of lecturing' (Skidelsky 1992: 290). In line with his fear of public exposure, Sraffa was also extremely reluctant to publish. Luckily for him, Keynes saw beyond these eccentricities and was instrumental in keeping Sraffa at Cambridge through various non-teaching appointments after Sraffa resigned his lectureship in economics in 1931.

Sraffa was well acquainted with Keynes's early theoretical work as he had translated the *Tract* into Italian in 1925. However, the two men held decidedly different positions when it came to economics. Keynes found Sraffa's preoccupation with Ricardo and Marx rather odd whilst Sraffa did not agree with many of the arguments contained in the *General Theory*, in particular Keynes's views on liquidity preference. Joan Robinson went further, claiming that Sraffa 'never really quite knew what it was that we [Keynes and the Circus] were going on about' (J. Robinson 1979b: 1). Given the power of Sraffa's intellect and the fear it held for Robinson, this again seems to be something of an exaggeration. This aside, Keynes had a great deal of respect for Sraffa and in his capacity to defend the Cambridge economics fortress against external attacks; Sraffa's savage review article of *Prices and Production* for the *Economic Journal* was ample demonstration of this, Sraffa referring to the book as a 'maze of contradictions' which made the reader 'completely dizzy' and 'prepared to believe anything' (Sraffa 1932: 45) out of sheer despair. Keynes must have been delighted at Sraffa's loyalty.

From the above, it is apparent that discipleship played an important part in determining the success of Keynes's research school at Cambridge, a point Keynes himself was well aware of. Writing to Harrod in August 1936, he complained how, '[E]xperience seems to show that people are divided between the old ones whom nothing will shift...and the young ones who have not been properly brought up and believe nothing in particular... I have no companions, it seems, in my own generation, either of earliest teachers or of earliest pupils' (Keynes to Harrod, 30 August 1936, CW XIV: 85). While Keynes may have been technically correct in his assessment, he was being a little pessimistic. It is true that he had considerable trouble convincing some of his contemporaries, notably Robertson, of the merits of the *General Theory*. Furthermore, the likes of Richard Kahn were far from being amongst Keynes's earliest cohort of pupils. However, he did have a number of supporters outside Cambridge who were able to propagate his message to a wider audience both within Britain and abroad.

In Britain, Keynes's most prominent non-Cambridge-based follower was Roy Harrod. Harrod was at Oxford from the 1920s to the 1960s and in 1922 spent some time studying economics under Keynes at Cambridge. Through their extensive correspondence, Harrod had a significant influence on Keynes's thinking during the writing of the *General Theory*. Harrod was instrumental in making Keynes realise that it was possible to have separate curves for saving and investment rather than collapsing the two into the same thing (although he was less successful in his attempts to persuade Keynes to soften his attack on classical theory) (see Phelps Brown 1980: 13-14). Harrod provided valuable additions to the Keynesian corpus in his own right and it was partly through these contributions that he ended up seeing himself as 'the disciple on whom the responsibility for continuity had especially fallen' (Harrod obituary from *The Times* in Skidelsky 1992: 696). A key Harrodian theory was the 'warranted rate of growth', which extended the *General Theory* by identifying 'that rate of growth which, if it occurs, will leave all parties satisfied that they have produced neither more nor less than the right amount. Or, to state the matter otherwise, it will put them into a frame of mind which will cause them to give such orders as will maintain the same rate of growth' (Harrod 1939: 16; see also Harrod 1948). At a broader level, the building of growth theory within a Keynesian framework was part of a wider Oxbridge research programme, with Harrod playing a leading role.

For his part, Keynes regarded Harrod as the most accomplished economist at Oxford (see Skidelsky ibid.). Even though he was geographically removed from the discussions going on in Cambridge, Harrod was in regular contact with Keynes. He also corresponded with Kahn. Kahn realised Harrod's importance as a defender of Keynes's ideas, aware of the role Harrod could play in spreading the Keynesian doctrine at Oxford. In a revealing letter, Kahn wrote to Harrod in November 1934: 'You are one of the few economists in the whole world on whom Maynard can reckon. I do not add the words "outside Cambridge" because the number of Cambridge economists, as you may by now have noticed, who can really be regarded as Maynard's supporters is a vanishingly small quantity. Such as we are, we do very much look to you as a leader in what must after all be described as a fight' (Kahn to Harrod, 13 November 1934, Kahn Papers (King's College, Cambridge) 13/57/70). Thus, Kahn here takes on the role of disciple but also, to an extent, recruiter, even though Harrod's support for Keynes was more or less assured by this stage.

Keynes was fortunate enough to have access to a group of students and, to a degree, colleagues who were willing to help him in his quest for a new economics. In addition, some of these followers were active in promoting Keynes's ideas outside academia. We have already seen how Meade pushed Keynesian theory in Whitehall. Yet, for the Keynesian gospel to spread beyond Britain's shores, it was necessary for there to be supporters further afield, especially in America. Galbraith (1998: 11-12) notes how the *General Theory* created a considerable amount of excitement amongst the younger economists in the United States, a view confirmed by Samuelson (1946: 187), who posited that Keynes's ideas 'caught most economists under the age of 35

with the unexpected virulence of a disease first attacking and decimating an isolated tribe of South Sea Islanders. Economists beyond 50 turned out to be quite immune to the ailment.' But given the *General Theory*'s inherent difficulty, Keynes's ideas still needed to be interpreted and championed. Across the Atlantic, the main thrust of this support was provided by Alvin Hansen. Of course, Keynes had other devotees in the United States. Most notable in this respect was the Canadian, Lorie Tarshis, who had attended Keynes's lectures at Cambridge in the early and mid-1930s. In 1938, Tarshis and a group of colleagues from Tufts (where he was then teaching) and Harvard published *An Economic Program for American Democracy*. The book, which criticised Washington's economic policy-makers for not adopting a greater interventionist stance, received widespread attention and confirmed Tarshis as a devout Keynesian. Most importantly, from a policy perspective, it also influenced the United States's 1938 budget.³¹

Nevertheless, it was Hansen who was to be the standard bearer of the Keynesian message in the United States. Hansen had spent time at the University of Minnesota before securing a professorship at Harvard in 1937. He initially had doubts about the *General Theory*, writing a highly critical review of it in the *Yale Review* of June 1936 where he argued that, 'It is reasonably safe to predict that Keynes's new book will, so far as his theoretical apparatus is concerned, fare little better than did the "Treatise" [on Money]' (Hansen 1936a: 829). But in spite of this initial hostility, Hansen had, after just a few months of reflection, become more sympathetic, subsequently stating that the *General Theory* 'will stimulate thinking on fresh lines in the field of economic dynamics' (Hansen 1936b: 686). He still accused Keynes of using unconvincing arguments and suggested that the *General Theory* was more 'a symptom of economic trends than a foundation stone upon which a science can be built' (ibid.). Be that as it may, it was clear that Hansen was gradually becoming a convert, an exception to Samuelson's supposition that economists over 50 were

³¹ Tarshis's later book, *The Elements of Economics: An Introduction to the Theory of Price and Employment*, which appeared in 1947 and was the first textbook to be written within a Keynesian analytical framework, did less well due to allegations that its author had Marxist sympathies, allegations which turned out to be wide of the mark (see Harcourt 1995: 1,249). Although not a textbook, Timlin (1942) was also an important early exposition of the *General Theory* to come out of North America.

somehow immune to the *General Theory* (Hansen was in his fiftieth year when it appeared).³²

Hansen was in an excellent position to influence both contemporary and future policymakers. A key channel through which this influence was exercised was his famed Fiscal Policy Seminar at the Graduate School of Public Administration at Harvard, which began in September 1937 and ran for 19 years until Hansen's retirement in 1956. The seminar would regularly draw in senior officials from Washington, keen to hear Hansen's latest views on budgetary policy, views which began to take on an added interest for officials as a result of the 1937 recession. All the same, it would be wrong to portray the seminar as dominated by Hansen as it was jointly organised and chaired by his colleague, John H. Williams, a sceptic when it came to the *General Theory*, who would use the meetings to air his differences with Hansen (see Haberler 1976: 12).

Hansen was not the only prominent Keynesian in Harvard's Economics Department. There was also Lauchlin Currie, who by the time he became Franklin Roosevelt's chief economic advisor in July 1939 had 'established an informal network of...converts extending into all of the fiscally significant agencies' (Galbraith 1975: 229). Furthermore, a number of attendees at the Fiscal Policy Seminar went on to hold high-ranking governmental and/or advisory positions, including one Chairman of the Council of Economic Advisers plus a handful of other Council members, two Under-Secretaries of the Treasury, two Assistant Secretaries of State for Economic Affairs, and four members of the Board of Governors of the Federal Reserve System (see Salant 1976: 22).

Hansen himself was highly influential in his role as a consultant to the Federal Reserve Board – he was very close to Marriner Eccles, chairman of the Fed from 1934 to 1948 – and from late 1934 onwards was instrumental, with the help of Currie, in converting the Fed to Keynesianism. Moreover, although he never held an official

³² Barber (1987) posits various reasons for Hansen's transformation into a Keynesian, including his move to Harvard, where he was more exposed to issues relating to fiscal policy, and the 1937 economic downturn in the United States, although neither of these reasons, it has to be said, account for the mellowing in Hansen's opinion of the *General Theory* which took place over the course of 1936.

government post, Hansen played a key role in getting Congress to understand the importance of the budget as a tool in policy-making and in committing the federal government to a policy of full employment in the landmark Employment Act of 1946 (see Tobin 1976: 34).

In terms of written support for Keynes's ideas, Hansen demonstrated his allegiance to the *General Theory* in various publications, including *Full Recovery or Stagnation?* (1938), *Fiscal Policy and Business Cycles* (1941), and *A Guide to Keynes* (1953). Even though the last of these exaggerated the emphasis that Keynes had placed on deficit spending as a means of curing a downturn, the book became part of Keynesian orthodoxy. In the meantime, Keynes was fully aware of the importance of his supporters in the United States and wrote 'admiringly' (Galbraith 1998: 12) of those youngsters in particular who propounded his case in Washington. On a related point, Keynes would also have been concerned that the *General Theory* had failed to make an impression at the prestigious Department of Economics at the University of Chicago, and probably wanted to encourage his supporters at Harvard as much as possible with a view to establishing a bulwark against any criticism from Chicago.

Finally, Britain and the United States were not the only places where the Keynesian message was making an impact in the 1930s and 1940s. In Canada, the *General Theory* was being advocated by Keynes's Canadian students. Robert Bryce was one of them and because he had been taught by Keynes at Cambridge, Bryce felt that he had a 'special licence' (ibid., 13) to explain what Keynes meant. Moreover, his appointment to a number of senior posts in the Canadian government, eventually ending up as Deputy Minister of Finance in 1963, was an important element in Canada becoming 'perhaps the first country to commit itself unequivocally to a Keynesian economic policy' (ibid.).

Marshall:

As with many aspects of his character, Marshall's approach to discipleship and *esprit de corps* was somewhat contradictory. There is firm evidence to support both his introverted intellectual style and his lack of interest in socialising on the one hand, and his ability to produce disciples on the other. By way of context, Marshall was a

predominantly lone thinker. Many of his most innovative ideas came to him as he meandered his solitary way through the Alps, or when, in 1881, he went to Italy for nearly a year, this trip inspiring Keynes's (1924: 353) memorable depiction of Marshall discovering the concept of elasticity as he sat on the roof of a small hotel in Palermo. Tollison (1986: 913-914) puts forward two convincing explanations for Marshall's burst of productivity during his Italian sojourn: the first was that he was away from his normal surroundings and so could look upon the world 'through a different window' (ibid., 914). Second, Marshall was recovering from illness brought on by a kidney stone. This forced him to rest his body, giving his mind the ideal opportunity to wrestle with new ideas.

Back in Cambridge, there was a distinct lack of social cohesion between Marshall and Neville Keynes. As we have seen, Keynes found Marshall to be 'a dreadful bore', and these sentiments were transferred to the social realm, Marshall never being invited to the Keynes home in Harvey Road. Maynard Keynes would have been aware of these tensions and it seems that he tried to throw a smokescreen over them by stating that Marshall 'did not much care about going to other people's houses' (Keynes 1924: 357) despite his 'great conversational powers' (ibid.). The lack of social interaction between Marshall and Neville Keynes was also probably a reflection of the differences in their respective approaches to economics, the best example of this being Marshall's critique of the methodological system adopted by Keynes in his best known book, *The Scope and Method of Political Economy*, which appeared in 1891, just a year after Marshall's *Principles*.

Despite these problems, Neville Keynes is still regarded as a disciple of Marshall's, as are a host of other important economists, the result of a number of them having been under his tutelage at Cambridge and elsewhere. By 1890, Marshall had already been teaching economics for two decades, not only at Cambridge but also at Bristol and Oxford. Amongst his Cambridge-educated followers were Charles Sanger, Arthur Bowley, Sydney Chapman, Arthur Pigou, Charles Fay, Walter Layton and, of course, John Maynard Keynes; Pigou was particularly loyal. Moreover, despite his attack on the classicals, Keynes could not get away from the fact that he had a Marshallian heritage. Loyalty to Marshall also resulted from his extensive use of the oral tradition, which produced subtleties in his work which only the initiated (i.e. his colleagues and pupils) could understand. The effect was in many cases irresistible and gave rise to 'a circle of *cognoscenti*' (Becattini 2006: 614) who felt that they were the 'custodians of an esoteric knowledge with a special mission' (ibid.).

Hayek:

With the fanfare that greeted the lectures he delivered at the LSE in early 1931, Hayek might have been forgiven for believing that his new academic home was going to provide him with an opportunity to recruit disciples. But even if it was clear within a relatively short space of time that many of the School's best young economists were being won over by Keynes, it would be wrong to assume that there was a complete absence of the elements required – at least in the initial stages of his professorship – for Hayek to establish a cohesive group of supporters. To begin with, his closest ally was Lionel Robbins. Robbins was head of the Economics Department and the man responsible for bringing Hayek to London from Vienna. The two men soon become close friends: as well as daily contact at the LSE, they lived in close proximity to each other in Hampstead Garden Suburb in North London and would often visit each other's homes. At a broader level, Hayek has also described how the staff in the Economics Department 'rapidly [became] a circle of very close friends... We got on extremely well together. There was very little need for any formality or formal organisation' (Hayek in Ebenstein 2001: 82). All the same, apart from Hayek's friendship with Robbins, there seems to have been limited social interaction between members of staff, there being 'very little social life beyond the occasional entertaining of a visiting colleague' (Hayek in ibid.). It seems therefore that Hayek was unable to replicate the very sociable relationship he had with Robbins, in spite of his claims regarding the Department's togetherness. At the very least, this failure must have been, in part, due to spatial constraints, staffers no doubt retreating to the far-flung corners of London after a hard day's work in the Aldwych. This would have been in stark contrast to Keynes and his supporters at Cambridge who lived pretty much within a stone's throw of each other.

A lack of social cohesion did not necessarily mean that there was a lack of unity amongst the LSE's ranks in the early 1930s when it came to intellectual matters, especially if it involved fighting Cambridge. Even if this unity fell away as the 1930s progressed, it was alive and kicking in the early years of the decade. One of the best examples of it took place in October 1932 when, with British unemployment running at over 20%, a group of Cambridge economists, including Keynes and Pigou, sent a letter to *The Times* advocating an increase in government spending. Not wanting to miss an opportunity to engage with the enemy, the LSE's big hitters, including Hayek, Gregory, Plant and Robbins, published their response shortly after, criticising the use of higher public expenditure as a means of reducing the jobless total.

There was also no shortage of talent at the LSE, and Hayek was initially able to form, with Robbins's help, a 'group of young theorists who were more or less like-minded about economics and could have all been called Hayekians' (Shehadi 1991: 381-382). Among them were John Hicks, Nicholas Kaldor and Abba Lerner. Hicks's theoretical prowess meant that he would have been a prime candidate to take on the corresponding role *vis-à-vis* Hayek as that played by Kahn in his relations with Keynes. But he was distracted by his own work on constructing an analytical economic framework founded on Paretian and Walrasian principles, a framework which would have been 'alien to Hayek's Austrian ideas' (McCormick 1992: 31). Any lingering hope that Hayek might have had of Hicks coming to his aid in the battle with Cambridge vanished when Hicks left the LSE in 1935 and took up a lectureship at Cambridge at the invitation of Pigou. Even though he arrived too late to take on a significant role in the group around Keynes,³³ Hicks was destined to play a major part in the Keynesian Revolution as a result of his diagrammatic formulation of IS-LM (Hicks 1937).³⁴

A specific symptom of Keynes's growing ascendancy during the 1930s was the switch in loyalties away from Hayek and towards Cambridge that took place amongst many of the LSE's staff and students. Both Kaldor and Lerner were clear manifestations of this seemingly ineluctable trend. Nicholas (later Lord) Kaldor had both studied and lectured at the LSE and was for a time, like Hicks, strongly influenced by Hayek. However, this changed with the advent of the *General Theory*

³³ Even though he ended up being a supporter of Keynes, Hicks's first affiliation on arriving in Cambridge was with Robertson (see Klausinger 2006: 631).

³⁴ At Keynes's request, Hicks also wrote a review of the *General Theory*, which appeared in the June 1936 number of the *Economic Journal* (Hicks 1936; see also Hamouda 1993: 199).

and was confirmed by Kaldor's article on wages and unemployment in the December 1937 *Economic Journal*, a piece which 'was crucial in winning acceptance for Keynes's ideas' (Skidelsky 1992: 698). After this, Kaldor was increasingly drawn to Keynes and his immediate circle, a process facilitated by the LSE's evacuation during the Second World War to Cambridge, where Kaldor would go on to become a Fellow of King's in 1949 and ultimately a Professor of Economics in 1965.

Just as interesting was the case of Abba Lerner. Lerner was a Russian-born economist who studied and taught at the LSE from 1929 to 1937. By 1936 it was clear that he also had become sceptical of Hayek's theories, in part encouraged by his six-month stay at Cambridge in 1934-35 when he had come into contact with Keynes. On top of this, Lerner had become the 'main link' (Shehadi 1991: 386) at the regular meetings held between Cambridge and LSE staff members at Bishop's Stortford – a practical solution in geographic terms, although even here Cambridge just had the upper hand! - where members of Keynes's coterie would try to explain the new gospel to their London colleagues in the hope of winning them over. Keynes never attended these gatherings, but they were led by the impressive figures of Joan Robinson and Richard Kahn. In what must have been a fascinating series of discussions, Lerner has described how the two tribes once met for a whole weekend in an attempt to finally get to grips with Keynes's theory. It was one of the LSE's first introductions to Keynesianism: 'Mainly...it was Joan Robinson in charge... [A]s we would try to understand, she'd say, "Yes, that's right; now you're getting the idea...No, no; now you've gone backwards." When the weekend was over we still didn't know what they were talking about... They were confident that we were either just very stupid or backward – and we thought they were crazy, obviously doing something that didn't make any sense, but we couldn't quite put our finger on what was wrong' (Lerner in Landreth and Colander 1989: 359).

Later on, in June 1936, Lerner, who was by then fully versed in the new ideas, wrote to Keynes to tell him about a favourable review he had written of the *General Theory* in the *International Labour Review*. Keen to encourage Lerner, Keynes wrote back: 'I think your article is splendid. You have succeeded in getting a most accurate and convincing story into a small space' (Keynes to Lerner, 16 June 1936, CW XXIX: 214). With this blessing, Lerner had become a fully-fledged convert and would go on

to write the influential *The Economics of Control* (Lerner 1944), a book based on his PhD thesis at the LSE which developed the theory of functional finance, even if, as with Hansen's *A Guide to Keynes*, Lerner went beyond anything that Keynes had ever advocated.

Lerner's devotion to Keynesianism was not a flash in the pan. Thus, in a review of Lerner's later book, *Economics of Employment* (1951), the reviewer commented that, 'The theoretical part of this volume is pure and undiluted Lord Keynes. Its practical part is pure and undiluted Lerner. Lord Keynes appears here as Allah, and Lerner as his militant Prophet... Indeed, there is something of [a] religious fervor in Lerner's treatment of the Keynesian theory as the key to universal prosperity and happiness' (Woytinsky 1952: 110). Interestingly, Lerner's interpretation of the *General Theory* was different from Hansen's: Lerner stressed the importance of controlling monetary and especially fiscal policy as a means of avoiding slumps while Hansen was more focused on the problem of secular stagnation (see Colander 1984: 1,573). Even though both men were confirmed disciples of Keynes, the fact that they had different takes on the *General Theory* was an early example of how Keynes could appeal to varying audiences.

Meanwhile, with the LSE proving to be an increasingly difficult recruiting ground for Hayek, the impressive array of economists who visited the School in the 1930s provided him with an alternative opportunity to secure disciples. However, this also turned out to be a false dawn. Amongst those who frequented the LSE during this period were Gottfried Haberler, Fritz Machlup, Erik Lindahl, Bertil Ohlin, Frank Knight, Jacob Viner and Joseph Schumpeter. Due to his status as one of the stars of the Austrian School, it was Hayek himself who was instrumental in bringing to the LSE this 'host of intellectual contacts from abroad which otherwise would not have existed' (Robbins 1971: 127). But for various reasons, he was never able to turn these visitors into devotees. The Swedes already had firm views on the cycle and the determination of output levels in the short period, which were more in line with Keynesian thinking than anything Hayek had to offer. With regard to the Americans and those non-Americans based in America, the failure to convert was fatal. Haberler tried to promote Austrian ideas at Harvard but lacked sufficient influence to sustain and strengthen the effort, this despite a growing reputation founded on his seminal

contributions to international trade theory. Later on in the 1930s, any efforts by Haberler to promote Austrian theories at Harvard were not helped by the fact that Cambridge, England, and especially Kahn, was, as we saw, deeply of critical of the first edition of what would nevertheless become Haberler's classic text on business cycles, Prosperity and Depression (1937). Unfortunately for Hayek, Haberler's attack on the multiplier had to wait until the second edition of *Prosperity and Depression* which appeared in 1939. Even after all this, Haberler himself still regarded the General Theory as a stimulating book, his loyalties between Austria and Keynes being torn possibly as a result of the month he had spent at Cambridge in 1932 as Keynes's guest. Further, Laidler (1999: 243) argues that Hayek's lack of impact in the United States was in part down to the fact that he could not call on the services of an 'American equivalent to Lionel Robbins, an established senior figure in an important department of economics who adopted and promoted [his ideas].' Laidler is right to make this general point, but his specific reference to Robbins is inappropriate as Robbins, while an 'established senior figure in an important department of economics', could not provide the necessary intellectual support required by Hayek in his battle with Keynes.

In addition to defections and a lack of discipleship, Hayek faced opposition to his theories from other junior members of staff at the LSE as the 1930s progressed, a situation 'in contrast to the support that Keynes received from the younger economists at Cambridge' (McCormick 1992: 3). For instance, Evan Durbin drew attention to the fact that Hayek's theory of the business cycle did not work if unemployment was already present and that it failed to give an adequate account of why unemployment tended to increase in a downswing (see ibid., 71-75). Matters were also not helped by the increasing popularity at the LSE of the theories emanating from the aforementioned Swedish School, in particular the work of Gunnar Myrdal and Bertil Ohlin. These ideas were championed at the LSE by Brinley Thomas, who had visited Sweden for six months in 1936 and whose Monetary Policy and Crisis (1936) was an exposition of Sweden's relatively rapid recovery from the Great Depression as a result of its adoption of interventionist policies. Given the parallels between the Swedish School's theories and those that Keynes was working on, it was no surprise that the warm welcome which the former would end up receiving at the LSE - not least amongst the likes of Hicks, Kaldor and Shackle - 'helped to intensify the interest in the epoch-making book that Keynes was expected to publish soon' (B. Thomas 1991: 390).³⁵

Kalecki:

Kalecki's primary intellectual concern was with discovering the truth. He treated any secondary matters connected to his work as just that, secondary. Granted, he was keen to influence other economists, but preferred to do it solely through the power of his ideas rather than through the representations of disciples. Nevertheless, a greater effort on his part to establish a group of loyal supporters, in the 1930s especially, would have undoubtedly helped to strengthen the propagation of his theories.

It would be incorrect to say that Kalecki had no disciples and attracted little loyalty. He had his own fan club in the later phase of his career, even if it was 'reserved, discrete, and not apparent to the outside world, including the bulk of professional economists' (Klein 1975: v). In his earlier years, the closest that Kalecki came to enjoying any kind of *esprit de corps* was with the Polish statistician, Ludwik Landau. The two men struck up a productive partnership at the Polish Institute of Research on Business Cycles and Prices, a partnership which led to the publication in 1934 and 1935 of investigations into Poland's national income, and a piece on Poland's prices, costs and industrial production, also 1935. Although not as close as his work with Landau, Kalecki, in addition, collaborated with the promising young economist, Marek Breit, at the Institute.

All of this was going on against the background of a significant increase in popularity for Polish economics, driven in particular by Oscar Lange and his ideas on the economics of socialism (see Lange 1936, 1937). But the failure of Kalecki and Lange to create disciples during this period was in stark contrast not only to Keynes at Cambridge but also the Swedish School. Bronfenbrenner (1969: 74) puts it in the following manner: 'Poland burst on the economic scene in the 1930s with Kalecki and

³⁵ There has been considerable debate over whether the Swedish School anticipated the *General Theory*, although the evidence is arguably not as strong as that which is supportive of Kalecki's claim. Moreover, the Swedish School never challenged Keynes in the way that Hayek did. Any further consideration of the Swedish case is therefore precluded from this thesis.

Lange, much as Sweden had done at the turn of the century with Cassel and Wicksell. Sweden...remained in the limelight by reason of the generation after the Cassel-Wicksell one; such names as Lindahl, Lundberg, Myrdal, and Ohlin come to mind. It seems natural to look for Lindahls, Lundbergs, Myrdals, and Ohlins among the Polish disciples of Kalecki and Lange... [U]nfortunately...there isn't a Lindahl, a Lundberg, a Myrdal, an Ohlin, or indeed much else...'

We have seen previously how Kalecki was able to establish a rapport with Tew and Hsu, his two research students at Cambridge. This was in the late 1930s, after the appearance of the *General Theory*. Later on, Kalecki's ability to recruit disciples was met with mixed outcomes. His years at Oxford produced some measure of success, most notably in the form of Joseph Steindl and David Worswick. However, this influence did not extend to undergraduates, the result being 'no large body of Oxford students to constitute a Kalecki generation' (Worswick 1977: 27). Back in Poland, Kalecki's reputation was bolstered by the followers he managed to recruit through his work at CRUE. But in later years, under pressure from the Polish authorities, some of Kalecki's students emigrated whilst others had their research activities seriously curtailed. Of course, the Keynesian Revolution had long become established by then.

Summary:

'Social cohesion, loyalty, *esprit de corps*, 'discipleship'' is one of the strongest categories for Keynes. Marshall also performs well, especially in the loyalty stakes. Both men are well ahead of Hayek and Kalecki, neither of whom was able to form much of a following around themselves and/or their ideas during the 1930s and 1940s.

 Table 6. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell

 Geison criterion 'v. Social cohesion, loyalty, *esprit de corps*, 'discipleship''

<u>Criterion</u>	<u>Keynes</u>	Marshall	Hayek	<u>Kalecki</u>
v. Social cohesion, loyalty, <i>esprit de</i>				
corps, disciplesnip	+	+	-	-

Note: 1 '+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

We have tried to show how 'Social cohesion, loyalty, *esprit de corps* and 'discipleship'' played a key part in underpinning the Keynesian Revolution during the 1930s and 1940s. At the heart of this effort was the Cambridge Circus. Having just finished *A Treatise on Money*, Keynes could easily have decided to go his own way. Yet he realised the Circus's importance, in particular its focus on the importance of changes in output rather than prices. Granted, the Circus did not follow up with statistical checks of the *General Theory* (see Klein 1966: 192). However, Klein's opinion that the Circus would have been eminently well qualified to carry out such analyses is only half right at best: Joan Robinson, for one, was never trained as a mathematician and there was never much evidence of Piero Sraffa being interested in empirical testing. Richard Kahn and/or James Meade might have been candidates, but the former was noted for his dithering when it came to publishing whilst the latter was engaged in other projects.

The Circus provided Keynes with the "intellectual buffer" required to see off potential opponents, a state of affairs which has been described as 'almost religious protection' by Blaug (1994: 1,205). To further appreciate this point one only has to think of the verbal onslaught meted out by Richard Kahn and Joan Robinson to Hubert Henderson at a meeting of the Marshall Society in May 1936, this after Henderson had attempted to mount a full-scale attack on the *General Theory* (see CW XXIX: 218). Such devotion may have been one of the reasons why Hayek chose not to review the *General Theory*; it also played a major part in Dennis Robertson being hounded out of Cambridge in 1938.³⁶ Furthermore, it should be noted that the production of Keynesian disciples at Cambridge would probably not have been possible without Marshall's efforts to establish the Economics Tripos. Marshall's work and reputation enjoyed its own high degree of protection, mostly due to the efforts of Pigou, and it does not seem unreasonable to argue that Kahn and Robinson observed Pigou's devotion to Marshall and decided to replicate it with Keynes.

The Circus provided Keynes with ready-made disciples. However, if we are looking for the 'ideal student' as described by Hagen (1993: 178-179), the prime candidate

³⁶ Robertson's psychological problems may have also contributed to him leaving Cambridge (see Moggridge 1992: 602).

would arguably not be Kahn, Keynes's favourite pupil, but rather Joan Robinson. Robinson's theoretical work was essential in extending Keynes's ideas in important directions, not necessarily considered by Keynes himself. Robinson also played a key role in communicating a simplified version of the *General Theory* through her *Introduction to the Theory of Employment*, thereby going some way to confirming Galbraith's assertion that Keynes was 'deeply dependent on his prophets' (Galbraith 1998: 8). The Circus also produced James Meade, who played a crucial part in promoting Keynesian ideas in Whitehall during the Second World War. Interestingly, however, as we will see later on, Keynes was not always successful in using his influence to secure official appointments for his supporters. Thus, he tried but failed to get either Kahn or Harrod into the Treasury during the war. Meanwhile, the last key member of the Circus, Piero Sraffa, was never quite convinced by Keynes and the rest of the Circus. Fortunately for Keynes, Sraffa was too absorbed in his own work on the theory of value to pursue any serious objections he may have had, but was nevertheless prepared to act as an effective critic of Hayek's *Prices and Production*.

The Circus was not the only source of discipleship for Keynes. If his ideas were to become part of mainstream thinking, he had to convince his American audience, a task made possible by the support of Alvin Hansen and others. For their part, Hayek and Kalecki never had a Hansen equivalent. Hayek had considerable trouble recruiting disciples at the LSE, let alone in the United States. As already noted, there was hardly a scarcity of potential recruits, among them Hicks, Kaldor and Lerner, and Hayek's influence can be seen in some of their later work, specifically Hicks's and Kaldor's capital theories and Lerner's theory of optimal socialist planning. Notwithstanding this, the appeal of Keynes's developing ideas coupled with the impact of Swedish theories at the LSE resulted in the rapid decay of the Hayekian camp, such that by the time Hayek's The Pure Theory of Capital appeared in 1941, former sympathisers had 'come to question the whole Austrian approach, and this dense and difficult tome did little to alter that' (Caldwell 2004: 176). Even Robbins, who had, by that time, become director of the ES in 1941, had become a lot more sympathetic to Keynesian theory. With the failure of The Pure Theory of Capital, Hayek turned his attention away from economics and towards political theory.³⁷

³⁷ Caldwell (1988) charts this transformation.

Finally, there was the physical proximity enjoyed by Keynes and his Cambridge disciples. As Cambridge was and still is relatively small, access to kindred spirits and social interaction was made much easier. In this sense, Cambridge can be said to have been akin to an economics laboratory in the early and mid-1930s. Social interaction, whilst present at the LSE between Hayek and Robbins, was less evident within the wider Economics Department due to a combination of the spatial constraints of living in London and because many of Hayek's colleagues and students eventually came to disagree with his views on the cycle. Finally, aside from his sometimes intense personality, Kalecki's inability to settle in one place for a prolonged period did little to help any effort on his part – which itself seems to have been broadly absent in the 1930s – to establish a group of disciples who could have challenged Keynes.

vi. Focused research program

While Morrell-Geison could perhaps be more explicit about the particular meaning of this category – in particular, to what extent it differs from criterion viii, 'Invasion of new field of research' – it is intuitively obvious what is meant: it is important that a research school, if it is to be a success, works towards a common set of goals. In some instances, this may translate into solving some long-standing problem or issue.

Keynes:

On the first day of 1935, Keynes was able to confidently write to his friend George Bernard Shaw: 'To understand *my* state of mind, however, you have to know that I believe myself to be writing a book on economic theory which will largely revolutionise – not, I suppose, at once but in the course of the next ten years – the way the world thinks about economic problems... I can't expect you, or anyone else, to believe this at the present stage. But for myself I don't merely hope what I say, in my own mind I'm quite sure' (Keynes to Shaw, 1 January 1935, CW XIII: 492-493). Even if Keynes's confidence was impressive, by simultaneously stating that his revolution would take a decade to achieve, he underwrote his belief that any research programme which flowed from the *General Theory* would have to be successfully sustained over a number of years.

Backhouse (2006a: 20) identifies Keynesian economics as referring to three different things, namely: demand management; a political philosophy grounded between Marxism and the free market; and Keynes's attempt to change economic theory. It is the first and last of these that most interests us here. What Keynes and his early adherents came up with was a synthesis of new and extant ideas which were broadly pertinent to the issues thrown up by the Depression, in particular the problem of mass and sustained unemployment. This synthesis has, when seen as a whole, arguably become the most important legacy of the Keynesian Revolution, a legacy which retains a major influence up to this day despite the emergence of numerous rival research programmes, many of which owe a debt of some sort or other to the *General Theory*.

It may seem obvious but the fact that Keynes's theories continue to be regarded as important is partly down to the importance that Keynes and his supporters attached to the policy usefulness of their theoretical output. Austin Robinson has noted that, 'never...did Keynes in late life devise an economic tool purely for its own sake rather than to solve an immediate practical problem in the application to government of the methods of economic analysis' (A. Robinson 1947: 10). When we consider to what extent the Keynesian Revolution helped to generate a new field of research, i.e. economists' theoretical response to the Great Depression, it is apparent that there was plenty for researchers to focus their attention on. The General Theory implied the importance of creating a coherent framework for the analysis of national income and related statistics, not least because this would help to improve the treatment of any multiplier effects. Ever the pragmatist, Keynes 'worked hard to define all his variables in operational terms, relating them whenever possible to actual or potentially available data' (Blaug 1991: 180). This was particularly the case concerning national income data: Keynes knew that he could piggyback on the recently published groundbreaking work on national income by Clark (1932) and Kuznets (1934). By using Kuznets's time series data, Keynes was able to produce the first ever estimate of the marginal propensity to consume (MPC). The General Theory also stimulated work on consumption functions, liquidity preference, and stagnation theories. Of course, Keynes's research agenda was far from being a rounded one. But putting such issues to one side, it remains questionable how rapidly work in the aforesaid areas might have progressed had the General Theory never been written.

For now, Keynes's emphasis on policy relevance provides one affirmative answer to the question of whether the Keynesian School possessed a focused research programme in the 1930s and 1940s. Other evidence points to a more subtle and arguably less positive response. Keynes's professional career in the years prior to the General Theory have led to him being characterised as a man who would frequently change his mind: Elizabeth Johnson (1974: 99) goes so far as to characterise Keynes as the 'india-rubber man.' One of the best examples of this flip-flopping was Keynes's backing of free trade in the early years of his career and his subsequent switch to support for tariff protection. Given this behavioural tendency, Keynes can be forgiven for not providing a clearer research programme in the General Theory. But of course, this is not to say that he did not have strong views on certain issues. His criticism of the application of mathematics to economic problems was well known. Despite his undergraduate training in mathematics, Keynes was of the opinion that an over-formalisation of economics would mean that theorists would 'lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols' (Keynes in CW VII: 298). At the same time, he was aware that mathematics did have a role to play insofar as it provided the degree of sophistication that was necessary for variables, such as investment and consumption, to be placed within a framework which could be manipulated in order to assist in the drawing up and application of policy.

Even given the above, there is still a case for placing less emphasis on the argument that Keynes's tendency to change his mind should necessarily be seen as a negative. As far as his thinking changed during the 1930s and 1940s, this aspect of Keynes might be better appreciated if it were considered as a form of adaptation on his part rather than anything else. A case in point, as we saw, was his approach to the problem of excess demand which he knew would emerge during the Second World War and where Keynes demonstrated in *How to Pay for the War* the flexibility of the *General Theory*'s implied research agenda. In a sense then, *How to Pay for the War* can be viewed as part of the footnotes which Keynes had otherwise intended to write for the *General Theory* (see Brown 1997: 47).

Much has been made of the *General Theory*'s poor construction. In the United States, this 'unreadability' meant that 'no-one in Cambridge, Mass. really knew what [it] was

about for some 12 or 18 months after its publication' (Samuelson in Brown 1988: 28) and that it was only with the subsequent IS-LM formulations that readers were given greater clarity. Yet, the *General Theory*'s open-endedness and a particular fascination with the notoriously obscure chapter 17^{38} – which deals with the properties of interest and money and where Keynes tries to show that there can be underemployment equilibrium – meant that researchers were able to interpret its contents with a fair degree of latitude. Leijonhufvud (1968: 10-11) takes this line of argument one stage further by suggesting that the problem with the *General Theory* was not just its poor literary style, but also that it contained logical errors, the result being that later theorists were given the opportunity to make 'repairs' as they saw fit. This, in turn, was a major contributory factor towards the emergence of the distinction between Keynesian economics and the economics of Keynes.

At a broader and more speculative level, Keynes may have had a premonition of Thomas Kuhn's later landmark work on paradigms and how they are overhauled: Keynes was certainly aware that the chances of his research agenda being successful would be greater if it not only encompassed new ideas but also made a direct challenge to orthodoxy. He had a two-pronged approach: an assault on classical economic theory and its claim that large-scale unemployment could not persist, and the debunking of the 'Treasury view'. The credibility of the attack on the latter was, of course, significantly strengthened by the advent of Kahn's article on the multiplier. Regarding classical theory, the success of the Keynesian challenge was questionable, even if Pigou (1950) did eventually concede that the *General Theory* was an important book, in contrast to his critical review of it some 14 years earlier in *Economica* (see Pigou 1936).

Marshall:

In his 1885 inaugural lecture at Cambridge, Marshall attempted to set out 'The Present Position of Economics'. As part of this, he identified the Organon, a theoretical framework which would provide those wanting to improve the world

 $^{^{38}}$ Lawlor (2006: 325) makes the point that many interpreters of the *General Theory* have found chapter 17 to be not only 'highly abstract – *but unintelligible*'.

through the study and application of economics with the means to do so. The Organon also supplied the foundation for Marshall's career, laying down, as it did, the basis upon which he could build the broader Cambridge School's approach to economics.³⁹ At the same time, he was keen to avoid relying too heavily on formal analysis, arguing that economic theory had to be combined with the analysis of other real-world phenomena if socio-economic behaviours and trends were to be properly understood. Thus, the Organon was, in Marshall's view, a necessary but not sufficient condition for the alleviation of man's ills.

Although it would be fair to say that both Marshall and Keynes had focused research programmes, the nature of these programmes was different. In writing the *Principles*, Marshall was responding to the need for there to be a coherent theoretical framework for the study of economic problems based, to some extent, on the mathematisation of John Stuart Mill's ideas on political economy but also on new theories about economics developed by Marshall himself and which could be used for pedagogic purposes. The focal point of Marshall's research agenda was the production of theory, albeit, as noted above, not of an overly formalistic type. Keynes's focus was also to produce theory but with practical applications, most notably, as it turned out, the elimination of unemployment. We should not be too unkind towards Marshall as he was never faced with the problems presented by the Depression. At the same time and putting to one side Keynes's attack on classical theory, had Marshall lived to see the *General Theory*, he probably would have been happy that Keynes had filled in a missing part of the Organon.

Lastly, we have seen how Marshall had a habit of delaying the publication of his work through a mixture of sensitivity to criticism and a desire to ensure that his written words reflected as accurately as possible what he wanted to say. This meant that he spent excessive amounts of time on detail, thereby probably denying himself the chance of making additional discoveries. On a related theme, Marshall was, as we already know, much more generous in sharing his latest thoughts with his students

³⁹ Backhouse (2006b: 28) argues that Marshall's interest in economics was sparked by the Cambridge philosopher Henry Sidgwick. In the same article, Backhouse also makes the wider case for Sidgwick having a much greater influence on the creation of the Cambridge School of Economics than has previously been suggested.

than with the outside world. Even so, the oral tradition was not the only means of communication he had with students: 'Much more than [his] published economic work, the Syllabus of Economics Studies developed by Marshall mapped out the research agenda for his direct and indirect students at Cambridge, by explicitly highlighting gaps to be filled' (Groenewegen 1988: 650). The theory of money, credit and finance was one of these. As such, despite Keynes's identification of Marshall as one of the classicals and his overthrow of Marshall's distinction between real and monetary factors in the long period, the *General Theory* should still be seen as a valid part of the mostly Marshall-inspired Cambridge tradition of creating innovative economics. Returning to our original point, what we have here is not only the fact that Marshall was comfortable in promoting the Organon through the formal syllabus as well as informally through the oral tradition, but also his willingness to point out those areas ripe for development – all in the name of further strengthening his 'engine of analysis'.

Hayek:

Hayek's work at the Austrian Institute for Business Cycle Research and, in particular, his *Geldtheorie und Konjunkturtheorie* (1929), secured his reputation as an important economic theorist. He certainly enjoyed some propitious conditions in terms of developing a focused research programme when he arrived at the LSE. The School's attack on Cambridge was, to a certain extent, grounded in Robbins's important work on the methodology and philosophy of economics encapsulated in *An Essay on the Nature and Significance of Economic Science* (Robbins 1932), where he argued that, 'Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses' (ibid., 15).⁴⁰ Robbins hoped that the success of the *Essay* would bolster the LSE's reputation and, by association, garner support for Hayek's cycle theory. He was certainly keen to focus attention on what he saw as Hayek's important contributions: Howson (2004: 440-441) notes that whilst Robbins was predominantly concerned with defining economics and with methodology during the first and second phases of writing the *Essay*, in the third

⁴⁰ Following on in this innovative vein, the LSE would later be the first British institution at university level to adopt Continental-style general equilibrium theorising.

phase, which took place during the winter of 1931-32, he turned his attention to incorporating contemporary economic theory, notably the work of the Austrian School.

Aware of his limitations as a theorist, Robbins was keen to help Hayek in any way that he could in the fight against Cambridge. In addition to promoting Hayek's ideas, Robbins used the Essay to attack the use of interpersonal comparisons in science, an approach which had been strongly advocated by Pigou in his work on welfare economics, itself an extension of the Marshallian research programme. What with Keynes's own attack on Pigou's theory of unemployment in the *General Theory*, it came to be that Cambridge and the LSE were, at different points but separated by just a few years, united in their opposition to Marshall's protégé.⁴¹ But despite this ironic turn of events, Hayek and Robbins were ultimately unsuccessful in challenging the emerging Keynesian paradigm, in part, it seems, because there was a question mark over the extent to which Prices and Production was itself underpinned by a focused research agenda. Some of the problem lay in the fact that the result of Hayek's analysis - where it could be gleaned, for like the General Theory, Prices and Production was criticised for sometimes being too abstract - was a policy recommendation to do nothing in a downturn: Hayek was in broad agreement with Mises's assertion that cycles are caused by changes in credit activity and that, as a result, a bust should be allowed to run its course through an adjustment of relative prices. However, as must have been obvious during the first half of the 1930s, it would have been politically impossible for governments to adopt a 'doing nothing' stance given rising unemployment and severely weakened economic activity; nature does indeed abhor a vacuum. Moreover, any claim that Hayek may actually have had a focused research programme which was able to provide a coherent solution to the Depression was made much less certain by the lack of alignment between his theories and reality: for example, Prices and Production concentrated on the dangers thrown up by inflation, this when deflation was a key feature of the Depression.

A further problem encountered by both Hayek and the broader Austrian School was its use of terminology. The various arguments that Hayek had with Keynes and Sraffa

⁴¹ Aslanbeigui (1990) explores this theme further.

which had been ignited by Hayek's review of *A Treatise on Money* were partly centered on definitions of key concepts, such as saving and investment. This disagreement with what was fast becoming a very important aspect of the Anglo-Saxon economics literature meant that Hayek and the Austrians, as Klausinger (2006: 629) points out, were eventually put in the 'position of outsiders', from where it proved difficult to recover.

Kalecki:

Various commentators have argued that Kalecki failed to produce a coherent scheme of thought. Lipinski (1977: 75) notes how difficult it is to extract any 'Kalecki system' from his work on socialism. Of course, this is not the same as saying that Kalecki failed to have any subsequent influence – one only has to think of his considerable reputation especially amongst post-Keynesians and the major impact of his mark-up theory on the development of industrial economics as examples of how his ideas continue to bear fruit. It remains the case, nevertheless, that Kalecki did indeed fail to produce a focused research programme with respect to his work on cycles and output determination in the short period. A variety of reasons can be posited for this. First, he could change his mind, a trait shared with Keynes. However, a crucial difference between the two men in this regard was that even though Keynes may have frequently revised his opinions, the *General Theory* provided researchers with an opportunity to develop a policy agenda, an opportunity which seemed to be less available to those reading Kalecki's work.

Another reason behind the lack of a focused research programme relates to Kalecki's preference for publishing in journals as opposed to writing books. Asimakopulos (1986: 815) and Dobb (1976: 369) maintain that Kalecki's influence was blunted due to his failure to produce a book which contained his 'theoretical framework that could serve as a basic reference for his approach' (Asimakopulos, ibid.). Moreover, Dobb notes that even when Kalecki did decide to publish in book form, his ideas came across as 'disparate'⁴² and that this contributed to his neglect, especially in the United

⁴² Blaug (1987: 259) makes the same point.

States.⁴³ There is also some doubt as to whether Kalecki's theories of the cycle formed a coherent system. Blaug (1987: 260), in particular, highlights Kalecki's preferred method of theorising, which involved starting off with accounting identities and using these same identities as the basis for asserting a causal relationship between them and claiming the results to be valid theoretical propositions. Consequently, Blaug states that, even if Kalecki's macroeconomic ideas had a microeconomic foundation, it was 'not always clear where this foundation [came] from' (ibid.). In making this point, Blaug appears to be taking his lead from Keynes, who pointed out to both Kalecki and others his (Kalecki's) tendency to make questionable assumptions.

Finally, even if all of the above is put to one side, any potentially viable research agenda which Kalecki might have created with respect to his cycle theories would have been tainted by allegations concerning his leftist leanings.⁴⁴ Kalecki saw the socialist system as being 'superior to the capitalist' (Feiwel 1975: 7), a position reflected in his attitude towards certain elements of the cycle. A good example was his approach to investment. Both Kalecki and Keynes appreciated the important role that investment played in capitalist economies. But whereas Keynes described investment in generally positive terms, Kalecki was less generous: his view that the 'tragedy of investment is that it causes crisis because it is useful' (Kalecki in J. Robinson 1941: 235) was, as Joan Robinson pointed out, very close to Marx's belief that, 'The real barrier of capitalist production is capital itself' (Marx in ibid.). In the 1930s, Britain and the United States were the key battlegrounds in the war of macroeconomic ideas. In neither country did socialism or communism become part of the political orthodoxy during this period, a fact which would have dented Kalecki's prospects had he ever tried to mount a challenge to Keynes.⁴⁵

⁴³ However, it should not be assumed that Kalecki had no supporters in the US. To name but three, Arrow, Galbraith, and Solow were all familiar with his work and thought very highly of it. For Galbraith's view of Kalecki, see Feiwel (1975: 17).

⁴⁴ He was, in fact, a democratic socialist.

⁴⁵ Although it can only be a very approximate guide, the poor performance of socialist and communist political parties in British general elections and American presidential elections during the 1930s go some way to supporting this point. For example, in the 1935 British election, the Communist Party secured only one seat in the 615-seat House of Commons and 0.1% of votes cast (see Craig 1989: 33),

Summary:

Given the evidence relating to their research activities, it is clear that both Keynes and Marshall had a clear focus when it came to conducting a research programme. Although Hayek and Kalecki both possessed elements of a focused research programme, these were arguably not as strong when compared with either Keynes or Marshall.

 Table 7. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell

 Geison criterion 'vi. Focused research program'

Criterion	Keynes	Marshall	<u>Hayek</u>	<u>Kalecki</u>
vi. Focused research program	+	+	±	±

Note: ¹ '+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

We have tried to bring out some potentially interesting points regarding focused research programmes. We saw that it is difficult to pin down exactly what is meant by a 'Keynesian' research agenda, a problem which partly arose as a result of the *General Theory*'s ambiguity. It seems reasonable to argue that Keynes wanted to keep his options open and no doubt suspected that this would help to underpin differing research strands going forward (albeit at the risk of fundamental misinterpretation). This explains why he had no major objections to IS-LM but still proceeded to emphasise the importance of uncertainty in his 1937 article for the *Quarterly Journal of Economics* (Keynes 1937). It may also shed light on why the *General Theory* was, in places, so obscure despite Keynes's legendary facility with the English language.

In spite of the various interpretations that have been placed on his work, the key concern for Keynes was finding a viable solution to the types of problems created by the Depression: in the years leading up to 1936 and after this was the basis of his research programme, a programme characterised by, amongst other things, the utilisation of new research into national income statistics, and which spurred

whilst in the 1936 American presidential election, the Communist Party candidate, Earl Browder, won 0.18% of votes cast and no votes in the Electoral College (see Petersen 1963: 94-95).

innovative work on consumption functions and the like. Keynes was also able to adapt the conceptual framework contained in the *General Theory* to account for conditions of excess demand in Britain during the Second World War. The *General Theory* was also guided by the gaps that had been left in Marshall's Organon, most obviously a theory of the business cycle. Moggridge (2006a: 599) makes the additional point that Keynes's work on concepts such as liquidity preference seemed to be 'logical developments of someone working within the [Marshallian] tradition.'

Meanwhile, Hayek's *Prices and Production* and his subsequent disputes with Keynes were, of course, driven by a common concern with excessive fluctuations in the cycle. However, the remedies recommended by the two men were wholly different, the one pro-active, the other passive. Sadly for Hayek, his work quickly became 'unpalatable' (Vaughn 1994: 48) for those more interested in action rather than thumb twiddling. Also, Hayek's concern with the problem of inflation did not match up with the contemporary reality of a deflationary environment, whilst his and the Austrian School's adoption of different meanings to important economic concepts meant they were increasingly removed from the emerging orthodoxy. Finally, there was little direct effort by Hayek to knock over old theories, as opposed to Keynes who made a point of attacking the classicals and the 'Treasury view'.

Kalecki's theories did not, in general, present the opportunity to easily extract guidance when it came to policy-making. Moreover, it was not always a straightforward matter for other economists to develop his ideas in different directions.⁴⁶ Kalecki's cause may have been helped if he had published his theories in book form rather than scatter them in journals, although he still would have been left with overcoming suspicions about his method of theorising and his leftist reputation.

vii. Simple and rapidly exploitable experimental techniques

A research school's cohesion can be strengthened where experimental techniques lead to the steady and systematic production of reliable experimental results, in turn giving

⁴⁶ Steindl (1952) is an exception to this.
rise to "a knowledge factory". When a knowledge factory is successfully established, a school often becomes strongly associated with a particular field of inquiry, this field sometimes becoming the "property" of the school. (Given that economics is not, in general, a discipline based on the construction of experiments which are simple and rapidly exploitable, it is necessary to interpret the meaning of this criterion in the broadest possible sense when applying it to our specific area of interest. In particular, in what follows, a key emphasis is placed on the extent to which the work of Keynes, Marshall, Hayek and Kalecki was 'translatable' into more simple structures and, in turn, the ease with which such formats lent themselves to empirical testing.)

Keynes:

As soon as the *General Theory* appeared in early February 1936, economists 'started formulating mathematical models of the relationship between saving, investment, the rate of interest, wages and the level of employment, working out when they yielded classical results and when they yielded Keynesian ones' (Backhouse 2006a: 22). How did these efforts manifest themselves? The ambiguity of the *General Theory* meant that certain parts of it were difficult to understand at best, although this haziness did not preclude it from simplistic interpretation. Although Richard Kahn and Joan Robinson were quick to highlight the importance, in their view, of the role played by expectations and uncertainty in Keynes's schema, the counterweight to this was the work which resulted in IS-LM, carried out in the early days by Harrod, Hicks, and Meade and, a little later, by Hansen, who was responsible for naming IS-LM. Keynes did not mount any serious objection to IS-LM as he was aware of the difficulties faced by his readers and the need for his work to be 'translated'.⁴⁷ The fact that the 'Fundamental Equations [of *A Treatise on Money*] (and mathematical ambitions generally) were given up' (Leijonhufvud 1968: 24) in the *General Theory* meant that

⁴⁷ Dimand (2007) shows that Keynes had actually mapped out a simultaneous equations approach in lectures he delivered at Cambridge in 1933 and in a 1934 draft of the *General Theory*. However, he decided to drop these equations from the published version of the book, aware of their limitations and also influenced by the rules of publishing laid down by Marshall, which dictated that mathematics should only be used as an 'aid to thought' (ibid., 92); Hicks adopted the same approach in *Value and Capital* (1939), although like Marshall in the *Principles*, he did go to the trouble of including a mathematical appendix.

the translation process was made easier as interpreters could cherry-pick what they wanted. IS-LM quickly became popular and even if Keynes did not explicitly endorse it, he was prepared to publish articles in the *Economic Journal* which made use of it, especially if it helped in attacking his opponents. An example of this was Kaldor's reference to IS-LM in a note in the December 1937 *Journal* (Kaldor 1937) which attempted to refute Pigou's views on the relationship between real and money wages and unemployment (Pigou 1937).

Still on IS-LM, Weintraub (2005: 148) points out, in an echo of what we have already touched upon, that in the 1930s, British economists did not, in general, have a particularly advanced level of mathematical training and so would have welcomed the diagrammatic representation of the *General Theory* offered up by Hicks. (This lack of training may also have accounted for the relatively slow take up of Tinbergen's important but heavily econometric work on business cycles which he carried out for the League of Nations and published in 1939, this despite his analysis seeming like the 'natural empirical extension of Keynesian economics' (Backhouse and Bateman 2006: 14).) At the same time, IS-LM was such a generalised model that it was, in fact, capable of accommodating theories opposed to those in the *General Theory*, such as the 'Treasury view'. Either way, and despite Hicks's later criticism of IS-LM, the model's determinateness gave policy-makers a better handle on how they could manipulate economic variables.

To give Keynes his dues, he was not averse to publishing material in the *Journal* which contradicted the *General Theory*. Most striking in this regard was the early statistical work of John Dunlop and Laurie Tarshis on the respective movements of money and real wages. In chapter 2 of the *General Theory* Keynes argued that money and real wage rates move in opposite directions. Soon after, Dunlop, who was a graduate student at Cambridge at the time, found that in Britain during the period 1860 to 1937, money wages and real wages actually increased together and that real wages may rise or fall when money wages decline (Dunlop 1938); Tarshis (1939) found broadly the same relationships in data for the United States between 1932 and 1938. Keynes allowed both articles to be published in the *Journal*, admitting to Dunlop that the *General Theory* contained some 'rash...generalizations' (Keynes in Dunlop 1998: 232), and followed this up with an article in the March 1939 *Journal*

calling for further investigations to be conducted. Keynes would no doubt have been surprised by the mass of literature which has subsequently been devoted to the question of wage movements and by the fact that the bulk of it more or less confirms Dunlop's and Tarshis's original findings.⁴⁸

Although Keynes was, of course, the key figure in the development of the ideas that culminated in the *General Theory*, we know that he was able to draw on some crucial help along the way. One of the more obvious examples of this was Kahn's June 1931 article on the multiplier. Skidelsky (1992: 371) provides a simple explanation of Kahn's thesis: 'In his 1929 pamphlet with Hubert Henderson, 'Can Lloyd George Do It?', Keynes had suggested that an initial expenditure on public works sets up a 'cumulative effect' through an 'increase in effective purchasing power'. Kahn had worked out a formula for calculating the net addition to employment produced by the consumption of the newly employed.' Kahn's work was the missing link in the Keynesian puzzle, one which provided governments with a simple justification for boosting spending during a downturn.

Despite Kahn's widely-cited article, there continues to be a lively debate about the actual origins of the multiplier concept. This debate has naturally revolved around Kahn's work itself and to what extent he was anticipated by others. The list of these 'others' is long and continues to grow: De Lissa, Giblin, Hawtrey, Schwoner, Warming, and Wulff are the names identified by Kent (2007: 529) as possible anticipators. Intriguingly, the main thesis of Kent's paper is his nomination of Keynes himself as a precursor. Kent argues that in the (extant) notes that Keynes made for a speech he delivered in London in May 1929, he meets all of the four criteria identified by Wright (1956: 193) as being the essential components of a multiplier-type analysis, including recognition of the importance of an exogenous injection in the form of say, an increase in public expenditure, and an incorporation of leakages. Keynes's 1929 speech was made more than a year before Kahn started work on his multiplier article (August 1930) and more than two years before its appearance in the *Economic Journal*. Saying this, Keynes would not attempt another multiplier analysis again until September 1930, when he concluded from an early draft of Kahn's work circulated to

⁴⁸ See Dunlop (1998) for a retrospective on the money/real wage debate.

the Committee of Economists that in Britain, 'a given amount of primary employment gives rise to an approximately equal amount of secondary employment' (Keynes in Kent 2007: 539-540).

Even given all of the above, it is still difficult to disagree with Shackle's observation that Kahn's article was 'one of the great landmarks of economics' (Shackle 1951: 241). Granted, Keynes and other candidate precursors recognised the importance of the multiplier,⁴⁹ but it was Kahn who was the first person to bring together in a rigorous, detailed and structured way the mechanisms by which the multiplier process works; the process of calculating multiplier values and, with it, the MPC was, in addition, made easier by the mathematical sophistication of Kahn's paper. This latter aspect was underpinned by Kahn's incorporation of "Mr Meade's Relation", which showed how the extra income created by an increase in initial investment would, in turn, create additional savings that would be equal to the original injection of investment. Thus despite the fact that the original idea for the multiplier may not have originated with Kahn, his 1931 article, its detailing of "Mr Meade's Relation", and its publication in the *Journal*, give some support to the argument that the Keynesian School in Cambridge in the early 1930s was something of a knowledge factory.

Cambridge's ownership of the multiplier was bolstered by the further analyses carried out by both Keynes and Colin Clark. As well as estimating the value of the multiplier in Britain, Keynes made a number of attempts at estimates for the United States, the first of which was contained in a paper read to the American Political Economy Club in the spring of 1934 (see Kent 2005: 104-109). A subsequent estimate for the United States appeared in the *General Theory* and two further estimates were made in the drafting of Keynes (1936) (see Kent ibid., 111-115). Meanwhile, Clark (1938) calculated the value of the multiplier for the British economy for the periods 1929 to 1933 and 1934 to 1937, whilst Clark and J.G. Crawford calculated it for Australia in their *The National Income of Australia* (1938), which was reviewed in the *Economic Journal*, the *American Economic Review* and the *Journal of the American Statistical Association*. Although Clark was not a member of the Economics Department at

⁴⁹ Later on, Keynes went as far to say that '[a]bout half the [*General Theory*] is really about it' (Keynes to Beveridge, 28 July 1936, CW XIV: 57).

Cambridge, he was a lecturer in the University's Department of Statistics from 1931 to 1937, a position which, coupled with Keynes's opinion of him as 'a bit of a genius' (Keynes in Patinkin 1976: 1,098), must have eased the process of getting his work published in the *Economic Journal*.⁵⁰

Aside from the *General Theory*'s opaqueness and Keynes's aversion to applying mathematics to economics, he did set some considerable store by the mathematical simplification, where possible, of economic processes and the related importance of identifying and quantifying functional relationships between macroeconomic variables. The multiplier was the best example of this and related to it was the consumption function, which Keynes was able to formulate as a result of Kahn's article. The consumption function has received extensive subsequent theoretical and empirical attention, most notably in the form of Friedman's 'permanent income hypothesis', Modigliani's 'life cycle hypothesis', and Duesenberry's 'relative income hypothesis', this popularity resting on the fact that it is relatively easy for the consumption function to be captured within the Y=C+I+G rubric – 'the cornerstone of Keynesian economics' (Patinkin ibid., 1,107) – and which has additionally formed some of the theoretical foundation upon which national accounts can be prepared; Samuelson's 'Keynesian Cross' diagram, a simple representation of the relationship between saving, investment and national income, was contained in the first edition of his highly successful Economics: An Introductory Analysis (1948), which gave popularity to Y=C+I+G.

Of course, the Keynesian Cross also referenced the inflationary gap, and during the Second World War the calculation of the gap became, according to Smithies, 'one of the favourite occupations of economists' (Smithies 1951: 590), even though by the time it had been calculated, it had, more often than not, been closed by, for example, higher rates of saving (ibid., 591). Smithies wrote from an American viewpoint and it was indeed in the United States that Keynes's ideas could be more easily put to the test: the relatively closed nature of the American economy meant that autonomous

⁵⁰ The intellectual link between Clark and Keynes went back to Clark's seminal *The National Income*, *1924-1931* (Clark 1932), which analysed a number of variables, including prices, investment, and saving, within the context of Britain's national income based on definitions contained in *A Treatise on Money*.

macroeconomic policies could be given greater rein (Samuelson 1976: 26). Samuelson (ibid.) also notes how the United States provided a 'massive controlled experiment' in the late 1930s of the Keynesian 'liquidity trap', as a large flow of gold into the country was met with a weak elasticity response to an easing of credit conditions.

Marshall:

Marshall's undergraduate training was in mathematics. Admittedly, by the end of the 1890s, he had not kept up with the latest mathematical developments and, as a result, his own analyses had become 'outdated even by Cambridge standards' (Dardi 2006: 154), with Edgeworth and Pareto, by that time, considered to be his mathematical superiors (ibid.). Marshall did not wholeheartedly embrace mathematics in his economics, although there has been a tendency to underestimate his propensity to use it, a tendency which is hard to understand given that he took the trouble to include a mathematical appendix in the *Principles*.⁵¹

Linked with the issue of Marshall's use of mathematics was his employment of diagrammatic constructions. His supply and demand diagrams are now, of course, a mainstay of microeconomics, Marshall aware that if he could represent his ideas pictorially, understanding amongst his readership would be increased. Moreover, the fact that his diagrams could, more often than not, be directly translated into algebra would have appealed to researchers interested in quantifying concepts such as consumer and producer surpluses and the price elasticity of demand. Marshall himself was conscious of the need to provide an empirical basis to his work, although with specific regard to estimating consumer surplus, he was still dogged by his reluctance to publish. He had already aired his early musings on consumer surplus in *The Pure Theory of Domestic Values* (1879), where he offered up a definition very similar to that given by the originator of the concept, Jules Dupuit, in 1861.⁵² But *The Pure*

⁵¹ Schabas (1989) argues that Marshall's adoption of mathematical techniques was influenced by his reading of Jevons's *Theory of Political Economy* (1871) while Schumpeter (1941: 247) claims that Marshall was 'one of the strongest influences in the emergence of modern econometrics.'

⁵² Marshall implicitly denied that he had been influenced by Dupuit (see Ekelund and Hébert 1985: 434).

Theory of Domestic Values was only issued privately and so the theory of consumer surplus had to wait until 1890 to secure the exposure afforded by the popularity of the *Principles*. Even then, it was not until April 1891 that Marshall published his one and only estimate of the size of the consumer surplus when he sent a letter to *The Times* detailing the surplus generated by the British Post Office.

Marshall's lack of any further empirical estimates of the consumer surplus can be explained not only by his reluctance to publish but also by his later view that the surplus was better seen as a theoretical device than as an empirical one. Either way, its inclusion in the *Principles* brought it the attention that it probably would not have otherwise received and may have been the catalyst for Hicks's later improvements which, in their turn, led to an outpouring of empirical work (see Ekelund and Hébert 1985: 440). Meanwhile, despite not necessarily being experimental techniques in themselves, Marshallian concepts such as the representative firm, have, over the years, become embedded in economics, providing researchers with ample opportunity to build on Marshall's original work. Furthermore, it does not seem unreasonable to suggest that Keynes realised the importance of – for want of a better choice of words – catchily named concepts, and employed this device in his own work, the multiplier being an obvious example.

Hayek:

The *General Theory* was, as we know, a difficult read. All the same, it did provide researchers with an opportunity to test a number of hypotheses. This was in contrast to the equally difficult *Prices and Production*, the result being that the process of translation failed to materialise. Granted, Clark (1932) did try to test an equation which he attributed to *Prices and Production* whilst also testing Keynes's "fundamental equations" (see Patinkin 1982: 243). But one of the problems with Hayek's analysis was his use of diagrams as a means of *supposedly* simplifying his theories. In *Prices and Production*, this involved the presentation of so-called 'Hayekian triangles,' which showed how the values of capital goods are related to the time period in which they are used in the production process, and the construction of 3D representations of various theoretical ideas, such as the intertemporal structure of capital. All of this turned out to be too complicated for his audience, not least Joan

Robinson (1972: 2), who recalls how, at a lecture on his new ideas delivered by Hayek at Cambridge, he ended up covering a 'black board with his triangles' and answered a puzzled question from Richard Kahn by pointing to his diagrams and maintaining that only a long mathematical argument could be used to explain why his diagrams were correct.

Elsewhere, with Robbins concentrating on his methodological work and, in any case, being less able than Hayek in theoretical matters, any remote possibility, had it existed, of reducing Hayek's ideas into a more easily understandable format would probably have had to involve Hicks, arguably the ablest young theoretical economist at the LSE during the early 1930s albeit an ironic choice for such a role given the important part he was to subsequently play in the making of IS-LM. However, even by Hicks's own testimony, the idea of him crusading on behalf of Hayek was simply a non-starter, Hicks describing Hayek's theories as containing some 'inner mystery' to which he and others 'failed to penetrate' (Hicks 1967: 205). In making these observations, Hicks no doubt had in mind the fact that Hayek's schema was fundamentally a dynamic one, a characteristic which made understanding and simplification considerably harder than that presented by the General Theory's comparative static framework. Whatever the case, any attempt by Hicks or others to simplify Hayek's work would have ultimately been less rich - at least as far as subsequent empirical testability was concerned - due to the fact that Prices and Production advocated a policy of non-intervention by the authorities.

On a final point, not all of Hayek's output had an air of untestability about it. Some of his later work has formed the basis for extensive empirical testing. Notable in this respect is the 'Hayek Hypothesis', which says that competitive markets have an inbuilt ability to meet certain efficiency postulates through information implicitly conveyed by prices. However, such work only took place much later on, well after Hayek's battle with Keynes over the cycle during the 1930s.

Kalecki:

The likelihood of Kalecki's cycle theories of the 1930s producing simple and rapidly exploitable experimental techniques was sharply limited in practical terms by the fact

that, with the exception of his technically demanding papers in the *Revue d'Economie Politique* and *Econometrica* (both 1935), his ideas appeared in relatively obscure publications in Poland: even had his theories been easily translatable into testable propositions, interested parties would have been constrained by the physical inaccessibility of such publications on the one hand and because they were in Polish on the other.

As with Keynes and Marshall, Kalecki appreciated the importance of empirical investigation: real-world robustness would surely have been at the forefront of his mind when he decided to commence his important work on Poland's national income with Ludwik Landau in the early 1930s (see Kowalik 1966: 1-2). But even if we ignore issues relating to visibility and language, Kalecki's cycle theories were still not as amenable to empirical testing and manipulation as Keynes's. Kalecki 'did not approach the theory of employment through the multiplier' (J. Robinson 1966: 337), the result being that his analysis was 'in a way less rich than Keynes'' (ibid.). This position is supported by Chapple (1995: 535) who, in considering Kalecki (1934) – a paper published in *Ekonomista*, the Journal of the Polish Society of Economists – argues that Kalecki 'does not explicitly utilise a mathematical multiplier' in what Chapple notes is an otherwise simple Keynesian model which Kalecki used to examine the effect on aggregate economic activity of various shocks. On the other hand, Kalecki was well aware of the usefulness of the multiplier concept and did employ it in his review of the *General Theory* (see Targetti and Kinda-Hass 1982).

As with Hayek, it would be wrong to assume that all of Kalecki's ideas were immune to testing. Had his writings been more accessible, there would have been opportunities for researchers: to return to Kalecki's 1934 paper, its treatment of the consumption function meant that it made 'the same predictions as the simple Keynesian function' (Chapple ibid., 530); the same paper contained Kalecki's early views on investment and money demand functions, which have a distinctly Keynesian flavour (ibid., 534).

Summary:

This sub-section has demonstrated that *The General Theory* spawned a range of easily exploitable 'experimental' techniques after its publication. Marshall also scored well

in this category. Once again, however, this feature was largely absent when we considered Hayek and Kalecki.

Table 8. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'vii. Simple and rapidly exploitable experimental techniques'

Criterion	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
vii. Simple and rapidly exploitable				
experimental techniques	+	+	-	-

Note: 1 + 2 means that this feature is present; 2 - 2 means that this feature is absent; and 2 ± 2 means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

The *General Theory* presented researchers with fertile ground for further theoretical and empirical development. To begin with, its ambiguity meant that Keynes's supporters were faced with the challenge of how to distil his ideas into an understandable format. This was most obviously achieved through IS-LM, even if it was also able to accommodate alternative theories of how the economy works. Despite Joan Robinson and Richard Kahn's hostility to IS-LM, the fact that they went to great pains to stress the importance of uncertainty and expectations was – as indeed was the formulation of IS-LM itself – an example of Keynesians cherry-picking what they liked from the book despite this contributing to the spawning of the many subsequent arguments over what Keynes actually meant.

Keynes was not keen on diagrams: the *General Theory* contained only one (on Harrod's prompting) and he was ambivalent about IS-LM. Given his Marshallian inheritance, this is somewhat surprising and marks a key difference in the way in which master and pupil theorised. This difference is even more surprising when considered alongside Cook's (2006: 105) observation that Marshall's liking for pictorial representation was probably a reflection of his undergraduate training and its foundation in Newtonian geometrical mathematics; this tradition clearly was not strong enough to influence Keynes when he took the Mathematical Tripos 40 years later. It is uncertain what would have become of the *General Theory* had techniques such as IS-LM not been invented. All the same, it is puzzling that neither Keynes nor any of the Circus had thought of it during the drafting process, especially given how many people subsequently and independently came up with the same basic idea.

Indeed, one is tempted to conclude that Keynes and his Cambridge coterie never thought along IS-LM lines.

Keynes appreciated the need to gather empirical support for his ideas. Despite being dense, the *General Theory* still lent itself to empirical testing far more than *Prices and Production*, which was set in a difficult to manipulate dynamic framework and, in any case, ultimately advocated a policy of non-intervention. Granted, the results of empirical testing did not always lend support to the *General Theory*, most notably Dunlop's and Tarshis's findings on the movement of money and real wages. However, there was plenty of additional empirical work for researchers to get their teeth into, such as the multiplier – which by the mid-1930s had become the property of the Keynesian School at Cambridge, thereby bolstering its claims to be a knowledge factory – and the consumption function. Moreover, the excitement that accompanied the appearance of the *General Theory* was carried into the 1940s by work dedicated to measuring the inflationary gap (especially in the United States), whilst the diagrammatic appeal of Keynes's ideas was underpinned not only by IS-LM but also by Samuelson's invention of the Keynesian Cross.⁵³

Just as interesting was the differing uses to which Keynes and Marshall utilised mathematics in order to explain their theories. Both saw economics as a moral science. However, if their respective use of mathematics is anything to go by, Keynes was a greater believer in the moral science assertion than Marshall. There is very little mathematics in the *General Theory* and, where it is used, the reader's understanding is not much impaired if it is omitted.

Conversely, there has, it seems, been a tendency to underestimate Marshall's enthusiasm for the application of mathematics to economic problems: without mathematics, how else, Dardi (2006: 155) notes, would Marshall have achieved his major theoretical breakthroughs in the theory of trade and the determination of prices and other variables through the analysis of supply and demand functions? And why,

⁵³ In addition to IS-LM and the Keynesian Cross, 'Aggregate Supply/Aggregate Demand' models also facilitated the diagrammatic representation of the *General Theory* (see, for instance, Swan 1989, which was originally written in 1945).

on a related point, would Marshall have gone to the trouble of including a mathematical appendix in the *Principles*, an appendix which, given the poor level of mathematical training amongst most of his colleagues, only a few of them would have understood?

Like Marshall, Hayek had a liking for diagrammatic representation. His 'triangles' were the clearest demonstration of this, but they turned out to be too complicated to understand. Moreover, given that Hayek's system was a dynamic one, the process of simplification was made even harder. Finally, Kalecki's 1934 paper might have been a good candidate for empirical testing, even if it failed to make explicit use of the multiplier. But even then, the problem remained that, as with so much of Kalecki's cycle work during the first half of the 1930s, it appeared in an obscure Polish journal. Tellingly, the same paper was not translated into English until it appeared in the first volume of Kalecki's *Collected Works* in 1990.

viii. Invasion of new field of research

As noted in criterion vi, 'Focused research program', Morrell-Geison is not explicit about how that criterion differs in a significant manner from 'Invasion of new field of research'. Nevertheless, it is still possible to draw something of a distinction between a research programme which helps to deliver some interesting results at the margin, and one that, in Kuhnian terminology, is the source of a completely new paradigm.⁵⁴

Keynes:⁵⁵

A number of articles have examined the Keynesian Revolution in the context of Kuhn's work on the structure of scientific revolutions, including Coats (1969)

⁵⁴ For the purposes of our analysis, it seems reasonable to assume that the multitude of theories which sprang up during the 1930s to explain the Great Depression constituted a new field of research in itself, excluding those theories which were in the classical tradition. As such, the focus of this sub-section will be on the relative influence of the theories of Keynes, Hayek and Kalecki, each of which represented a contribution to this new field.

⁵⁵ Parts of the following draw on Cord (2007: 75-76, 87 and 89).

(supporting), Bronfenbrenner (1971) (dissenting) and Stanfield (1974) (supporting), while Blaug (1976: 164) backs the contention that the Keynesian Revolution is actually better explained by Lakatos's research programmes methodology. On a related theme, Routh (1989: 27) maintains that the basic analytical framework around which economics has been organised has remained virtually unaltered since the 17th century, implying that there have been no revolutions in the Kuhnian sense, merely additions to the existing corpus of knowledge. For those who are still of the view that the *General Theory* was the special case rather than the general case which Keynes claimed for it, Routh's proposition *vis-à-vis* the Keynesian Revolution must carry some weight.⁵⁶ But even if we allow for this – and, as we have seen, Ambrosi (2003) does not – it is still true that the *General Theory* represented a very *important* case, one which had previously received little systematic theoretical attention. In fact, the importance of the *General Theory* was such that it is difficult to think of an equally influential publication within the social sciences in the 20th century.

It is difficult to deny that the *General Theory* was the trigger for a structural shift in the way that economists thought about how the economy works. It was certainly the founding document in the field of macroeconomics, a far cry from the partial equilibrium analysis which had otherwise dominated Keynes's Marshallian heritage. As Keynes confessed in the final paragraph of the English preface to the *General Theory*, the intellectual journey that he had had to travel and the one that he believed his readers would have to accompany him on as they ploughed through the book if they were to fully grasp his theories, was a tortuous one: 'The composition of this book has been for the author a long struggle of escape, and so must the reading of it be for most readers if the author's assault upon them is to be successful, – a struggle of escape from habitual modes of thought and expression. The ideas which are here

⁵⁶ Irrespective of whether it was in fact a general theory, Keynes's masterpiece was responsible for driving interest in the search for general theories in economics. This meant a steady stream of articles and books appearing after the *General Theory* claiming – in all cases over-enthusiastically – to have discovered fundamental economic laws. Even those theories with arguably the greatest claims to generality – but which had actually appeared before 1936 – had major holes in them. For example, Schumpeter's (1946: 514) claim that Walras's general equilibrium theory was the 'only truly general theory ever written' is subject to the criticism, *inter alia*, that there is no place in it for time and money (see Hahn 1980; see also Hodgson 2001: 225).

expressed so laboriously are extremely simple and should be obvious. The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds' (Keynes in CW VII: xxiii).

In order to assist the reader, Keynes (ibid., xxii) gave an early glimpse in the book into a key aspect of his new thinking, namely the questioning of the assumption of fixed output: 'When I finished [A Treatise on Money], I had made some progress towards pushing monetary theory back to becoming a theory of output as a whole. But my lack of emancipation from preconceived ideas showed itself in what now seems to me to be the outstanding fault of the theoretical parts of that work (namely Books III and IV), that I failed to deal thoroughly with the effects of changes in the level of output. My so-called 'fundamental equations' were an instantaneous picture taken on the assumption of a given output... This book, on the other hand, has evolved into what is primarily a study of the forces which determine changes in the scale of output and employment as a whole...' In a reversal of Say's Law, Keynes proceeded to show the primacy, as he believed it, of effective demand rather than supply in determining the course of the business cycle. More specifically, Keynes's belief was that the investment activity of firms is mostly determined by the consumption behaviour of individuals, not their saving behaviour. Put another way, if planned savings are greater than planned investment at full employment there will be a deterioration in firms' animal spirits which will manifest itself in the form of lower investment in capital and labour. This, in turn, leads to unemployment.

In spite of the difficulties he faced during the preparation of the *General Theory*, Keynes was determined to 'raise a dust' and he was in no doubt, as demonstrated by his remarks to Bernard Shaw, that the book was going to be revolutionary. But did the analysis contained in the *General Theory* really represent a revolutionary contribution to the new field of research opened up by economists during the 1930s as they tried to understand and solve the Great Depression? It certainly contained a number of innovations, such as an emphasis on the short period, a focus on psychological factors (including animal spirits and uncertainty), and, as we have seen, Keynes's argument that classical theory should be considered as a special case, relevant only in conditions of full employment. However, Keynes also made use of a number of extant theories.

The principle of effective demand had been proposed as far back as Malthus in the late 18th century and the related notion that under-consumption could be responsible for the cycle had also been put forward before in various places (see below), albeit with relatively little success for its proponents. The question of Keynes's referencing of pre-existing under-consumption theories in the General Theory is of additional interest here. More specifically, Samuelson (1946: 190) maintains that Keynes was 'not overly-generous' in his acknowledgements in the book. Even if Samuelson is referring here to the General Theory as a whole, it is difficult to support his position with respect to Keynes's description of forerunners to his own views on underconsumption. For example, in chapter 23 of the General Theory, 'Notes on Mercantilism, the Usury Laws, Stamped Money and Theories of Under-Consumption', Keynes devotes no less than seven pages to under-consumption, focusing on Hobson and Mummery's The Physiology of Industry (1889) - a book which he quotes from extensively – and other 'heretics', such as Major Douglas. At a broader level, Keynes's precursors did not have the benefit of innovative concepts, such as the multiplier, with which to underpin their work, nor did they enjoy Keynes's high public profile and influence. As a consequence, the chances of their theories on under-consumption taking hold were significantly reduced. All the same, judging by the space given over to them in the General Theory, it is clear that they had a considerable influence on Keynes.

Where Samuelson may have a stronger point becomes apparent when we consider Keynes's incorporation of expectations and uncertainty in the *General Theory*. Shackle (1967: 6) notes that it was the Swedes, Erik Lindahl and, more decisively, Gunnar Myrdal, who first highlighted the relevance of expectations in economics. Regarding Keynes's knowledge of this prior work, one caveat should be noted and it is that Myrdal's thoughts on the subject were only published in English in 1939, eight years after they originally appeared in Swedish and six years after they were translated into German; Keynes had no knowledge of Swedish and his understanding of German was very limited. On the other hand, he was still well aware of theoretical developments taking place in Sweden, implied by his use of expectations in *A Treatise on Money*. It is therefore a little odd that there are no references at all to the Swedish School or its individual members in the *General Theory*. He had looked at the

issue extensively in *A Treatise on Probability*. But an equally, if not more, important analysis was contained in Frank Knight's *Risk, Uncertainty and Profit* (1921), where Knight made his famous distinction between risk and uncertainty. Keynes's only reference to Knight in the *General Theory* is in a footnote on page 176 dealing with Knight's unrelated article for the August 1934 edition of *Economica* entitled 'Capital, Time and the Interest Rate'. The question of the extent of Knight's influence on Keynes seems to be another aspect of the Keynesian Revolution yet to be fully uncovered.⁵⁷

Meanwhile, the idea of using public works programmes as a means of curing a slump was certainly not a new one, especially at Cambridge, where, amongst others, Foxwell and Pigou had supported the idea well before the 1930s. Keynes himself had come out in favour of public works as far back as 1924, but his analysis was, as we saw, compromised by the 'Treasury view'. With the appearance in 1929 of *Can Lloyd George Do It*? the case was again made for public works based on Lloyd George's espousal of the same in March of that year in a Liberal Party pamphlet called 'We Can Conquer Unemployment!' With the advent of Kahn's multiplier article two years later, theoretical support for public works became stronger. (As a side-note, Keynes never explicitly argued for the manipulation of fiscal policy in the way that has since become associated with his name; the closest he came to such a position was his advocacy of the 'socialisation of investment'. Rather, it was Lerner's elaboration of 'functional finance' that became the channel through which Keynes's name would come to be identified with deliberate fiscal adjustment as a means of influencing output levels over the short period.)

The multiplier was an example of Keynes's fondness for employing suggestive and evocative words and phrases in order to help get his point across. There are a host of

⁵⁷ Parker (1998: 155) points out that Keynes's ideas on expectations and uncertainty as well as his treatment of probability only really started receiving proper attention from economists in the 1980s. He goes on to identify various reasons as to why these ideas failed to get much notice, in the United States in particular, in the period immediately after the *General Theory*'s publication despite the book's enthusiastic reception, especially amongst the young. These explanations include the dominance of other aspects of the book and the influence of interpretive work by, amongst others, Hicks and Hansen (ibid., 155-158).

similar examples throughout his work, including the 'fundamental equations' of *A Treatise on Money* and the 'animal spirits', 'expectations', 'liquidity preference', 'marginal propensity to consume' and 'marginal efficiency of capital', amongst others, used in the *General Theory*. Some of these concepts also lent themselves to measurement, a factor which only increased the attractiveness of Keynes's theories, as did other measurables, such as the inflationary gap, which although they came along after the *General Theory*, were an indirect result of it. It seems then that Keynes was able to achieve a fine balance between on the one hand, giving researchers enough new ideas to set them on their empirical way, and on the other, stressing the importance of certain concepts, such as expectations, which do not inherently lend themselves to real-world testing.

The *General Theory* also coincided with the appearance of the newly developing field of national income accounting. Well before 1936 Keynes had become keenly aware of the need for the proper measurement of economic aggregates, as demonstrated by his recommendation to Macmillan that they should publish Clark's *The National Income 1924-1931*; Macmillan followed Keynes's advice and published it in 1932. The book was a call to arms, with Clark complaining about the 'disgraceful condition of British official statistics' (Clark 1932: vi) and that a greater effort should be made to centralise the collection of such data. Keynes followed this up by publishing another important piece of work by Clark, his June 1933 article for the *Economic Journal*, where he made the first ever attempt to estimate national income on a quarterly basis (Clark 1933).

During this period, Keynes was also conscious that Simon Kuznets and his coworkers at the University of Pennsylvania and the National Bureau of Economic Research were building a framework for national income analysis and, as we saw, Keynes would go on to quote Kuznets (and Clark) in the *General Theory*. Further, in a *Journal* article of September 1936, Keynes acknowledged and corrected his misuse of Kuznets's investment data in the *General Theory* (Keynes 1936). Patinkin (1976: 1,098-1,099) devotes some space to analysing Keynes's use of the Kuznets data and to the subsequent correspondence between the two men which Keynes used to clarify its meaning. Given the level of interest quickly produced by the *General Theory*, it would have been easy for Keynes to have ignored any relatively minor errors it might have contained. In the Kuznets case, however, he chose to very openly address the problem at hand, a point which Patinkin fails to give Keynes enough credit for.

Keynes was in place to oversee other important developments in national income accounting post-1936. In late 1939 and early 1940, he worked closely with the German economist, Erwin Rothbarth, to produce the first double entry national accounts (see Cuyvers 1983: 629), thereby providing the missing link between Clark's earlier research and Meade and Stone's work at the ES during the Second World War (ibid., 632). Earlier, part of the foundation for the greater manipulation of national income data for policy purposes had been laid down as a result of the increase in interest in econometrics which took place in the late 1920s and early 1930s on the back of work by, amongst others, Ragnar Frisch, the founding of the Econometric Society in December 1930, and, relatedly, the appearance of the first volume of Econometrica in January 1933. As far as the Keynesian Revolution was concerned, these developments were ironic given Keynes's distrust of econometric methods – a distrust which famously manifested itself in his attack on 'Professor Tinbergen's Method', which appeared in the September 1939 Economic Journal (Keynes 1939) and his membership of the Council of the Econometric Society from 1935 until his death (he was also President in 1944-1945) (see Morgan 1990: 121).

Even so, building on the successes of July 1941, Keynes's theories would go on to benefit from wider policy developments within Britain's social, political and economic landscape. As we saw, there was the Beveridge Report (Beveridge 1942), in which Beveridge implicitly assumed that government would be able to manipulate demand along Keynesian lines in the post-war period, and so maintain full employment, defined as being less than 3% unemployment. This, in turn, would help to finance an expansion of welfare provision for those who, for whatever reason, were unable to work. Beveridge's recommendations received strong political backing from the newly elected Labour government of 1945. Meanwhile, the emphasis on full employment would appear again in Beveridge's *Full Employment in a Free Society* (Beveridge 1944) and in the British government's White Paper on Employment Policy (also 1944).

Marshall:

Marshall's claim to originality is almost as great as Keynes's. When we considered Marshall's contribution with respect to simple and rapidly exploitable experimental techniques, a number of factors were identified, amongst them Marshall's employment (albeit qualified) of mathematical techniques, his use of diagrams – which helped to simplify, in particular, his theories on supply and demand – and his origination of concepts such as the price elasticity of demand. All of these were important components of the Organon. At the same time, the extent of Marshall's originality was necessarily constrained as his work was, to a certain degree, built on the theories of a number of his classical predecessors, in particular Smith, Ricardo and Mill.⁵⁸

We saw a similar pattern in the *General Theory* with respect to Keynes's use of, for instance, under-consumptionist theories. However, Keynes's claim to greater originality is bolstered by the fact that the *General Theory* was a concerted attempt to escape from previous modes of thinking about a particular problem in economics. As part of this, Keynes made an explicit attack on orthodoxy, in stark contrast to Marshall, who would never have contemplated such a course of action in his own work. In addition, Keynes's apparent creativity may, in the 1930s at least, have appeared to have been greater than in other circumstances because he was responding to an important contemporaneous set of historical circumstances.⁵⁹ Again, this was distinctly different from Marshall's theoretical output, which was, in the main, ahistorical.⁶⁰

⁵⁸ Although Marshall may have thought of himself as belonging to the classical tradition, Sraffa believed that this was not the case and that Marshall's claim to being a classical economist in fact only served to weaken the classical tradition (see Harcourt 1981).

⁵⁹ Lawlor (2006: 72) notes that Keynes's preference for engaging in topical issues was a theme throughout his career, beginning with his interest in Indian monetary affairs – even if this was partly forced on him as the India Office was his destination after finishing second in the civil service examinations in August 1906; the first-placed man, Otto Niemeyer, went to the Treasury – before moving on to war finance, the Great Depression, and returning to war finance.

⁶⁰ Note should also be made of Lawlor's (2006: 99) point that, long before the appearance of the *General Theory*, the influence of Marshall's Organon had suffered a decline as a result of its inability to account for the increasing power and influence of large companies and, as a result, imperfect

Hayek:

With Robbins at the helm at the LSE when Hayek arrived there in 1931, there was an air about the place which suggested that it wanted to make a break with the past, especially with the theories associated with Marshall via Cannan, who had dominated the Economics Department at the School for a number of years. Robbins wished to move the LSE in a more Continental direction, and this was one of the reasons for Hayek's recruitment. Hayek's appointment was, as already noted, also driven by Robbins's desire to fight Cambridge. Granted, it would be wrong to characterise the two camps as being in complete disagreement about everything concerning economics: thus, Robbins's objections to econometrics were probably stronger than Keynes's, reflected in his assertion that the application of quantitative methods to economic problems was 'doomed' (Robbins 1932: 102). Robbins was nevertheless determined to give the LSE a new lease of life and he envisaged that Hayek's work on the cycle would be bolstered by his own ideas on methodology and value theory. However, both men made crucial mistakes in their respective approaches: in Robbins's case, his methodological work arguably failed to see the need for and the imminence of the Keynesian Revolution (see Winch 1969: 191), while Hayek did not at first realise that Keynes had founded the new field of 'macroeconomics', one of the consequences of this being that he was unable, along with other reasons, to crystallise any early substantive criticism of the General Theory. Hayek instead opted to continue developing his own thoughts on the cycle which, he believed, would rival Keynes's, a decision which, unfortunately for Hayek and the Austrians, turned out to be erroneous.

As with Keynes and Marshall, Hayek built on the work of his predecessors. He agreed with Mises that changes in credit conditions were a key driver of the cycle. This view was, in turn, an extension of Wicksell's capital theory and the "cumulative process" induced as a result of differences between the natural rate of interest and the money rate of interest. Wicksell's theories, encapsulated in his *Value, Capital and Rent* (1893) and, by implication, *Prices and Production*, were difficult to understand;

competition. Meanwhile, in 1930, Sraffa had argued for the complete abandonment of Marshall's partial equilibrium analysis (see Sraffa 1930: 93).

Caldwell (1995: 33) notes that, 'few of [Hayek's] English readers were familiar with...capital theory.' Part of the problem was that Wicksell's books were originally only published in German, his target audience necessarily restricted as a result.⁶¹ Meanwhile, even if Wicksell's influence on Keynes was not insignificant, it may have been greater if his preferred language of publication had been English; it certainly would have increased the chances of *A Treatise on Money* having a stronger capital-theoretic foundation, a weakness which Hayek was quick to seize on. Still, Hayek's own use of capital theory came under sustained attack from no less a figure than Frank Knight. Knight's onslaught and Hayek's defence lasted for three years from 1933 to 1936 (see Knight 1933, 1934, 1935 and Hayek 1936), perhaps, in turn, contributing to Hayek's later declaration that he was tired of controversy as one of the reasons for his failure to critically review the *General Theory*.

Lastly, Hayek was sometimes guilty of missing the opportunity to make better use of innovative theoretical ideas whilst actively objecting to others. For example, he and the wider Austrian School did not appreciate the potential significance of the role played by expectations in helping to shape the cycle when the idea first emerged in Sweden: 'The failure to grasp '[this] golden opportunity' was surprising given the emphasis in Austrian economic thought upon the subjective nature of marginal utility analysis' (McCormick 1992: 84). Meanwhile, Hayek's opinion of the multiplier was dim at best: he sarcastically referred to it as the 'Peter-Outer' (see Ebenstein 2001: 111).

Kalecki:

Compared with Keynes, Marshall and Hayek, Kalecki has an equally strong, if not stronger, claim to originality. The difficulty of pinning down exactly how Kalecki arrived at his innovative theories of the cycle remains a pertinent one right up to this day, not least because of the relatively unorthodox route he took into economics but also because his early career has not, so far, been as well documented as those of Keynes, Marshall and Hayek. Add to this Kalecki's relative lack of contact with Western economists during the late 1920s and early 1930s and his reputation as one of

⁶¹ An English translation of Value, Capital and Rent did not appear until 1954.

the great innovating economists of the 20th century is, although probably undeniable, still cloaked in a certain air of mystery.

The fact that Kalecki had little communication with economists outside of Poland during the initial phase of his career as a professional economist may, paradoxically, be a pointer to how he managed what he did. More specifically, he was not inculcated with mainstream classical economic thinking (see J. Robinson 1966: 338), the result being that he never had to contend with the intellectual wrestling which Keynes, most obviously, had to go through in order to 'escape from habitual modes of thought and expression.' If Kalecki did indeed stand on the shoulders of a giant, it was those of Marx, the description of schemes of production and reproduction in *Das Kapital* having a particularly strong influence on the development of Kalecki's views on economic fluctuations.

Summary:

Out of all of the 14 Morrell-Geison criteria, this was the only one where Kalecki's performance is an unambiguously strong one. Given that each of Keynes, Marshall and Hayek had a mixed record when it came to the question of 'Invasion of new field of research', it was the only criterion where Kalecki is the clear winner.

Table 9. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'viii. Invasion of new field of research'

<u>Criterion</u>	Keynes	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
viii. Invasion of new field of research	±	±	±	+

Note: ¹ '+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

A diverse set of issues have been covered in the pages above. Putting to one side the debate over whether the *General Theory* represented a general or special case, it was nevertheless a very important case. At a minimum, it ushered in the new subject of macroeconomics: Keynes's synthesis of a number of pre-existing theories, his challenge to the classicals, and his belief, as subsequently summed up by Meade, that 'a dog called *investment* wagged his tail labelled *savings*' (Meade 1975: 82) rather

than the other way around, provided the *General Theory* with its most convincing set of claims to be a revolutionary book. Moreover, it appeared at a fortuitous time: not only was the Great Depression fresh in the mind, but research into national income accounting was starting to take off whilst the use of econometrics was assuming a higher profile in the profession. In spite of his general distaste for the application of mathematics to economic problems, Keynes moulded the *General Theory* in such a way that it would become an integral part of such developments. Later on, Keynes also played a crucial role in disseminating Meade and Stone's pioneering work on national income accounting.

Interestingly, however, the manipulation of fiscal policy as a means of influencing the cycle was an idea only indirectly associated with Keynes, its more direct expression being realised in Lerner's theory of functional finance. Meanwhile, any influence that Marshall may have had on the new ideas contained in the *General Theory* was restricted by his classical background, a characterisation which Keynes employed in order to sell the *General Theory* as being a genuine break from the past. Deliberately or not, Keynes had nevertheless filled in one of the major lacuna in Marshall's Organon, namely a convincing explanation of mass and sustained unemployment.

Elsewhere, there was a determination on Robbins's part to move the LSE away from Marshall's influence and towards Continental-style thinking through his work on methodology and Hayek's cycle theories. Yet, both Robbins and Hayek failed to anticipate the Keynesian Revolution, the result being that Hayek, in particular, was unable to mount a convincing critique of it, left voluntarily, as he was, to concentrate on his own work on the cycle which he thought – wrongly as it turned out – would rival and possibly supersede the *General Theory*. Hayek also sometimes failed to spot the importance of new ideas, notably the role that expectations might play in influencing economic activity. For his part, Kalecki has arguably the greatest claim to being the innovator of a new field of research. He did, to some extent, rely on his interpretation of Marx. On the other hand, he had the benefit of not being influenced by orthodox Western theories, a problem particularly incumbent on Keynes.

On a final note, Blaug (1991: 174-175) argues that one way of measuring the speed at which a new research programme is adopted is how long it takes for it to be

incorporated into elementary textbooks. Keynes's big break in this respect took place in 1948 with the appearance of Samuelson's *Economics*, a full 12 years after the publication of the *General Theory* (although this process of filtering may have been quicker had it not been for the Second World War). At first glance, it would not therefore seem unreasonable to argue that textbook expositions played only a relatively minor part in the Keynesian Revolution. But this is at the risk of underestimating the impact of Samuelson's book: his invention of the Keynesian Cross and his extensive use (for the time) of diagrams as pedagogic aids meant that he 'out-Keynesianized' (Elzinga 1992: 863) Lorie Tarshis's *The Elements of Economics* (1947). As a testament to the longevity of Samuelson's analysis, *Economics* is still in print after 18 editions with over four million copies sold, thereby making it the most successful economics textbook ever written. As for Hayek and Kalecki, their respective theoretical systems received little or no formal treatment in textbooks during the 1930s and 1940s.

Though maybe not quite as conclusive, we can try to extend Blaug's premise by examining journal citations for Keynes, Hayek and Kalecki from the early 1930s to the mid-1940s.

1931-35		1936-39		1940-44	
Keynes	66	Keynes	125	Keynes	59
Robertson	44	Robertson	48	Hicks	30
Hayek	33	Hicks	33	Haberler	24
Fisher	30	Pigou	31	Robertson	22
Hawtrey	30	Harrod	27	Hawtrey	20
Cassel	22	Hawtrey	25	Kalecki	18
Pigou	20	Haberler	24	Schumpeter	18
Wicksell	17	Hayek	24	Hansen	17
Hansen	14	Robinson (Joan)	20	Kaldor	17
Marshall	13	Clark	18	Kuznets	16
				Lerner	16

Table 10. Most cited economists in the Index of Economic Journals, 1931-44

Source: Ebenstein (2001: 80)

The most striking aspect of Table 10 is Keynes's leading position in each of the three periods: even during the years 1931-35, before the *General Theory*'s appearance, he was well ahead of the second-placed Robertson, reflecting the not-insignificant impact of *A Treatise on Money*. Keynes and Robertson retained their leading positions in

1936-39, the major difference being the substantial increase in citations received by Keynes: in percentage terms, he enjoyed 160% more citations than Robertson during this period, well up on the 50% advantage he had between 1931 and 1935, clearly a reflection of the *General Theory* appearing in 1936.

During the war, when the publication of journals was necessarily restricted, Keynes was still dominant, recording a near 100% lead over Hicks in second. Reflecting the brief popularity of *Prices and Production*, Hayek took third place in 1931-35, before dropping to eighth in 1936-39; tellingly, he makes no appearance in the data covering 1940-44. Kalecki does feature in this final set of years, but only in joint sixth place with 18 citations, well behind Keynes on 59.

ix. Pool of potential recruits (graduate students)⁶²

According to Morrell-Geison, it is important that a research director has access to a reasonably large pool of potential recruits. The importance of this is apparent in two respects: 1) To help a director continue his own immediate research programme; and 2) To disseminate to a wider audience the research outcomes discovered by the school. In addition, Morrell-Geison also makes reference to graduate students as being the most likely source of recruits.

Keynes:

Keynes became a lecturer in economics at Cambridge in January 1909. Although it was still very early days, as far as the potential for discovering students with the talent to contribute and carry forward his later revolution was concerned, the omens for Keynes were not good. At the beginning of the 20th century, economics was still finding its feet in the academic world. In Britain, there had been a rich tradition of eminent economists, amongst them Thomas Robert Malthus, David Ricardo, John Stuart Mill and, of course, the founding father, Adam Smith. Cambridge had had its professors of political economy, perhaps most notably the blind Henry Fawcett,

⁶² Parts of the following draw on Cord (2007: 22-25).

Marshall's predecessor. However, Fawcett's teaching responsibilities were small, amounting to little more than lecturing to a few ordinary degree students. Not surprisingly, this produced few individuals of real quality.

Part of the problem lay in the fact that economics did not have its own tripos at Cambridge, that is until Marshall secured the new degree in 1903. Nevertheless, as of 1909, the shortage of students was worryingly apparent to the newly appointed Keynes, who observed that he had delivered his first lecture 'before an enormous and cosmopolitan audience – there must have been at least fifteen, I think, but a good many of them really had no business there, I am afraid, and I shall have to tell them that the lectures are not suitable to their needs' (Keynes to Grant, 19 January 1909, in Harrod 1951: 147). Indeed, in his search for disciples who would go on to further his revolution, Keynes would have to wait even longer than the decade and a half it took Marshall to find Pigou: it was not until the second half of the 1920s that Cambridge would produce Richard Kahn and Joan Robinson.

In spite of all this, it soon became clear to Keynes that economics as an academic subject was changing, not least because of Marshall's efforts to put it on to a more rigorous footing. One result was that the number of economics undergraduates at Cambridge began to grow: by 1910, those sitting for Part I of the Tripos had reached 25, relatively small, but well up from 11 in 1909 and just four in 1906. There was also growth in Part II examinees, where student numbers climbed from a paltry three in 1906 to 13 in 1909.⁶³ With the Faculty expanding, Keynes decided to set up the Political Economy Club in October 1909 (not to be confused with the Political Economy Club established by James Mill, father of John Stuart, in London in the 1820s).

The Cambridge version was a largely informal gathering of staff and some of the best undergraduates who would meet in Keynes's rooms at King's to discuss contemporary economic issues and problems. Keynes would preside over the Club's meetings with a benevolence which encouraged participation by students. The Club

⁶³ The number of students graduating from the Economics Tripos (Parts I and II) continued to grow, rising from 29 in 1910 to 74 in 1924, the year of Marshall's death (see Groenewegen 1990: 55).

could nevertheless still hold a certain terror for undergraduates, as one of its attendees, Austin Robinson has recalled at length: 'To the undergraduate of the early twenties, I can say from experience, Keynes' club was fascinating but alarming. Fascinating because here one heard Keynes, a large part of the Faculty, and all the best of one's rivals discussing in realistic detail all the real and most urgent problems of the world. Alarming because if one read a paper one was likely to find one's undergraduate efforts (I speak from painful memory) being dissected by a visiting Mr. Hawtrey, destroyed by the full power of Frank Ramsey's dialectical analysis, and when one had maintained one's position to the best of one's ability for some three hours, Keynes would sum up in friendly but utterly devastating fashion – I learned a certain sympathy with the prisoner waiting for the judge's black cap' (A. Robinson 1947: 27). Despite this description, the Club would, over the years, become a defining feature of the economics scene at Cambridge.

Although economics had been recognised as a separate Tripos at Cambridge, graduate studies were far from being put on a similar footing, either then or for a long time subsequently. Moggridge (1998: 23) sums up the common position at Oxbridge: 'Oxford and Cambridge...were not well-organized centres of graduate instruction in economics. Both offered doctoral degrees, but the taking of such degrees in economics was a very new phenomenon in the 1930s (and one confined largely to foreigners for several decades), and neither ancient university...offered formal instruction in economics designed specifically for graduates. In these institutions, graduate work really meant learning from the literature, your supervisor, your fellow students and sympathetic faculty, but it was very much a matter of luck and circumstances.' Against this background, Keynes's wish to plug the gap in graduate training was, it seems reasonable to argue, one of the driving forces behind the creation of his Club, as was his interest in spotting and encouraging emerging talent: 'Keynes knew intimately right down to his illness in 1937 all the best of each generation of Cambridge economists, and exercised a more personal influence upon them than anyone else' (A. Robinson 1947: 27).

From around 1920 the Tripos was producing young men who could take on some of the lecturing load of more senior staff. This allowed Keynes to concentrate on other activities, such as academic writing and journalism, but also the supervision of undergraduates. Whilst the oral nature of supervisions necessarily limits the amount of evidence available, if the recollections of Brian Reddaway are anything to go by, Keynes does not seem to have used meetings with his students to publicise the ideas that would appear in the *General Theory*.⁶⁴ As Reddaway has described it, at his supervisions with Keynes, 'bits of ideas leaked out, but they were pretty thin. From that point of view, I got my General Theory from the copy of the *General Theory* which Keynes gave to me' (Reddaway in Young 1987: 75). Reddaway must still have had a rough idea of what the book would contain: he published an early academic review of it in the June 1936 number of the *Economic Record* – the house journal of the Economic Society of Australia and New Zealand – when he spent a year as a Research Fellow at Melbourne University, where he became one of Keynes's overseas emissaries (see Millmow 2003).

Morrell-Geison stresses that a research director should have access to a pool of graduate students rather than undergraduates. This makes sense as graduate students are, in general, more likely to have the research skills and knowledge that will be of use in a research school setting. The experience of the Circus goes some way to confirming this. While Kahn never undertook formal postgraduate work in economics, he did complete a seminal Fellowship dissertation on the economics of the short period⁶⁵ and successfully submitted it to the Fellowship Electors at King's in December 1929. Meade was a graduate student, albeit from Oxford, and Sraffa had already completed his doctor of law dissertation in Italy as far back as 1920 and so had left his graduate student days long behind him by the time of the Circus meetings. Joan Robinson is the odd one out as she never completed a dissertation or any formal graduate study. She had finished her undergraduate degree in economics in 1925 and from 1926 to 1928 spent two years in India with her new husband, Austin. The couple then returned to Cambridge, but it was only in 1934 that she secured an academic

⁶⁴ Reddaway was supervised by Keynes (and Kahn and Shove) in the early 1930s, became director of the Department of Applied Economics at Cambridge in 1955 and Professor of Political Economy in 1969.

⁶⁵ A Fellowship dissertation was roughly equivalent to today's PhD. During the writing of his dissertation, Kahn received considerable help from Shove and was also heavily influenced by Keynes (see Kahn 1989: xi). Marris (1992) is an interesting account of the varied history of Kahn's dissertation.

post, as a University Assistant Lecturer, helped by the publication of *The Economics of Imperfect Competition* in 1933. It does not seem unreasonable to suggest that her participation in the Circus may have been facilitated by her husband, who was already a member of the Economics Department at Cambridge.

Even though the Circus contributed to the initiation of the Keynesian Revolution, its subsequent contribution was mixed. After the appearance of the General Theory, Richard Kahn, still very much a Keynesian, continued in his role as something of a back room boy (albeit a very effective one) and Piero Sraffa devoted himself to Ricardo and Marx. Conversely, James Meade was Keynes's bulldog in Whitehall while Joan Robinson flew the Keynesian flag – or rather her and Kahn's interpretation of it – mainly through her teaching and extensive writing. The impact of the former at Cambridge was not inconsiderable, a fact not lost on Pigou who, describing the answers to that year's Tripos questions, wrote to Keynes in June 1940 that: 'The chief bad thing we found was that a very large number of people had been stuffed like sausages with bits of your stuff in such a way that (1) they were quite incapable of applying their own intelligence to it, and (2) they perpetually dragged it in regardless of its relevance to the question... My own guess... is that the parrot-like treatment of your stuff is due to the lectures and supervision of the beautiful Mrs R[obinson] - amagpie breeding innumerable parrots.' (Pigou to Keynes, [?] June 1940, JMKP PP/45/254/44). We should also not forget the role played by Joan Robinson and Richard Kahn in convincing Abba Lerner and others from the LSE of the merits of Keynes's theories.

Given such evidence, Pasinetti's (2007: 40) view that the Cambridge Keynesians 'did almost nothing to prepare their succession' seems a little unfair: Cambridge was far from being a desert when it came to carrying forward the Keynesian message. In addition to the above, one only has to think of Kaldor's trade cycle article of 1940 (Kaldor 1940) and his later work on growth theory to appreciate this. Renewing hostilities that had begun when they were both at the LSE, Kaldor was also willing to take up the baton in attacking Hayek. Indeed, the battle between Cambridge and LSE which had raged during the 1930s was only really brought to a close with Kaldor's critique (Kaldor 1939, 1942) of Hayek's revised cycle theory which appeared in *Profits, Interest and Investment* (1939) and *The Pure Theory of Capital* (1941).

It was true and somewhat inevitable that, after such a bright few years during the 1930s, Cambridge as an outpost for Keynesianism suffered a relative, albeit not fatal, decline; after all, Keynes and the Circus must have been a hard act to follow. But one aspect of the Keynesian Revolution that we have not yet examined in detail is what happened after the 1940s. There have been some clues. For example, in Whitehall, the Keynesian torch found a very able bearer in the form of Robert Hall, who saw to it that Keynes's ideas were promoted during the 1950s, often by facing down non-Keynesian analyses (see Booth 2001: 307). This had faint echoes of Keynes's successful challenge to the 'Treasury view' in the 1930s and, as such, Hall can be considered as one of Keynes's natural successors in Whitehall; in the United States, Paul Samuelson and James Tobin performed a similar function during the Kennedy Administration. Meanwhile, the monetarist backlash is nominally dated from Friedman's 1956 restatement of the quantity theory of money, even if it was not until the 1970s that monetarist ideas began to seriously influence British and American policy-makers. On a related note, Pasinetti (2005: 839) argues that the Keynesian School at Cambridge failed to turn the Keynesian Revolution into a 'permanent winning paradigm'. This is inaccurate. What should be acknowledged is that Keynesianism was not abandoned as a result of the rise of monetarism; it was just downgraded in the armoury of economic policies available to government. In fact, Keynesian economics was subject to the process described by Merton as "obliteration by incorporation". In other words, Keynesian principles became such an accepted part of economic policy-making that nobody ever or rarely bothered to cite their originator (see Samuelson 2002: 51). More recently, witness some of the fiscally-based responses to the ongoing economic downturn.

Whilst Keynes could call on the services of a group of talented younger colleagues as well as students at Cambridge and to a lesser extent, Oxford, during the writing of the *General Theory*, there was a strong level of support amongst graduate students in the United States in the years following publication. Alvin Hansen was, of course, not a graduate student in 1936, having completed his doctorate in 1918. However, he was an important influence on a number of graduate students at Harvard, including Samuelson and Tobin, as well as other youthful members of the Faculty, such as John Kenneth Galbraith. Keynes's reputation as a man who was willing to challenge convention meant that there was a great sense of anticipation at Harvard in the period

leading up to the *General Theory*'s appearance, with undergraduates putting in a special order to ensure that the book reached them as quickly as possible; Samuelson, for one, likened its arrival as giving rise to the kinds of emotions that Keats experienced as retold by the poet in his *On First Looking into Chapman's Homer* (see Galbraith 1998: 11). Harvard's young would also have been encouraged in a Keynesian direction by the presence in their midst of Robert Bryce, who had attended Keynes's lectures at Cambridge and who arrived at Harvard in autumn 1935 full of the Keynesian gospel, having already taken the opportunity to preach it at the LSE (see Moggridge 1998: 29). Granted, not all of the economics students at Harvard during this period necessarily came under Keynes's spell. By way of example, in the late 1930s, Abram Bergson was preoccupied with his pioneering work on social welfare functions. It remained the case, however, that Harvard was the foremost centre of support for Keynes's ideas in the United States, fortunate for him, as we have already seen, given the distinct lack of support for the *General Theory* at Chicago.⁶⁶

Marshall:

Marshall's pool of potential young recruits at Cambridge was relatively limited in the years before the establishment of the Economics Tripos, as well as in the immediate period following 1903. Before the Tripos, Cambridge undergraduates had to study either Moral Sciences or History to get any exposure to what was then termed 'political economy'.⁶⁷ On reflection, Marshall seems to have made the best of a challenging situation, producing Cunningham, Foxwell, Neville Keynes, and Nicholson in the 1870s, Berry, Flux, and Johnson in the 1880s, and Bowley, Chapman, MacGregor, Sanger, and, of course, Pigou, in the period between 1890 and 1903 (see Groenewegen 1995: 322).

⁶⁶ The fact that the Chicago School was right wing and therefore sympathetic to the then out-of-favour Austrian view of economics was fortunate for Hayek as it was one of the few institutions prepared to offer him a job in the early years after the Second World War.

⁶⁷ The Moral Sciences Tripos had been introduced at Cambridge in 1848 along with Natural Sciences, while the History Tripos had to wait until the 1870s to get its own degree after being split off from Law. Mathematics has easily the longest history of any tripos at Cambridge, dating back to the middle of the 18th century (see Leedham-Green 1996: 226).

However, Maloney's (1985: 59) claim that it was the Mathematical Tripos, not Moral Sciences, which was responsible for restricting Cambridge's output of economists before 1903 is a little off the mark when quality is considered. True, Moral Sciences was the source of the majority of Cambridge economists before the Economics Tripos was introduced. But Mathematics produced some influential thinkers in the subject, not least Marshall himself and others, such as Bowley and Flux. Moreover, Marshall was of the belief that Moral Sciences had failed to provide him with 'one single high class man devoting himself to economics' (Marshall in Groenewegen 1990: 51). Perhaps a more interesting question is why the History Tripos produced so few eminent economists (with the exception of Pigou), despite the fact that it rivalled Moral Sciences in the number of students sitting for the political economy exams: according to Groenewegen (ibid., 53), of the 254 undergraduates who were Marshall's students between Michaelmas Term 1886-87 and Lent Term 1888-89, 24.0% were from History compared to 16.1% from Moral Sciences.⁶⁸

Not one to be easily deterred, Marshall pushed ahead with the creation of the new Tripos. One very specific reason for this may have been that when he spent just a year at Balliol College, Oxford, from 1883 to 1884, he produced three students of promise, namely Gonner, Harrison and Price (see Groenewegen 1995: 322), far better, proportionately, than his performance at Cambridge before and after 1903. Be that as it may, one alternative to an Economics Tripos would have been to recruit promising young teaching staff from other British universities. But instead of appointing outsiders, Marshall tried to 'export' his protégés, successfully in some cases but doomed to failure in others, notably the effort to get Neville Keynes to go to Oxford; given the subsequent role played by Maynard Keynes in strengthening the profile of Cambridge economics, it was probably for the best that Marshall failed in this particular venture.

Aside from a possible fear of being accused of poaching, Marshall's reluctance to recruit outsiders may also have been driven by a wish to produce home-grown talent schooled in Cambridge norms and habits, such as the oral tradition, and whom he

⁶⁸ The remainder were made up of 'Special' students and 'Miscellaneous', including those entered for the Indian Civil Service exams.

thought would be up to carrying forward his theoretical framework and, in particular, to fill in some of the gaps in the Organon. Before Maynard Keynes, Pigou played this role to a certain extent. But with the Economics Tripos up and running, there were hopes that it would begin to attract a greater number of able students who would not only excel as undergraduates but may also become economics lecturers themselves, if not at Cambridge then at other British universities.⁶⁹ However, in the very early days, this turned out to be a premature hope. Particularly scathing was the testimony of Neville Keynes, who noted how the quality of the answers in Part I of the 1907 Tripos was 'poor in the extreme... quite extraordinarily bad' (J.N. Keynes in Maloney 1985: 64).

Finally, Marshall's attitude towards women is worth considering at this point. In the early part of his professional career, Marshall was a keen supporter of higher education for women, and in the Easter Term of 1872-73 he gave six introductory lectures on political economy to a female audience at Cambridge (see Raffaelli, et al. 1995: vii). Yet this seemingly enlightened attitude had its limits. For instance, despite Marshall allowing his wife, Mary Paley Marshall, to co-author *The Economics of Industry* (1879), he was, in fact, of the view, according to Harcourt (2001: 336), that 'women could not do economic theory but that she [Mary] could act, in effect, as his research assistant.' Marshall also believed that the children of women who took up economics would suffer as a result.

Marshall's misogyny was unfortunate and certainly had no grounding in reality if examination results in the Moral Sciences Tripos were anything to go by. Between 1881 and 1906 the proportion of women receiving First Class degrees stood at 19.6%, higher than the 18.3% recorded by men during the same period (see Groenewegen 1990: 57). Furthermore, within the First Class division itself, there were some outstanding women students, not least one H. Dendy, who topped the list in 1888 (ibid., 52). But even with this evidence, Marshall continued to advocate the exclusion of women from economics, one broader manifestation of this being his support for an

⁶⁹ This was notwithstanding the fact that, as we shall see, Marshall had already created a network of former students who had taken up teaching posts in economics across the British university system.

1896 campaign to continue blocking the awarding of Cambridge degrees to women.⁷⁰ Had Marshall been more receptive to the idea of women economists, the history of economic theory might have turned out very differently. As it was, his prejudice may have been responsible for denying the profession a number of eminent thinkers. His chauvinism has certainly cast a shadow over his subsequent reputation. Most notable in this respect was the opinion of Joan Robinson, who once commented that the more she learned about economics, 'the more I admire Marshall's intellect and the less I like his character' (J. Robinson 1973: 259).

The difference between Marshall and Keynes in their attitude towards women in economics is striking: Keynes realised that women could make a significant contribution to the development of the subject, as demonstrated by Joan Robinson's role as one of his confidantes on theoretical matters, not to mention her own highly original contributions to economic theory. Marshall, on the other hand, regarded women as merely part of the support structure for the male of the species. Indeed, it would be hard to imagine a Joan Robinson-type figure emerging during the years when Marshall controlled economics at Cambridge, even though Robinson herself was, as it turned out, a beneficiary of the Tripos which Marshall strove hard to create.

Hayek:

The LSE was created in 1895, became a constituent college of the University of London five years later, and awarded its first degrees in 1902. According to Coats (1993: 373), as of 1919, more than two decades after its founding, only one-third of its students were full-time; the rest, categorised as 'occasional', attended the odd lecture here and there. Whilst this situation was, to an extent, driven by the aftermath of the First World War, the School was nevertheless keen to consolidate its position as a centre for the study of the social sciences, a position which clearly could not be achieved if the majority of its students were part-timers. A subsequent push to reverse the balance between part- and full-time students was so successful that, by the late 1930s, the number of full-time students had grown to around two-thirds of the total.

⁷⁰ Women could attend lectures and take exams but did not gain full admission into the University until May 1948.

As far as the Economics Department was concerned, it had started to be a magnet for some considerable talent from the late 1920s, both at student level and in terms of young staff members. In fact, the relatively wide pool of potential young recruits which Hayek could have drawn upon in the early 1930s rivalled that available to Keynes at Cambridge and included, as we have seen, Hicks, Kaldor, and Lerner. For one reason or another, each of these eventually left the Hayek camp to join the Keynesian fold. But just as telling was the experience of G.L.S. Shackle. Shackle joined the LSE as a doctoral student in 1935 under Hayek's supervision, his area of interest being Austrian capital theory. However, in what turned out to be a revelatory episode, Shackle travelled to Cambridge in the same year to hear Richard Kahn and Joan Robinson lecture on the forthcoming *General Theory*. Shackle was so taken by what he heard that he wanted to drop his proposed thesis on capital theory and replace it with an analysis of the application of the *ex ante* and *ex post* concepts to the emerging Keynesian paradigm; he did so, with, as Shackle (1983: 115) has described it, 'extreme enlightened generosity' on the part of Hayek. In later years, Shackle would become a highly respected member of the Post-Keynesian School.

On a last note, Hayek's only sustained support at the LSE during the 1930s came from the young Ludwig Lachmann, who had arrived at the School from Germany in 1933 having obtained a PhD from the University of Berlin and who studied under Hayek before becoming a colleague. But with only Hayek and Lachmann left to fight Cambridge, it is not surprising that interest in Hayek's cycle theories had completely collapsed by the time *The Pure Theory of Capital* appeared in 1941.

Kalecki:

A variety of factors meant that Kalecki's access to a pool of potential young recruits was extremely limited during the late 1920s and the first half of the 1930s. Putting to one side his seeming indifference to the importance of the role that disciples can play in promoting ideas, Kalecki's lack of access to university students was not helped by the fact that he did not hold an academic post at the time. Had he finished his own university education, things may have been different. As it turned out, his talents as an economist were eventually noticed and he secured a job at the Institute of Research on Business Cycles and Prices in Warsaw in 1929. At the Institute, he worked relatively

closely with Ludwik Landau and Marek Breit. However, any suggestion that Landau and Breit could have somehow formed the basis of an equivalent to the Circus appears to be far-fetched. For one, Landau's primary area of interest was statistics. Granted, Breit,⁷¹ who had secured his PhD in monetary economics from the University of Krakow in 1933, had similar interests to Kalecki, demonstrated by his most important published article on the role of imperfect competition in the theory of credit and investment, which appeared in 1935. He was also engaged in other projects, notably his work with Oscar Lange on the economics of socialism (even though this seems to have been completed before his arrival in Warsaw). Nevertheless, any chance of Kalecki establishing a following in Poland during this period was ultimately dashed after Landau and Breit were dismissed from the Institute in 1936 for attacking government economic policy; Kalecki responded by resigning his own post at the organisation.

There was also a question of age. Kalecki was born in 1899, making him only eight years older than Breit and ten years older than Landau. It seems possible that Breit and Landau saw Kalecki as someone from their own chronological cohort rather than belonging to a previous generation. Without the benefits of greater maturity which significant age gaps usually bring with them, Kalecki may therefore have had a harder job at recruiting people like Landau and Breit as disciples than did Keynes at Cambridge and in the United States. Indeed, apart from the anomaly that was Hansen (born 1887), Keynes (born 1883) never had to deal with such a problem: amongst the members of the Circus, Sraffa was closest to him in age but was still 16 years younger while at least two decades separated Keynes from each of Richard Kahn, Joan Robinson and James Meade. Meanwhile, in the United States, Samuelson was not born until 1915, making him a full 32 years younger than Keynes.

Summary:

'Pool of potential recruits (graduate students)' is one of only four criteria where Hayek secures a positive rating. Keynes also does well, outperforming Marshall (an ambiguous performance) and Kalecki (a negative performance).

⁷¹ The details of Breit's life and career presented here draw on Chilosi (1982: 80-81).
Table 11. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'ix. Pool of potential recruits (graduate students)'

Criterion	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	Kalecki
ix. Pool of potential recruits (graduate students)	+	±	+	-

Note: ¹ '+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

It is perhaps inevitable that there should be points of similarity and overlap between the criterion considered here and some others, notably that dealing with social cohesion and discipleship. Notwithstanding such considerations, this sub-section has, it is hoped, thrown up some interesting aspects of the Keynesian Revolution. In 1938 Keynes wrote that, 'Good economists are scarce because the gift for using 'vigilant observation' to choose good models, although it does not require a highly specialised intellectual technique, appears to be a very rare one' (Keynes to Harrod, 4 July 1938, CW XIV: 297). When Keynes began teaching at Cambridge in early 1909, the pool from which he might draw 'good economists' was relatively small, this despite the formation of the Economics Tripos just a few years previously. Keynes had to wait nearly 20 years before Richard Kahn and Joan Robinson emerged, although his decision to set up the Political Economy Club in late 1909 demonstrated an early willingness to compensate for the lack of teaching in advanced economics then apparent at Cambridge. Graduate education in economics was undoubtedly more sophisticated in the United States, especially at Harvard, where a generation of young economists, including Samuelson and Tobin,⁷² took it upon themselves to advance the Keynesian cause under the inspiring leadership of (the much older) Hansen; in fact, by the early 1940s, the pool of potential recruits had arguably become more 'Keynesian' than Keynes himself.⁷³ At the same time, had it been down to Chicago, the General Theory's reception in the United States would have been much cooler.

⁷² Tobin had actually been introduced to the *General Theory* as an undergraduate (see Harcourt 1984: 495).

⁷³ One is reminded here of Keynes's comment to Lerner shortly before he (Keynes) died where he claimed that he was not, in fact, a Keynesian (see Clark 1970: 53), an early instance, perhaps, of the bifurcation that would produce Keynesian economics on the one hand and the economics of Keynes on the other.

Marshall's pool of potential recruits was necessarily limited before 1903 as he had to rely on students supplied by other triposes. Despite managing to produce a number of important economists at Cambridge, Marshall's experiences at Oxford played an important part in setting him on a course that would end up with the establishment of the Economics Tripos. Although the new Tripos had a slow start, in time, it significantly expanded the pool of potential young recruits available to Marshall's successors in the Economics Department, including Keynes. Unfortunately, in Marshall's case, this pool did not extend to women, despite the considerable potential contained therein.

Hayek's access to potential recruits was relatively good when he arrived at the LSE; he was arguably in a stronger position than Keynes in this respect. But as stories emerged from Cambridge about what Keynes and his close associates were working on, support for Hayek began to ebb away. As a microcosm of this, Moggridge (1998: 27-29) notes that Kaldor's and Lerner's switch to the Keynesian creed was a classic example of the 'persuasion effect' described by Hirschman (1989) in his intriguing account of how people are drawn to a new theory; Shackle's conversion to Keynesianism can be similarly categorised. Finally, Kalecki never had access to any university students during the period under consideration as he was working at the Institute of Research on Business Cycles and Prices. His co-workers at the Institute, Landau and especially Breit, might have been recruited to the cause, although this was made difficult as they were relatively close in age to Kalecki plus the fact that they were both dismissed from their posts at the Institute in 1936.

x. Access to or control of publication outlets

Discussing the ease with which members of a research school can publish their work, Morrell states:

'[Relatively] easy access to publication opportunities, or best of all control of them, enable[s] a school to convert private work into public knowledge and fame. Publication [is] vital to the success of any ambitious research school. Otherwise its reputation remain[s] restricted and its students [lack] the spur of seeing their names in print' (Morrell 1972: 5).

Keynes:

We have seen how the oral tradition at Cambridge was passed down by Marshall to his students, including Keynes. The continuation of the tradition under Keynes manifested itself in various guises, including his decision to establish the Political Economy Club. The proceedings of the Club were informal and, as a result, no written record of what it discussed exists. The meetings of the Circus, for which there are also no written records, adopted the same practice of informality. However, it would be a mistake to assume that Cambridge's activities with respect to the Keynesian Revolution were solely reliant on the spoken word; opportunities to get into print were plentiful.

Keynes's publishing history dated back to well before 1936. His first non-academic piece appeared in February 1909 when he sent a letter to *The Economist* arguing in favour of free trade, while his first full-length professional article, on 'Recent Economic Events in India', appeared in the March 1909 number of the *Economic Journal* (Keynes 1909).⁷⁴ This marked the beginning of Keynes's long association with the *Journal*, an association which lasted right up until a few months before his death.

For reasons that will soon become clear, Keynes was elected to the editorship of the *Economic Journal* in late 1911, aged just 28.⁷⁵ It has to be said that he was remarkably fair when it came to deciding what should and should not appear in the *Journal*'s pages. Of course, to an extent he had to be, not only because of his innate sense of even-handedness but also because Edgeworth had opened the very first issue with the following words: 'The *Economic Journal*...will be open to writers of different schools. The most opposite doctrines may meet here as on a fair field'

⁷⁴ Keynes's first actual piece for the *Economic Journal* was a two-page note on rents, prices and wages, which appeared in September 1908.

⁷⁵ This paragraph draws on Cord (2007: 27-28).

(Edgeworth 1891: 1). Keynes nonetheless found himself in a difficult position: on the one hand, he was in charge of a respected journal and so could not be seen to be biased, while on the other, he was emerging as one of the key figures in the Cambridge School of Economics, with a reputation for independent thought. Given this, it would have been easy for him to have used the Journal as an outlet for his and his followers' views. However, as it turned out, his name did not appear particularly frequently in its pages: between 1911 and 1946, 37 of his articles, comments on other articles, and notes (excluding obituaries and book reviews), were printed in the Journal, an average of around one appearance a year. Of those pieces which were published after February 1936, only one – Keynes's June 1937 article on alternative theories of the interest rate – had any direct relevance to the *General Theory*. His most important written defence of the General Theory was in the February 1937 issue of the Quarterly Journal of Economics and even that was only in response to the critiques published in the November 1936 number of the same journal by, amongst others, Robertson and Viner. Keynes's capacity to defend the General Theory became rather limited by first, the heart attack he suffered in May 1937 and, second, by his steadily increasing involvement in Britain's war effort. One other reason for Keynes's seeming reluctance to publish his own ideas in the Economic Journal was his view that Cambridge was the world's leading economics institution. Patinkin (1982: 33) points out that, in Britain, Keynes only really had time for Oxford and London (read: the LSE). With Roy Harrod and James Meade representing his theories at Oxford⁷⁶ and Richard Kahn and Joan Robinson busy converting the youngsters at both Cambridge and the LSE, Keynes took little interest in using the Journal as yet another mouthpiece for his ideas, even if there was the odd occasion - such as the employment of Sraffa to criticise Hayek's Prices and Production (Sraffa 1932) when he would use the Journal to attack the ideas of others.

In terms of how much exposure the specific issue of unemployment received in the *Journal*, there is a hint that Keynes may not have wanted to give too much publicity to others' theories. Thus, between 1932 and 1935, only three articles on the subject appeared in the *Journal*'s pages (see Routh 1989: 286-287). But this does not

⁷⁶ After his postgraduate year at Cambridge, Meade returned to Oxford for the Michaelmas Term of 1931 and remained there until December 1937.

represent an accurate picture as Keynes did, in fact, publish a larger number of articles on the more general topic of economic fluctuations: between 1930 and 1935, 21 such pieces appeared in the *Journal*, an average of around 0.875 per number. (On a related note, Routh (1989: 286) is incorrect in his broader characterisation of economists being preoccupied during the first half of the 1930s with perfect and imperfect competition on the one hand and cardinal and ordinal utility on the other. The events of 1929 led to a veritable explosion in the publication of works dedicated to the study of economic fluctuations: in an impressive bibliography, Gordon (1937) details no less than 941 books and articles which appeared on the subject between 1930 and 1936.)

In terms of articles submitted for possible inclusion in the Journal, Keynes would sometimes try, but not force, his own ideas on others. Granted, there was his rejection of Kalecki's submission on technical progress. However, as we saw, this only took place after Keynes had carried out an extensive correspondence on the matter with Joan Robinson and Nicholas Kaldor. Moreover, in exchanges with Kalecki over his submission in early 1942 of a piece on the theory of profits, there is little sign of Keynes abusing his position, this despite the fact that his suggested revisions, which would have undoubtedly improved Kalecki's article, were rejected by the author; in the spirit of magnanimity, Keynes published the piece anyway (see CW XII: 837-841).⁷⁷ In addition, as we saw with the work by Dunlop and Tarshis on the movement of money and real wages, Keynes also published research which directly contradicted claims he had made in the General Theory. This aside, Keynes, like many editors with a vested interest, was not totally immune to the publication of material supportive of his own views. For example, the appearance in the Journal of Kahn's multiplier article in June 1931 gave it the crucial exposure that would help to establish it as a key building block of the General Theory. In addition, there was Hicks's broadly positive review of the General Theory published in June 1936. Finally, Meade and Stone's article on national incoming accounting in the June/September 1941 Journal (Meade and Stone 1941) was an important part in the development of that field of inquiry, one which was also heavily integrated with the Keynesian Revolution.

⁷⁷ The fact that Kalecki submitted another article to the *Economic Journal* so soon after his previous attempt was rejected says something about his confidence in Keynes's fairness as an editor.

Even though Keynes would consult others when he could not make up his mind about a proposed article, he was not reticent about turning down submissions when he was convinced – sometimes wrongly, it has to be said – that they were not appropriate for the *Journal*. One of his first acts as editor was to reject a piece by the economic historian, Archdeacon Cunningham. In his typically forthright style, Keynes described Cunningham's article as 'the most complete wash [which] had nothing to do with economics' (Keynes in Skidelsky 1983: 207). In the majority of cases, Keynes's judgement in deciding what should appear was correct. However, he did make some howlers. In 1923 he rejected what would turn out to be a seminal contribution to the theory of international trade from Ohlin and in 1931 he refused to publish a classic article on the economics of exhaustible resources by the American economist, Harold Hotelling, on the grounds that he considered it to be too mathematical (see Blaug 1994: 1,209).

Despite the above, Keynes was responsible for giving the *Journal* a much-needed shot in the arm, helping it to keep ahead of the LSE-based *Economica*. Indeed, the reputation that the *Journal* gained during the years of Keynes's stewardship enabled it to become one of the most influential and respected publications within the economics profession, a point not lost on the young John Hicks, who wrote that in the early 1930s, 'one naturally began by trying to get something published in the *E.J.*, as [it] was a source of prestige' (Hicks in Coats 1993: 194). The *Journal*'s strong reputation has been preserved right up to the present day.

Keynes's access to book publishers was dominated by his relationship with Macmillan, with whom he had a long-standing and close association throughout his career. This was founded on his friendship with a fellow old Etonian and partner at the company, Daniel Macmillan, brother of Harold, and would have been bolstered by Marshall's own relationship with Macmillan, which dated back to 1879 when they published *The Economics of Industry*. All of Keynes's major books, including the *Economic Consequences*, A *Treatise on Money* and the *General Theory*, were published by Macmillan. Reflecting his influence within the company, Keynes was able to negotiate a contract for the *Economic Consequences*, whereby he would pay for all production costs, the publisher would receive a 10% commission plus 10% of net sales, and Keynes would keep the rest. Subsequent adjustments to this

arrangement meant that the *General Theory* could be priced at just five shillings, low enough to encourage readership amongst less well off students but also a manifestation of Keynes's belief that the book was an important one that deserved to be read. By means of comparison with other economics books published by Macmillan at the time, Joan Robinson's *The Economics of Imperfect Competition* (J. Robinson 1933c) was priced at 12s 6d for 352 pages while Lionel Robbins's *The Great Depression* (1934) sold for 8s 6d for 238 pages (see Moggridge 2006b: 139). Calculated on a cost-per-page basis, the *General Theory* (404 pages) came out at a particularly favourable 0.15 of an old British penny (pre-decimalisation), much cheaper than Robinson's and Robbins's books, both priced at 0.43 of an old British penny.⁷⁸

Apart from Macmillan, Keynes had access to various other publication outlets. His views frequently appeared in national newspapers. Even before any thoughts of the *General Theory* had started to coalesce in his mind, Keynes was in demand as a man who might be able to shape official and popular opinion (even if, in reality, his influence in this regard may not always have been significant, at least during the 1920s).

The *Economic Consequences* had made Keynes's name as a controversialist and it led C.P. Scott, editor of the *Manchester Guardian* (forerunner of *The Guardian*), to ask Keynes to cover the Genoa Conference in April-May 1922, where participants from 34 countries were due to discuss how they would pull the world economy out of the downturn that had struck the previous year. As part of his commission, Keynes edited a series of supplements under the general title 'Reconstruction in Europe', which appeared between April 1922 and January 1923. Though they were not directly related to the Keynesian Revolution, the supplements helped to maintain and further consolidate Keynes's profile both within the economics profession and in the public's psyche. A couple of years later in July 1925, Keynes added further to his profile by attacking Churchill's decision to return Britain to gold. His position was set out in three articles in the *Evening Standard* and later in *The Economic Consequences of Mr*

⁷⁸ One old British penny is equal to 0.417 of a post-decimalisation (i.e. today's) penny.

Churchill, printed by Hogarth Press, which was owned and run by his old friends, Leonard and Virginia Woolf.⁷⁹

As far as the Keynesian Revolution itself was concerned, most notable amongst Keynes's non-Macmillan output was *Can Lloyd George Do It?* (1929), which appeared in *The Nation and Athenaeum*, and four articles penned for *The Times* in March 1933 under the heading 'The Means to Prosperity', where Keynes argued for economic recovery through loan financing. This latter set of ideas also received an American audience after *The Means to Prosperity* was published by Harcourt Brace, Keynes's publisher in the United States, in pamphlet form later in 1933. Back in Britain, Keynes followed up his articles for *The Times* with a piece for the renamed *New Statesman and Nation* in April 1933, which presented a detailed explanation of the multiplier. Post-*General Theory*, Keynes's newspaper contributions included 'How to avoid a slump', which appeared in *The Times* in mid-January 1937, and his articles in November 1939 for *The Times* which formed the basis for *How to Pay for the War*.

Books aside, Keynes had a certain enthusiasm for publishing his ideas through newspapers and/or pamphlets rather than in the pages of an academic journal, where the readership was necessarily limited. In fact, he had well-defined beliefs about the best and worst means of publishing. Writing about Jevons, Keynes argued that: 'An economic treatise may have great educational value. Perhaps we require one treatise, as a *pièce de résistance*, for each generation. But...does not the progress and the daily usefulness of economic science require that pioneers and innovators should eschew the treatise and prefer the pamphlet or the monograph? I depreciated Jevons's *Political Economy*...on the ground that it was no more than a brilliant brochure. Yet it was Jevons's willingness to spill his ideas, to flick them at the world, that won him his great personal position and his unrivalled power of stimulating other minds. Every one of Jevons's contributions to economics was in the nature of a pamphlet...

⁷⁹ Hogarth published only three of Keynes's works, all in pamphlet form and all in the mid-1920s: *The Economic Consequences of Mr Churchill* (1925), *A Short View of Russia* (1925), and *The End of Laissez-Faire* (1926).

day, fling pamphlets into the wind, write always *sub specie temporis*, and achieve immortality by accident, if at all' (Keynes in CW X: 198-199). It seems likely then that Keynes may have got the idea for publishing pamphlets from Jevons: it certainly was not from Marshall. As we see, Keynes also makes the case for allowing one book in economic theory to become a masterpiece in each generation, an attribute clearly met by the *General Theory*.⁸⁰

The written word was not the only method employed by Keynes in his efforts to find outlets for his ideas. He could also employ oral channels of communication. As well as the small number of 'inspiring' lectures he delivered to students at Cambridge each year, there were the numerous lectures he gave to various other audiences. A good example of this took place in 1931 when Keynes gave two lectures to the New School for Social Research in New York. Confirming his reputation in the United States, Keynes's first lecture was reported by a number of newspapers, including *The New York Times* and *The Wall Street Journal*. In his second lecture, Keynes made the case for government intervention as a means of curing a slump, this in front of an estimated 400 people (see Kent 2004: 201). Keynes also had access to the radio waves and would often make BBC broadcasts on economics. One of the most notable of these again took place in 1931 when Keynes urged Britain's housewives to 'sally out...into the streets and go to the wonderful sales' (Keynes 1931a: 46), so that they could play their part in the fight against unemployment.

Marshall:

The *Economic Journal* was a key aspect of the heritage which Keynes enjoyed at Cambridge. Marshall had been instrumental in founding the *Journal*, the first volume of which appeared in March 1891. Aware that Britain was dragging its heels when it came to establishing and maintaining reputable economics periodicals, Marshall wrote in October 1890 that, 'The need [for] an economic journal has long been felt in England. Every other country in which economic studies are pursued with great

⁸⁰ O'Donnell (2006: 400) points out that Keynes was incorrect to use the word 'pamphlet' to describe all of Jevons's major works. Some of Jevons's output was decidedly in book form, including his masterpiece, *Theory of Political Economy* (1871), the first edition of which contained an un-pamphlet-like 267 pages.

activity, offers facilities for the publication of thorough scientific work by persons who have not the time, or are unwilling, to write a formal treatise' (Marshall in Whitaker 1996: 343).

The first academic journal fully dedicated to economics was published in Germany in 1844 under the title *Zeitschrift für die gesamte staatswissenschaft*,⁸¹ with various other European countries, including France and Italy, publishing their own journals before the appearance of the *Economic Journal*. Yet it was the October 1886 debut of the Harvard-based *Quarterly Journal of Economics* which really spurred Marshall into action as it was the first English-language journal devoted to economic issues; Marshall was no doubt put out by the fact that there was no recognised academic outlet for his articles in Britain and that, as a result, he had to turn to the *Quarterly Journal of Economics* to get two of his pieces published – the first on the theory of business profits and the second on wages and profits – in 1887 and 1888 respectively.

Marshall probably also felt that a Cambridge-based journal would be a useful addition to his Organon in terms of providing another channel for conveying his theories to the rest of the profession.⁸² His insistence on keeping mathematics out of the *Economic Journal* meant that, in the early years, the articles that appeared were not as sophisticated as they would later become. Moreover, the *Journal* was certainly not the bulldozer for his theories which Marshall had maybe wished it to be. Of course, the *Journal* did have its moments, notably the debates over utility and opportunity cost that took place in 1894 (see Maloney 1990: 50). But Marshall should take some of the blame for the *Journal*'s failure during this period to live up to its earlier promise: Marshall never really took to publishing articles, his tendency to sit on ideas for long periods being a contributory factor. In fact, during his lifetime, Marshall published only six articles in the *Journal*, the first being in March 1892, the last in March 1907.

Meanwhile, in 1908, Marshall had supported Pigou's candidature as his successor as Professor of Political Economy at Cambridge, hoping that Pigou would be the torch-

⁸¹ Today, Zeitschrift für die gesamte staatswissenschaft is entitled Journal of Institutional and Theoretical Economics.

⁸² This paragraph draws on Cord (2007: 27).

bearer for the Organon. There was little doubt that Pigou was one of Marshall's strongest supporters, his belief that 'It's all in Marshall' becoming part of Cambridge economics folklore. But even though Pigou was not as averse as Marshall to publishing in journals - he authored 12 articles for the Economic Journal between its founding in March 1891 and December 1911 (the last number before which Keynes became editor) - he was not as active as he might have been. Perhaps we are being a little harsh on Pigou. In his defence, he, along with Edgeworth, contributed a number of book reviews to the Journal during its second decade; he was also preoccupied with writing his masterpiece, Wealth and Welfare, the first edition of which appeared in 1912. But either way, when Edgeworth indicated in 1911 that he wished to step down as the Journal's editor, Marshall took the view that Pigou should not be his successor, sensing that the baton had to be passed to a younger generation if the Journal was to fulfil the hopes of its founders. Keynes was the obvious choice and Marshall knew it: he made a special effort to attend the October 1911 meeting of the Council of the Royal Economic Society in order to support Keynes's candidature, support which more or less guaranteed Keynes's appointment.

Marshall had a good level of access to other publication outlets. For instance, in 1879, Henry Sidgwick arranged for the printing and private publication of Marshall's monographs on *The Pure Theory of Foreign Trade* and *The Pure Theory of Domestic Values*. Sadly, relations between the two men subsequently deteriorated partly, it seems, because of Marshall's decision to reverse his earlier support for the promotion of women's higher education. It is mere speculation, but had they remained on good terms, Sidgwick may have been in a position to encourage Marshall to publish his ideas more quickly than he did. Apart from the oral tradition, Marshall relied mostly on books to get his point across. Granted, there were regular letters to *The Times* as well the evidence he gave to government commissions, but these never came close to the theoretical sophistication contained in his treatises. Needless to say, the *Principles* stands out in this respect: not only was it the most important book on economics of its generation – nothing came close to rivalling its influence until the *General Theory* – but, on a more esoteric note, it was also the first book to be published under the resale price maintenance (RPM) scheme pioneered by Macmillan.⁸³ As with Keynes,

⁸³ As Guillebaud (1965) shows, Marshall was not completely in favour of the scheme.

Marshall enjoyed a long publishing history with Macmillan, beginning, as we saw, with *The Economics of Industry* (1879) and ending with *Money, Credit and Commerce* (1923). At the same time, it is less clear how Marshall's very first contact with Macmillan came about and to what extent Marshall himself may have played a part in encouraging Keynes to publish with Macmillan (notwithstanding Keynes's existing ties with the Macmillan family). Both of these issues would benefit from further treatment.

Hayek:

What the *Economic Journal* was to Cambridge, *Economica* was to the LSE. It first appeared in January 1921 and was initially home to all the disciplines at the School. In 1934 it was split into *Economica* (New Series),^{84,85} concerned only with economics, economic history and statistics, and another journal, *Politica*. Judging by Table 12, in its early years, *Economica* was far more of a house journal than its Cambridge counterpart, this probably being a manifestation, during the late 1920s and early 1930s, of Robbins's desire to fight Cambridge.

 Table 12. Cambridge- and London-based authors of articles in *Economic Journal*

 and *Economica*, 1920-69

	Cambr	idge	London		
	Economic Journal Economica I		Economic Journal	Economica	
	%	%	%	%	
1920-29	32.1	6.6	17.3	70.3	
1930-39	33.8	4.2	19.3	70.7	
1940-49	26.3	8.2	15.7	55.9	
1950-59	23.9	10.7	18.2	51.4	
1960-69	23.1	3.7	13.8	58.0	

Source: Adapted from Coats (1993: 189)

There was also an imbalance between London-based authors publishing in the *Economic Journal* and vice versa. For example, during the 1930s, London economists

⁸⁴ *Economica* had made a name for itself by the mid-1930s with a brace of seminal articles on the theory of value by Hicks and Allen gracing the first two numbers of the New Series. It nonetheless remained behind the *Economic Journal* in terms of standing within the profession.

⁸⁵ For reasons that will become clear, the *Review of Economic Studies*, which was founded at the LSE, is not dealt with here but rather in 'Students publish early under own names'.

were responsible for nearly one in five of all articles appearing in the *Journal*, whilst Cambridge economists authored only 4.2% of pieces appearing in *Economica* during the same period. Whether this effect was down to Robbins's crusading zeal or Keynes's generosity or a combination of both is difficult to say. The important point is that London economists were seemingly given plenty of opportunity to get their views into print via journals.

Almost immediately upon his arrival at the LSE, Hayek found that he could publish more or less what he liked in *Economica*, underpinned by support from Robbins, who was acting editor during the 1930s. Hayek's first article was 'The "Paradox" of Saving' (Hayek 1931b), which ran to a length of no less than 45 pages.⁸⁶ Following this, Robbins asked Hayek to review Keynes's *A Treatise on Money*, Hayek's comments appearing in two instalments in the August 1931 (Hayek 1931c) and February 1932 (Hayek 1932) editions of *Economica*. A taste of Hayek's opinion of the book can be gleaned from the opening paragraph of the first part of his review: '[T]he *Treatise* proves to be so obviously...the expression of a transitory phase in a process of rapid intellectual development that its appearance cannot be said to have that definitive significance which at one time was expected of it' (Hayek 1931c: 270). Hayek's main point of disagreement was over Keynes's alleged failure to pay enough attention to the effect that monetary policy has on the structure of production, a key plank of Austrian cycle theory.

Keynes was furious. In his private copy of the August 1931 *Economica* he pencilled to himself: 'Hayek has not read my book with that measure of 'good will' which an author is entitled to expect of a reader. Until he can do so, he will not see what I mean or know whether I am right. He evidently has a passion which leads him to pick on me, but I am left wondering what this passion is' (Keynes in CW XIII: 243). Keynes repeated these sentiments in a reply published in *Economica* in November 1931, stating that, 'Dr. Hayek has seriously misapprehended the character of my conclusions. He thinks that my central contention is something different from what it really is' (Keynes 1931b: 387). Later in the same response, Keynes could not resist a dig at *Prices and Production*, claiming that it was 'one of the most frightful muddles I

⁸⁶ This paragraph draws on Cord (2007: 73-74).

have ever read... It is an extraordinary example of how, starting with a mistake, a remorseless logician can end up in Bedlam' (ibid., 394). A private correspondence between Keynes and Hayek lasting from December 1931 to March 1932 failed to make any substantive progress towards a reconciliation and neither did a February 1933 article in *Economica* by Joan Robinson; Sraffa's rather acerbic attack on *Prices and Production* in the *Economic Journal* of March 1932 could not have helped matters.

It would be easy to conclude from the above that relations between Keynes and Hayek were rather poor during this period. Keynes, in particular, seems to have been somewhat upset by Hayek's comments regarding the *Treatise*. But this exaggerates the true picture. To begin with, as noted, Keynes and Hayek still thought it worthwhile to carry on a private correspondence for four months to see if they could patch up their differences, while Joan Robinson's *Economica* article shows that she believed that some consensus could be reached.⁸⁷ Also, despite the ongoing fracas between Cambridge and London, Hayek was still able to publish an article in the *Economic Journal* relatively soon after looking at investment and output (Hayek 1934) where, incidentally, Keynes allowed Hayek to indulge his passion for complicated diagrams.⁸⁸

Although Cambridge and London had apparently been able to keep bilateral relations on a reasonably even keel, Hayek wrote to Haberler in March 1936 that: 'The chance exists just now to isolate Keynes and to bring to a stand a common front of other Cambridge and London [economists]. These possibilities we would not jeopardize by putting *Economica* in the forefront of the attack. Pigou's article will cause enough sensation' (Hayek to Haberler, 15 March 1936, in Howson 2001: 372). 'Pigou's article' refers to the highly critical review that Pigou had written of the *General Theory* which, rather divisively, he had been asked to pen for *Economica* by Robbins and Hayek. Hayek was clearly excited about what was in Pigou's piece, with some

⁸⁷ It would be interesting to know where the impetus for Joan Robinson's article came from, in particular whether it was at the invitation of *Economica* or whether it was at Robinson's and/or Keynes's suggestion.

⁸⁸ Intriguingly, there are no references to Keynes in this article. On a separate note, Keynes only ever published one piece in *Economica*, his reply to Hayek's critique of *A Treatise on Money*.

justification as it turned out, as the following excerpt from its first page demonstrates: 'Einstein actually did for Physics what Mr. Keynes believes himself to have done for Economics. He developed a far-reaching generalisation, under which Newton's results can be subsumed as a special case. But he [Einstein] did not, in announcing his discovery, insinuate, through carefully barbed sentences, that Newton and those who had hitherto followed his lead were a gang of incompetent bunglers' (Pigou 1936: 115). In order to maximise its impact, Pigou's comments appeared at the beginning of the May 1936 number of *Economica*, occupying 18 pages. But if Hayek and Robbins thought that Pigou would bring the Keynesian steamroller to a juddering halt, they were very much mistaken. The point has already been made that Hayek, in particular, did not anticipate the major impact that the *General Theory* would have once it appeared, one of the results of which was his failure to take advantage of available publication outlets – *Economica* being the main one – through which he might mount a counter case.

After Cambridge's attack on *Prices and Production*, it would not have been a surprise had Hayek come out fighting in 1936. But he did not. As already alluded to, a host of reasons have been suggested as to why this was so (see Caldwell 1998 and Howson 2001), including Hayek's reluctance to enter into further controversy, a preoccupation with his own work (including his classic 'Economics and Knowledge', which appeared in *Economica* in February 1937, as well as his *Profits, Interest and Investment* (1939) and *The Pure Theory of Capital* (1941)), and the suggestion that Hayek regarded the *General Theory* as just another transitory phase in Keynes's thinking. Whatever the reason(s), informed readers of *Economica* in 1936 would have been surprised not to see someone from the LSE taking on Keynes.

Finally, Hayek was not one for pamphleteering. As far as books were concerned, he was able to get Routledge to publish *Prices and Production*, a relationship which resulted in the same company publishing *The Pure Theory of Capital*. In the United States, *Prices and Production* appeared in 1932 under the Macmillan imprint and received generally positive reviews from Alvin Hansen in the *American Economic Review* and Arthur Marget in the *Journal of Political Economy*. Closer to home, the situation was less comforting. Sraffa's attack on Hayek has been noted. In addition, in an article which has arguably been overlooked, Hawtrey wrote a far from

complimentary review of *Prices and Production* for none other than *Economica* itself.⁸⁹ There would have been plenty of other reviewers available to Robbins; he could even have written a review himself. This, however, would have smacked of partiality and so Robbins chose Hawtrey, hoping that the Treasury man's views would reflect the divergence of opinion on the cycle that had opened up between himself and Keynes in the early 1930s. But the decision to have Hawtrey write a review was a bad miscalculation. Thus, in his last paragraph, Hawtrey (1932: 125) complained that *Prices and Production* was 'so difficult and obscure that it is impossible to understand [its] 112 pages except at the cost of many hours of hard work', and that, 'this is not a necessary consequence of the difficulty of the subject, but that [Hayek] has been led by so ill-chosen a method of analysis to conclusions which he would hardly have accepted if given a more straightforward form of expression' (ibid.). Had Keynes known how critical Hawtrey was going to be, there is a possibility that he may not even have bothered with the Sraffa commission.⁹⁰

Kalecki:

Kalecki had reasonably good access to publication outlets in the early and mid-1930s, although, for the most part, they were not of the kind required to launch a 'Kaleckian' Revolution. An early attempt by Kalecki to get his ideas into print was his co-founding of a newspaper, entitled *Koniunktura Wlókiennicza* (The Textile Market), a doomed project which resulted in only one issue being published (see Kowalik 1966: 1). Following on from this, he became closely associated with the socialist movement and contributed articles to a variety of Polish journals, including *Przeglad Gospodarczy* (The Economic Review), *Polska Gospodarcza* (Polish Economy), and *Przeglad Socjalistyczny* (The Socialist Review). Concerning the last of these, Kalecki was forced to publish his articles under the pseudonym Henryk Braun, reflecting his concern that he may attract the wrong kind of attention from the authorities. He also published in *Ekonomista* and it was for this publication that Kalecki penned his 1936 review of the *General Theory*. As Harcourt (1992: 1,609) notes, the fact that Kalecki

⁸⁹ Hawtrey's comments appeared in the February 1932 number, one month before Sraffa's review was published in the *Economic Journal*.

⁹⁰ It is unclear whether Keynes had any foreknowledge of the contents of Hawtrey's review.

was able to write up and publish his review relatively quickly after the *General Theory*'s appearance supports the argument that his own ideas had anticipated Keynes's.

There is still a chronological issue here, however. As a Polish translation of the *General Theory* was presumably not then available to Kalecki, there is a question mark over whether he based his review on the English- or the German-language version of the book. Keynes only completed the preface to the German-language edition of the *General Theory* on 7 September 1936, and so it seems likely that the German version did not appear for at least a couple of months after that. This, in turn, suggests that Kalecki would not have had the time to both read the German edition and write up his review (it is unclear in which month in 1936 Kalecki's review appeared). Give this evidence, there is a reasonable chance that Kalecki only had access to the English-language edition. If this was indeed the case and if Kalecki's English writing skills – even if they may only have been rudimentary – in any way matched his reading skills, the question has to be asked as to why he never submitted his early cycle work to English-language journals, where they would have received much more exposure.

It seems, therefore, that Kalecki fell foul of the not uncommon mistake in academic publishing of simply submitting his pieces to the wrong journals.⁹¹ In fact, Kalecki made the double error of publishing his early work not only in Polish but also one article in French (Kalecki 1935a), this when English was and indeed still is the lingua franca of economists. Additionally, Kalecki published what should have been relatively simple ideas in a complicated form; to a certain extent, Keynes was also

⁹¹ Kalecki was certainly not the first academic to commit this error. Within economics, another example was the appearance of Slutsky's (1915) important piece on the decomposition of demand functions into income and substitution effects, which appeared in the little known *Giornale degli economisti*; it was only rediscovered two decades later by Schultz (1935) and Allen (1936). In the sciences, Simonton (1988: 157-158) notes two examples where the influence of an original and important piece of research was diminished by publication in an obscure place, namely Mendel's work on genetics, which appeared in the *Transactions of the Brünn Natural History Society*, and Gibbs's papers on chemical thermodynamics, published in the *Transactions of the Connecticut Academy of Sciences*. These various articles were victims of what Merton (1968: 60) refers to as 'noise' in the communication system of science.

guilty of this in the *General Theory*, albeit in a different manner. In Kalecki's case, he 'over-mathematised' his theories on the cycle, an example being his 1935 article for *Econometrica*. Even though *Econometrica* had only first been published in 1933, it had quickly built up a strong reputation: in the same issue as Kalecki's article was a piece by Tinbergen, whilst Frisch had appeared in the preceding number. But as we saw when we looked at Kalecki's research reputation, it seems that even those in attendance at the Econometric Society meeting in September-October 1933, where Kalecki presented his ideas upon which the *Econometrica* piece was to be based, failed to grasp the significance of what he was saying partly, it would seem, because of the excessively technical nature of his analysis.

On a final point, Chapple (1991: 258) maintains that one reason why Kalecki did not publish in the leading English-language journals was that his lack of formal training in economics meant that he was not 'socialised' in how to write academic papers and where to publish them in order to generate maximum effect. Chapple makes a valid point: in addition to his pieces in Polish and French, Kalecki sent a German translation of his cycle theory to a publisher in Germany in the early 1930s. However, this never came to anything as the publisher had already left the country as a result of Hitler's rise to power (see A. Kalecki to Kahn, 13 May 1981, JVRP vii/231/5). The same translation was also sent to Keynes but was returned to Kalecki with a note written by Kahn stating that Keynes could not read German (ibid.).

One point which should be considered alongside this is the fact that Ludwik Landau was able to publish an article in English in the March 1931 issue of the respected *Journal of the American Statistical Association*. Granted, the article, which deals with the organisation of statistics in Poland, is at times staccato. Nevertheless, it is still something of a mystery why Kalecki – who must surely have been aware of Landau's piece – did not follow suit and submit some of his early work to an English-language periodical.⁹²

⁹² Oscar Lange also published his early work in his native language. His first English-language article was 'The Determinateness of the Utility Function', which appeared in the June 1934 *Review of Economic Studies*. On a more speculative note, Lange's doctoral thesis was on the subject of business cycles in Poland between 1923 and 1927. It would be of interest to know whether Kalecki was aware of its existence and, if he was, whether it influenced his own ideas.

Summary:

Hayek again scores well in this category, even if he sometimes failed to make good use of easy access to publications. Keynes and Marshall are able to match Hayek, and all three are ahead of Kalecki.

Table 13. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'x. Access to or control of publication outlets'

Criterion	Keynes	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
x. Access to or control of publication				
outlets	+	+	+	-

Note: 1 + 2 means that this feature is present; -2 means that this feature is absent; and 2 ± 2 means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

The part played by issues related to publishing in the careers of Keynes, Marshall, Hayek and Kalecki varied considerably. Keynes was in the privileged position of being editor of the *Economic Journal*. He did not, however, use it to advance his revolutionary ideas on the cycle. Of course, he published Kahn's multiplier article and employed Sraffa to attack Hayek. There was also the cachet that came with the editorship itself, a position Keynes had secured with the considerable help of Marshall. But Keynes took the decision to rely more on books, pamphlets and newspapers to convey his message, aware that these would give his ideas a much wider circulation, even if his audience might be less sophisticated when it came to understanding technical economics.

With respect to books specifically, Keynes was probably encouraged by the success of Marshall's *Principles* – the two men had little else in common when it came to 'flicking' their ideas at the world – and believed, correctly, that he could emulate such success. At a more pragmatic level, Keynes's close relationship with Macmillan meant that the *General Theory* could be published at a comparatively cheap price.

As soon as he arrived at the LSE from Austria, Hayek, with the editorial support of Robbins, was able to publish his ideas at will in *Economica*. Unfortunately, after his very public spat with Keynes over *A Treatise on Money*, Hayek made some basic

errors, most notably not writing a review of the *General Theory*; while Hayek believed that the Pigou review for *Economica* would do mortal damage to Keynes, this turned out not to be the case.

Finally, in the crucial years of the early 1930s, Kalecki was writing predominantly in Polish for Polish publications. Even where he succeeded in publishing in non-Polish journals, his analysis was still too technical. Had he taken a lead from Landau and attempted to publish his work in a top flight English-language journal, his standing in the subsequent history of economic theory may have been very different.

xi. Students publish early under own names

Geison (1981: 26) states:

'To produce a school that extends beyond himself, the director must nurture early independence, self-reliance, and ambition among his students, especially by encouraging them to publish under their own names at an early stage in their career...'

Keynes:

In the years leading up to 1936 and thereafter, the publishing activities of the individual members of the Circus and of others who had been Keynes's students was mixed,⁹³ although the bottom line was that a good enough number of those closely associated with Keynes published work during the 1930s and 1940s which supported the Keynesian Revolution.

Prior to the *General Theory*, Richard Kahn had published five pieces in the *Economic Journal*, only two of which were full-length articles, one of course being his classic

⁹³ At the risk of splitting hairs, of the four main members of the Circus, only Kahn was supervised by Keynes. Joan Robinson was taught by other members of the Economics Department, Meade was a pupil of Dennis Robertson's, and Sraffa had long completed his formal education.

on the multiplier, the other concerned with welfare economics. The remaining three were notes on the financing of public works, decreasing costs, and the elasticity of substitution respectively. He also published 'Public Works and Inflation' in the March 1933 *Journal of the American Statistical Association*, an attempt to push the multiplier idea to an American audience. Post-1936 Kahn's writing was sparser: in a note for the *Review of Economics and Statistics* in August 1936 he batted away criticism of his analysis of secondary employment in Kahn (1931) and in the December 1937 *Economic Journal* he defended Keynes's theories in his review of Haberler's *Prosperity and Depression*.

Kahn's reputation for infrequent publishing has been partly driven by the extremely long time it took to get his King's Fellowship dissertation into the public realm: finished in 1929, it was published in Italian only in 1983, with an English version following in 1989. In Kahn's defence, during the first half of the 1930s, he was busy helping Keynes with the preparation of the *General Theory* as well as playing a key role in the imperfect competition revolution at Cambridge.⁹⁴ However, this still does not fully explain away his subsequent procrastination with respect to publishing.

We have already alluded to how Joan Robinson benefited from Kahn's extensive help in her work on imperfect competition during the 1930s. But like Kahn, Robinson was heavily involved in assisting Keynes during the first half of the decade, and the reputation she acquired as a result of her work on imperfect competition no doubt added to the attention that her writings in defence of Keynes received. She penned a piece for the *Review of Economic Studies* (J. Robinson 1933b), which was an update on Keynes's latest ideas, notably his transition from a focus on price changes to one more concerned with variations in output, and wrote two pieces for the *Economic Journal* – 'Disguised Unemployment' (J. Robinson 1936) and 'The Concept of Hoarding' (J. Robinson 1938) – both of which were a nod in Keynes's direction. One of her most important book contributions to the Keynesian cause during the 1930s was *Essays in the Theory of Employment*, which appeared in 1937 (J. Robinson 1937b).

⁹⁴ As well as assisting Joan Robinson, Kahn published an important article on duopoly in 1937 (Kahn 1937).

James Meade also made published contributions to the Keynesian Revolution in the early years of his career. There were some non-Keynesian articles, such as his 'The Amount of Money and the Banking System' (Meade 1934a) for the *Economic Journal* and two pieces on the elasticity of substitution for the *Review of Economic Studies* (Meade 1934b, 1934c). These aside, before the appearance of the *General Theory*, Meade was advocating Keynesian ideas within political circles. As we saw, there was his work for the New Fabian Research Bureau, which acted as an advisory body to the Labour Party's Finance and Trade Committee, led by Hugh Dalton (see Howson 2000: F124). As part of this, Meade produced a pamphlet in 1933 called *Public Works in their International Aspect*, where he made a strong case for using countercyclical government spending to expand public works, a case founded on the multiplier.

One of the clearest published instances of Meade's early Keynesian credentials came with the appearance in 1936 of his book An Introduction to Economic Analysis and Policy. Published soon after the General Theory, it contained a Keynesian treatment of unemployment as well as a chapter on imperfect competition and sections dealing with the distribution of income, the supply of the primary factors of production, and international trade. Its length (392 pages) was in keeping with that of a textbook and it was priced at a reasonably competitive 10s. As such, it held some value for students, this at a time when economics textbooks by well-known authors were thin on the ground. But despite Meade's status as a man close to the unfolding events at Cambridge – a fact which helped to secure reviews in a number of the quality journals both in Britain and the United States – the book was not a commercial success. A number of reasons help to explain this, including Meade's own reasoning that the intervention of the war meant that minds were distracted in other directions. At the same time, however, Meade's book did not contain any diagrams and it may also have been viewed as being too biased as a result of its extensive treatment of the 'new economics' being pioneered at Cambridge. In addition, Meade was criticised by some reviewers for his claim to have written an 'introduction' to economic theory, the sophistication of much of his analysis only really lending itself to study by advanced students (see Benham 1937: 238).

Following on from *An Introduction to Economic Analysis and Policy*, Meade wrote 'A Simplified Model of Mr. Keynes' System' (Meade 1937), an article which was one

of many published around that time which contributed to the formation of the IS-LM framework. Meade's piece was undoubtedly in that tradition, even if it had its failings, notably not being as readable as say, Hicks's treatment which contained less mathematics, and being devoid of diagrams. Meade's strong publication record within the context of the Keynesian Revolution nevertheless continued into the early years of the Second World War when his energies were devoted to national income accounting. As we have seen, most important in this regard was his and Stone's 'National Income, Saving and Consumption', which appeared in the *Economic Journal* in March 1941.

Piero Sraffa was the least productive of the main Circus members in terms of publishing material supportive of Keynes's theories. This was down to a variety of factors, including his inherent lack of commitment to the Keynesian cause, his interest in other projects (notably the works of Ricardo and Marx and his related attempt to induce a classical revival), and his slowness in getting anything into print (he easily surpassed Marshall in this respect). In fact, during the 1930s, his only published contributions to the Keynesian cause was his attack on *Prices and Production* – where, importantly, he also developed the theory of own rates of interest, which was to be a major influence on chapter 17 of the *General Theory* (see Roncaglia 1981: 246) – and one rejoinder to Hayek's response, both in the *Economic Journal*.

Elsewhere, the gradual strengthening of the Economics Tripos together with (selected) support for his theories at Oxford meant that Keynes had a number of other champions. Four or five of these are worthy of mention here. First was Austin Robinson. Robinson was far from being one of Keynes's younger protégés by the time the *General Theory* appeared (he was in his late 30s in 1936). He was, however, a regular attendee at the Political Economy Club and was assistant editor to Keynes on the *Economic Journal*. Robinson also had an important influence on his wife, Joan, and Richard Kahn in the early stages of their explorations into imperfect competition (see Cairncross 1994: 907 and Harcourt 2001: 134).⁹⁵ Regarding the Keynesian Revolution itself, one of Robinson's most important written pieces was his review of

⁹⁵ In addition, Austin Robinson made important contributions to the economics of development (see Harcourt 2001: 135-136).

the *General Theory* (A. Robinson 1936), which appeared in *The Economist* just a few weeks after the book's publication. Robinson used the review to provide strong early backing for Keynes, knowing that *The Economist*'s wide circulation would ensure that his views would reach far beyond the readership of the academic journals.

A second Cambridge student was David Champernowne. 'Champ' had already secured a Double First in the Mathematical Tripos before Keynes persuaded him to study economics; another First Class degree quickly followed. With respect to published support for Keynes, Champernowne is best known for his June 1936 article for the *Review of Economic Studies* (Champernowne 1936) where, despite his mild criticism of certain parts of Keynes's analysis in the *General Theory* – in particular, his treatment of the labour market – he identified some of the basic equations which helped towards the construction of IS-LM. In the same month, Brian Reddaway, another one of the outstanding talents to have studied under Keynes, did much the same thing in his review of the *General Theory* for the *Economic Record* (Reddaway 1936), thereby helping to spread the Keynesian gospel in the Antipodes. This was followed by a June 1937 piece for the *Economic Journal* dealing with the obstacles to full employment, the first line of which stated that, 'The object of this article is to continue the work begun by Mr. Keynes in Chapter 22 of his *General Theory*' (Reddaway 1937: 297).

Next was Roy Harrod. Harrod worked at Oxford and spent his entire career there. However, he had the benefit of spending the Michaelmas Term of 1922 in Cambridge where he attended Keynes's lectures, took him essays, and participated in the Political Economy Club. A close friendship ensued. Harrod was also involved in the ongoing discussions on imperfect competition taking place at Cambridge and he published a number of articles related to it (see, for instance, Harrod 1931 and 1934a), predominantly in the *Economic Journal*. As well as all of this, Harrod took a deep and enduring interest in what Keynes was doing. He still had something of an attachment to the 'old' economics associated with Marshall and Pigou, his review of Pigou's *The Theory of Unemployment* in the *Economic Journal* (Harrod 1934b) being broadly complimentary. But Harrod was becoming immersed in and convinced by Keynes's emerging ideas: as early as 1933 he published *International Economics*, where he made use of the multiplier in the context of foreign trade, while in 1936 *The Trade*

Cycle appeared where the multiplier was again deployed, this time within the setting of an open economy. In January 1937 Harrod made his own contribution to the IS-LM nexus, although his comment that 'Mr. Keynes has not affected a revolution in fundamental economic theory but a re-adjustment and a shift of emphasis' (Harrod 1937: 85) again highlighted his strong ties with pre-existing theory. Harrod nevertheless continued to be a Keynes loyalist, his article on dynamic economic theory in the late 1930s (Harrod 1939) fusing the multiplier and the accelerator and forming the basis of subsequent growth theory.

The two Canadians, Lorie Tarshis and Robert Bryce, both of whom attended Keynes's lectures in the early 1930s as well as meetings of the Political Economy Club, must also be mentioned here. Apart from his *The Elements of Economics* (1947), Tarshis is remembered for his work on real and money wages which appeared in the *Economic Journal* (Tarshis 1939). This was preceded by an analysis of changes in real wage levels in the United States and Britain in a piece written for the *Canadian Journal of Economics and Political Science* in 1938 (Tarshis 1938). Meanwhile, Bryce's (1939) analysis of the effects that economic cycles in the United States have on Canada was his sole published support for Keynesianism before the Second World War. However, he made up for this with his major contribution to the White Paper published by the Canadian government in April 1945 which made a strong commitment to maintaining full employment, a position which would be the driving force behind macroeconomic policy-making in that country for 40 years (see Mollins 1997).

From the above, it is clear that a number of Keynes's acolytes made important contributions towards increasing the profile of his work during the 1930s and 1940s. However, it should be said that they failed to produce a successful Keynesian textbook during this period. Furthermore, not all of Keynes's students turned out to be supporters. Hubert Henderson disowned *Can Lloyd George Do It?* only a year after its appearance and was 'barked at' at Cambridge when he tried to attack the *General Theory*. The most notable of Keynes's 'student-critics' was Dennis Robertson. Robertson had studied under both Keynes and Pigou and at the age of just 25 had published his *A Study of Industrial Fluctuation* (1915), where he stressed the importance of real factors in influencing the cycle. During the 1920s, the relative closeness of the working relationship between Keynes and Robertson was not far off

being as close as that which later developed between Keynes and Kahn, Robertson's most important book, *Banking Policy and the Price Level* (1926), being a product of this association. Yet, with Keynes beginning to question the old orthodoxy in the late 1920s, he began to drift away from Robertson, their disagreements often centering on the nature of saving. Robertson was vocal in his criticism of Keynes once the *General Theory* had appeared (see Robertson 1936, 1937), but failed to make any significant impression. Even though Keynes would later go on to generously acknowledge Robertson's contribution at Bretton Woods, a misunderstanding over a negotiating position meant that the two men never repaired their differences (see Fletcher 2000: 155).

We have seen how Keynes facilitated the publication of Meade and Stone's research on national income accounting in 1941. His influence also extended to Macmillan, not only because they were more than happy to publish his often very popular books but because they would sometimes turn to him for advice on manuscripts they had received. For example, his opinion was sought on Hicks's The Theory of Wages (1932) and Joan Robinson's The Economics of Imperfect Competition (1933). Regarding the former, Keynes infamously commented that Hicks's work was the product of an 'unoriginal but competent mind' (Keynes to H. Macmillan, 27 April 1932, CW XII: 861). However, given that The Theory of Wages has since become a classic in its field, Keynes's comment seems tough. On the other hand, as Hicks was then at the LSE and may have been regarded by Keynes as part of the Hayek clique, his views on Hicks may perhaps be seen in a different light. On a related point, Keynes's comment on The Theory of Wages does not indicate any interest on his part that he may have been interested in recruiting Hicks – who would surely have been of some considerable help had he become part of Keynes's group at Cambridge - to assist with his forthcoming revolution.

Meanwhile, Keynes played a decisive role in persuading Macmillan to publish Joan Robinson's early masterpiece. He had already become involved in the effort to find a publisher for Robinson's *Economics is a Serious Subject*, proposing that she submit it to *The Political Quarterly* and that she mention to the editor that her submission was at his [Keynes's] suggestion. But for reasons that are unclear, the 14 pages of *Economics is a Serious Subject* ended up appearing as a pamphlet published by

Cambridge's W. Heffer and Sons.⁹⁶ Keynes's role in the publication of The Economics of Imperfect Competition was more decisive. Harold Macmillan.⁹⁷ then employed at his family's publishing firm, wrote to Keynes in November 1932 asking for his comments on the book. Keynes's reply, whilst unequivocally supportive of publication, also highlighted his confidence in the abilities of one of the other members of the Circus, namely Richard Kahn: 'I have no doubt that you ought to accept this book... I have not read [it] critically, which would be a formidable task. I have, however, a good deal of confidence that it is reasonably free from minor slips and errors and fallacies because the authoress explains in the preface that it has been very elaborately and carefully criticised by R.F. Kahn; indeed, I suspect that he has played a very substantial part in getting it to its present form' (Keynes to H. Macmillan, 25 November 1932, CW XII: 866-867). With Keynes's blessing, Macmillan published The Economics of Imperfect Competition and Joan Robinson commenced a relationship with Macmillan which would last for much of her career. Indeed, Macmillan would go on to publish her Introduction to the Theory of Employment (J. Robinson 1937a), The Accumulation of Capital (J. Robinson 1956), and Essays in the Theory of Economic Growth (J. Robinson 1962b). Later on, however, it seems that An Introduction to Modern Economics (1973), written by Robinson and John Eatwell, was, in fact, too unorthodox for Macmillan and so found a home at McGraw-Hill instead, where the book found a wider audience, particularly in the United States.

Marshall:

Marshall oversaw the work of a number of outstanding students, including Neville Keynes, Pigou and, of course, Maynard Keynes. Although each of these, to a greater

⁹⁶ With his extensive contacts in Cambridge, it seems quite possible that Keynes may also have been involved in getting W. Heffer and Sons to publish *Economics is a Serious Subject*. Either way, the work failed to attract as much attention as Robinson may perhaps have wished, this author only being able to identify one comment on it, published in *The Cambridge Review* of November 1932. Harcourt (1990) uses *Economics is a Serious Subject* as the backdrop for a thorough analysis of Robinson's early views on method.

⁹⁷ Macmillan was pro-active in his own support for Keynes's ideas. His *The Middle Way* (1938) drew extensively on the *General Theory*, offering officials a centrist approach to policy-making.

or lesser degree, was influenced by Marshall, there is no obvious link between the early publication output of Marshall's pre-Maynard Keynes students and the Keynesian Revolution. Still, we can point to two factors which have an indirect link to our discussion. First was the building of Cambridge's reputation as a centre of excellence for the study of economics. Marshall was the prime mover in this respect, his Principles marking the acme of 19th century Cambridge economics. In addition, there were other important publications, especially books, which helped to consolidate the work started by Marshall. Amongst these was Neville Keynes's The Scope and Method of Political Economy (1891) - Keynes was well into his career when it appeared - Pigou's Principles and Methods of Industrial Peace (1905), Bowley's Wages in the United Kingdom in the Nineteenth Century (1900), and Layton's Introduction to the Study of Prices (1912).⁹⁸ But there were also disappointments: Foxwell is the prime example, his only book, Papers on Current Finance, not appearing until 1919, while the rest of his written output only served to highlight his distinctly 'un-Marshallian' interest in historical forces. Meanwhile, the first Marshallian textbook, Flux's Economic Principles: An Introductory Study, was not published until 1904, a revised version only appearing in 1923. A second Marshallian textbook - Chapman's Outlines of Political Economy - came out in 1911 (see Becattini 2006: 612).

In terms of published articles, Marshall's students had a mixed record (see Table 14). Looking at just the *Economic Journal* from March 1891 to just before Keynes became its editor, the most prolific of Marshall's Cambridge students was Alfred Flux, whose work appeared 17 times during the period in question, followed by Chapman on 15. The least productive of Marshall's Cambridge group was Cunningham, with just five articles, although he compensated for this by publishing in other journals and by authoring a number of books, including his three-volume *Principles of Political Economy* (1893, 1897, 1901), which Marshall was positive about. Gonner, Harrison and Price, the three good students Marshall had produced at Oxford between 1883 and 1884, also had a mixed record in their contributions to the *Economic Journal*, Price comfortably heading the others on 17 articles while Gonner published just four pieces in two decades.

⁹⁸ Becattini (2006: 611-612) provides a more complete listing.

Author	University education	Number of articles	
Edgeworth	Dublin & Oxford	34	
Bastable	Dublin	22	
Flux	Cambridge	17	
Price	Oxford	17	
Cannan	Oxford	15	
Chapman	Cambridge	15	
Pigou	Cambridge	12	
Giffen	None	10	
Harrison	Oxford	10	
Bowley	Cambridge	9	
Nicholson	Cambridge	6	
Cunningham	Cambridge	5	
Gonner	Oxford	4	

Table 14. Number of articles appearing in the *Economic Journal* from March1891 to December 1911 by selected Marshall and non-Marshall students

Source: Author's research

On a second broad point, there were the supporters of the Marshallian orthodoxy who were not Marshall's students but had, in fact, been taught by Maynard Keynes. Amongst these were Frederick Lavington and Gerald Shove. Lavington's first academic article appeared in the September 1912 *Economic Journal*, where his consideration of the relationship between uncertainty and the rate of interest was an early demonstration of his innovative streak. This was followed by important work on monetary theory, encapsulated in *The English Capital Market* (1921). Sadly, Lavington's death in 1927 aged just 46 meant that he was denied the chance of defending Marshall against the onslaught of the *General Theory*. Meanwhile, Shove may have taken on this defensive task, but in the early 1930s he was caught up in the debate over imperfect competition. Moreover, by that time he was into his forties and so would have found it harder to take on the role of crusading student.

Hayek:

While Hayek had access to a number of potential disciples at the LSE in the first half of the 1930s, the Hayek camp had been deserted by the end of the decade. The publication records of Hayek's early circle of followers go some way to confirming this desertion process. Among those we have already looked at are Hicks, Kaldor, Lerner and Shackle. There were others, including Paul Sweezy who, ironically, was set on the road to Marxism after hearing Hayek attack Marx in his lectures, and Ursula Hicks, who in 1938 published *The Finance of British Government, 1920-1936*, the first serious study of Britain's public finances since the First World War.⁹⁹

The importance of having access to their own publication outlet was not lost on the youngsters at the LSE and, with this in mind they decided to set up the *Review of Economic Studies* in 1933. One of the founders' objectives was to minimise the influence of older economists; this extended both to excluding recognised names from the board of editors – the original managing editors were Ursula Hicks (Webb, as she was then), Lerner and Sweezy – and a distinct bias towards publishing articles by younger writers. The opportunity was certainly there for the *Review*'s editors to use it as a vehicle for defending Hayek. However, there is a temporal issue here, namely, that the journal was only set up in the latter part of 1933, by which time Keynes was already on his way to getting the upper hand over Hayek.

Besides, there was also a seeming determination to steer clear of the business cycle debate: between October 1933 and February 1936 the Review contained only two articles directly concerned with cycles, one being, as already noted, Joan Robinson's update of Keynes's latest thinking (J. Robinson 1933b) and the other a fairly neutral article by Shackle (1933). Instead, the *Review* became a debating forum for issues such as the economics of socialism, the elasticity of substitution, utility functions, and index numbers. Granted, between February 1936 and June 1939 there was an increase in the number of cycle articles but, in a broader reflection of the times, they were almost all written from the point of view of the General Theory and thus to the exclusion of Hayek. In fact, in the second half of the 1930s, the Review became something of a vehicle for Keynes's young supporters at Cambridge. For instance, there were the early IS-LM-type articles by Champernowne and Meade, as well as a lengthy statistical investigation into the multiplier and the MPC by Richard Stone and his then wife, Winifred (Stone and Stone 1938). There were also pieces by non-LSE economists on unemployment (Singer 1939), the international propagation of cycles (Polak 1939), and money wage rates (Somers 1939).

⁹⁹ Given what must have been the relative novelty of Hicks's book, it is surprising that it has not been considered within the context of the history of national income accounting; Patinkin (1976), for one, does not mention it.

Kalecki:

Any analysis of the relation between Kalecki's theories on the cycle and students publishing early under their own names is severely compromised again by the fact that Kalecki never had direct access to a university department in the early 1930s. Of those to whom he was closest in Poland during this period – namely Landau and Breit – we have already argued that he would have had trouble recruiting them not least because of issues relating to age gaps or the lack thereof. Even when he was at Cambridge, those close to Kalecki published very little: Tew's contribution was limited to a mathematical piece on trend elimination co-authored with Kalecki for *Econometrica* in April 1940 (Kalecki and Tew 1940) while Hsu seems to have published nothing of note in the mainstream economics journals.¹⁰⁰ Another student at Cambridge, who worked under both Kalecki and Dobb, was Fan-Hung. However, his publication record as far as the mainstream journals were concerned comprised just one article comparing Keynes and Marx on capital accumulation and the rate of interest (Fan-Hung 1939), which came down in favour of Marx (see Trescott 1996).

Summary:

'Students publish early under own names' is a feature that was positively present when we considered Keynes and Marshall. Neither Hayek nor Kalecki secured positive scores; in fact, the feature was clearly not present in both cases.

Table 15. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'xi. Students publish early under own names'

<u>Criterion</u>	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
xi. Students publish early under own				
names	+	+	-	-

Note: 1'+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

¹⁰⁰ Hsu is still of interest, first, because he was one of the first Chinese to receive a Cambridge economics doctorate (1940), and second, after the Second World War he started to translate the *General Theory* into Chinese, a project completed in 1957, a year before his death (see Trescott ibid.).

Keynes's efforts to create a successful research school benefited from the fact that a number of his clique published important supporting articles and books relatively early on in their careers. In terms of its subsequent importance to the Keynesian Revolution, Kahn's multiplier article was undoubtedly the most significant of these publications. A list of others who also published important Keynesian-inspired work included Joan Robinson, James Meade, David Champernowne, Brian Reddaway and Roy Harrod.

It has to be said that not all of Keynes's students turned out to be ardent supporters of his revolutionary ideas; Dennis Robertson was probably the most notable of his opponents both amongst those who were once pupils and those who went on to become Keynes's professional colleagues at Cambridge. But any published opposition that Robertson and others had to the *General Theory* was not nearly strong enough to slow the book's success. As well as its revolutionary content, part of the *General Theory*'s success was down to the reputation which Cambridge had secured as a place which produced important new economic theory, a reputation built not only by Marshall but by his own eminent students, including Neville Keynes and Pigou, both of whom published important treatises, the latter at a relatively young age.

When we considered discipleship, we saw that the potential pool of talent available to Hayek when he arrived at the LSE was considerable. However, one indicator of his failure to convert this potential was the non-existent published support given to his theories by this group despite the ready availability of their very own publication vehicle. Finally, Kalecki found himself in an even weaker position: without a university appointment, his access to students was necessarily limited throughout his early career in Poland.¹⁰¹

¹⁰¹ On a more abstruse note, various articles have looked at the function and performance of economics journals. For example, Eagly (1975) examines journals as a communications network whilst Liebowitz and Palmer (1984) measure the impact of journals according to citation activity. What analyses of this type have not have attempted so far, but which may be of interest, is the testing of the so-called 'Price Law' (see Simonton 1999: 150). This asserts that around half the output in a given domain is more often than not attributable to the square root of the total number of 'creators' in that domain. Thus, in a domain with 100 creators, 10 will be responsible for half the output. An analysis of this type might give some additional insights not only to patterns of publication within the business cycle literature of the

xii. Produced and 'placed' significant number of students

It is important that a research school and its director have the ability to produce students who can propagate the research that the school has produced. Without this, there is a danger that a school becomes dependent on the efforts of just its leader. Further, Geison (1981: 26) states:

'[I]f the director has 'placement power' in his discipline he can do much to ensure [his research students'] employment in a propitious academic setting, thereby further extending the reputation and influence of his school.'

Keynes:

In criterion ix, 'Pool of potential recruits (graduate students)', we saw that Keynes joined the Faculty of Economics and Politics at Cambridge at a time when it was growing thanks to the introduction of the new Economics Tripos. The circumstances were therefore right for him to have a direct influence on an ever-increasing number of students. But even though his overall record of producing students who would go on to support his revolution was reasonably good, Keynes did not play a significant role in helping to place students in positions of influence outside Cambridge – Reddaway's appointment as a Research Fellow in Melbourne, Australia, being an exception to this (see Matthews 2008) – part function, no doubt, of his belief that his Alma Mater was, at least in the 1930s and 1940s, the world's premier economics institution.

As we saw, of those who made up the core of the Circus, Keynes's only formal teacher-pupil relationship was with Richard Kahn. He never taught Joan Robinson and does not appear to have made any concerted attempt to keep James Meade at Cambridge, probably aware of his teaching commitments at Oxford but perhaps also sensing that Harrod might need help in spreading the Keynesian gospel at

¹⁹³⁰s, but also across other fields within economics, where the publication activity of creators and followers may be in need of greater explanation.

Cambridge's great rival. Moreover, with Richard Kahn and Joan Robinson safely ensconced at Cambridge, Keynes may have taken the view that his ideas were already in safe hands.¹⁰² This might also help to explain why the likes of Reddaway and Champernowne – both supervisees of Keynes's, the latter of whom took up a post at the LSE in 1936 – were allowed to 'leave' Cambridge despite their considerable promise.¹⁰³

For their respective parts, Kahn and Robinson seemingly never felt the need to permanently cut the umbilical cord that kept them at Cambridge for the rest of their careers. This was probably due to a number of factors, including Kahn's preference for staying out of the limelight (which he could at Cambridge) and the fact that Robinson carried out much of her Keynesian crusading through the written word. In any case, the *General Theory* quickly found other support groups in a number of foreign outposts, notably the United States, without necessarily having to rely on hearing the received gospel from Keynes's inner circle, even if some of the members of the 'outer' circle, such as Tarshis, did take on a crusading role once they left Cambridge.

On a last point, during the Second World War, when the considerable expansion of economic advisory services within the British government represented a natural placement opportunity for bright graduates, Keynes's record as a recruitment officer was not, in actual fact, very good. Granted, Meade was able to secure what turned out to be a key role in the ES, where he was joined by Stone, never Keynes's pupil but an attendee at the Political Economy Club. However, both Meade and Stone were taken on by Whitehall as a result of recommendations made by Austin Robinson, not Keynes. Meanwhile, Keynes was keen to have both Kahn and Harrod by his side at

¹⁰² Although it requires further research, it is almost unthinkable that Keynes would not have been involved in the decisions to appoint Richard Kahn (1933) and Joan Robinson (1934) to positions in the Faculty of Economics and Politics.

¹⁰³ As Sraffa was a product of the Italian university system, he does not fit easily into this part of the analysis. Nevertheless, it is interesting that Keynes devoted so much effort to keeping him in Cambridge, this despite Sraffa's lack of commitment to Keynes's ideas. This effort, it seems, was an implied acknowledgement on Keynes's part of Sraffa's strong intellect as well as the affection he felt for Sraffa based on their close friendship.

the Treasury, but Kahn ended up at the Board of Trade while Harrod was recruited by Lord Cherwell, Churchill's scientific advisor, to serve in S Branch where, apart from playing an important part in getting the organisation of national accounts off the ground (see Higgins 1989: 299), he failed to make any other significant contribution (see Phelps Brown 1980: 20-21). Ironically, both Robertson and Henderson – opponents of the *General Theory* – did end up working with Keynes at the Treasury during the war years.

Marshall:

As his efforts to get Neville Keynes to go to Oxford demonstrated, Marshall was aware of the importance of placing students as a means of bolstering support for his theories and the wider reputation of Cambridge economics. Any relationship between Marshall's activities in placing students and the Keynesian Revolution is thereby centered on reputational effects along with Marshall's power to influence appointments at Cambridge itself.

Marshall was more active than Keynes in encouraging his students to secure academic appointments, even if he was less concerned about postings in Whitehall and government. As early as his Inaugural Lecture in 1885, Marshall claimed that, 'It will be my most cherished ambition...to increase the numbers of those whom Cambridge, the great mother of strong men, sends out into the world with cool heads but warm hearts' (Marshall in Keynes 1924: 367). The Economics Tripos would eventually prove to be an important breeding ground for the establishment of Marshall's 'Cambridge stables', as he liked to refer to his students. But it was also the case that some of his most distinguished protégés were not the product of the new Tripos but rather Moral Sciences, History and Mathematics; the triumvirate that immediately spring to mind are Neville Keynes, Pigou and Maynard Keynes, respectively. Either way, after failing to get Neville Keynes to fly the flag at Oxford, Marshall devoted more of his attention, albeit not exclusively so, to consolidating the future of Cambridge economics. As part of this, he was instrumental in securing Pigou as his successor - despite the disappointment that this caused the ambitious Foxwell - and played an important part in Maynard Keynes's own appointment to the Cambridge Faculty.

The point about Marshall's failure to persuade Neville Keynes to take up a position at Oxford might, at first glance, suggest that he was not successful in his broader effort to establish networks of support other than at Cambridge. But this would be wrong. Marshall's reach was a long one, a point not lost on Maynard Keynes when he wrote in 1924 that: 'It is through his pupils, even more than his writings, that Marshall is the father of Economic Science as it exists in England to-day [sic]. So long ago as 1888, Professor Foxwell was able to write: "Half the economic chairs in the United Kingdom are occupied by his pupils, and the share taken by them in general economic instruction in England is even larger than this." To-day [sic] through his pupils and the pupils of pupils his dominion is almost complete' (Keynes ibid., 366-367). Even though Keynes chose not to note Foxwell's (justified) acknowledgement of Sidgwick as an important influence on those Moral Sciences undergraduates reading economics, it was clearly the case that Marshall was the pre-eminent economist at Cambridge in the latter part of the 19th century and the early 20th century. Examples of Marshall's pupils (from either Cambridge or Oxford) who would go on to occupy positions in British and overseas universities (excluding Oxbridge) included Chapman (Cardiff and Manchester), Flux (Manchester and McGill), Gonner (Bristol and Liverpool), and Layton (University College, London, but who also taught at Cambridge). Additionally, it is important to bear in mind that at the end of the 19th century and in the very early years of the 20th, Marshall's chances of achieving superiority in British economics were made easier by the fact that the number of academic appointments available in economics departments was very limited, standing at less than two dozen in 1891; Foxwell's comment in 1888 about half the economic chairs in the United Kingdom being occupied by Marshall's students should perhaps be seen in this light.

 Table 16. Growth of academic appointments in economics and related subjects in

 British universities, 1891-1969

	1891	1915	1925	1939	1950	1960	1969
Total	20	85	180	286	446	679	1,802
% growth	-	325	119	59	56	52	165

Source: Coats (1993: 340)

At the same time, the professionalisation of the subject – brought about in no small part by Marshall himself – meant that the number of academic appointments had
grown substantially by the time of Marshall's death in 1924; Keynes's reference to Marshall's near complete dominion by that time was indeed testament to the success of the Economics Tripos.

Hayek:

Various reasons have already been put forward as to why Hayek was unable to capitalise on his early popularity at the LSE, including his austere manner and the technical demands of his analysis. However, it was also the case that he did not have the opportunity to build up his reputation over a number of years at the School, as Keynes did at Cambridge. Instead, he was immediately faced with the challenge of Keynes and his disciples. Had Hayek already been an established name at the LSE, his chances of producing and placing a group of student-believers might have been greater.

There was already something of a tradition of former students taking up appointments at the School, despite its embryonic status. Examples included Theodore Gregory, who was first appointed to a teaching post in 1913 and went on to become Professor of Banking and Currency in 1927; Robbins, lecturer from 1925 to 1927 and Professor of Economics from 1929 to 1961; and Arnold Plant, Professor of Commerce from 1930 to 1965.¹⁰⁴ There were, of course, talented students in Hayek's midst when he arrived in London, even if it was only Lerner – who had enrolled at the School in 1929 – who was exceptionally gifted.

The other great LSE economics student of the time was Kaldor, but he had, in fact, already graduated with a degree in 1930, and even though he became an Assistant in economics in 1932 (later Assistant Lecturer), he quickly turned against Hayek. Hicks was the third of the triumvirate of impressive young economists at the LSE during the early 1930s, although his days as a student had been completed at Oxford in 1925. Moreover, despite taking something of an interest in Hayek's theories, he was too distracted by his own work on the theory of value.

¹⁰⁴ Less well known former students who were appointed to the Faculty included F.C. Benham, F. Brown, and G.L. Schwartz (see Hayek 1946: 24).

Thus, despite the success of his first forays in London, Hayek's situation actually turned out to be rather difficult. It is fair to say that he failed to produce a single student of outstanding ability during this time and certainly nobody of the same calibre as say, Kahn. The inevitable result was that there was very little, if any, activity on Hayek's part in terms of the placing of students.

Kalecki:

When we considered Kalecki's access to potential recruits, the point was made that his lack of a university education and his subsequent employment at the Institute of Research on Business Cycles and Prices meant that he never had a natural route into the higher education system and that, as a consequence, his ability to attract followers was severely limited. Without wanting to labour the point, the same applies to Kalecki and the production and placement of students: Landau and Breit would have presented the best opportunities to secure disciples who might have been able to carry Kalecki's message further afield. However, for reasons that have already been noted, such opportunities were never really viable and were certainly in no way comparable to those available to Keynes, Marshall or Hayek.

Summary:

'Produced and 'placed' significant number of students' is one of only three of the Morrell-Geison criteria in which Keynes does not secure a positive outcome. There is no such ambiguity with respect to Marshall, where the feature is clearly present. Once again, the feature did not figure when we considered Hayek and Kalecki.

Table 17. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell Geison criterion 'xii. Produced and 'placed' significant number of students'

<u>Criterion</u>	Keynes	Marshall	Hayek	<u>Kalecki</u>
xii. Produced and 'placed' significant				
number of students	±	+	-	-

Note: 1 + 2 means that this feature is present; -2 means that this feature is absent; and 2 ± 2 means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

Of our four main protagonists, it was Marshall who was the most active in producing and placing students. He produced students of quality at both Cambridge and Oxford, the former being the main source of his success in this respect and where he also enjoyed considerable placement power. That said, his three most eminent students were not the product of the Economics Tripos. Nevertheless, the new Tripos did play a key role in cementing Marshall's already considerable reach in terms of the presence of his former students in important teaching positions in British and overseas universities (with, perhaps, the exception of the United States). In turn, this network of supporters helped to consolidate Cambridge's reputation as a leading centre for instruction and research in economics, a reputation which trickled down to the benefit of Maynard Keynes and which he, in turn, helped to sustain. Keynes produced many students of considerable talent, some of whom would go on to provide strong support for his revolution. But he played less of a role in placing them, a reflection perhaps of his opinion that Cambridge was head and shoulders above any of its potential rivals. Interestingly, during the Second World War, when he took a greater interest in securing postings for his protégés, he was unable to exert much influence in Whitehall.

Neither Hayek nor Kalecki enjoyed much success in either producing or placing students who might have been supporters of their work. A variety of reasons meant that Hayek failed to capitalise on initially favourable conditions at the LSE, with many students or young staff members actually ending up aligned, in one way or another, behind Keynes. Meanwhile, without any direct presence at a university during his early career in Poland, Kalecki's chances of producing and placing supportive students were more or less reduced to zero.

xiii. Institutionalization in university setting

Morrell-Geison argues that it is important for a research school to have institutionalized commitment for its endeavours within a university; without this, a school is likely to become marginalised at the institutional level and, as a result, at the intellectual level. In such circumstances, a school's failure as a worthwhile research project becomes more probable.

Keynes:

In a sense, the institutionalization of the Keynesian Revolution at Cambridge was made easier because the Keynes name had become an important part of University life well before 1936. Neville Keynes was Senior Moralist in 1875, wrote The Scope and Method of Political Economy (1891), which became the 'standard English treatise on the subject' (Harrod 1951: 10), and was administrative head of Cambridge University for 15 years. Regular visitors to the Keynes household included the philosophers Henry Sidgwick and W.E. Johnston and the economist Herbert Foxwell (but not Marshall). It must have seemed inevitable to the young and precocious Keynes that great things were expected of him. In November 1901, Keynes wrote that he did not want to go to Oxford 'at any price' (Keynes in Skidelsky 1983: 98). This hostility coupled with the influence of Samuel Lubbock, his tutor at Eton who had just graduated from King's (Eton's sister foundation), and Keynes's existing connections with the town, meant that Cambridge became the obvious choice for his undergraduate studies. As a student, Keynes's love affair with Cambridge was cemented by his membership of the Apostles, while one of his first concerted attempts to bring his influence to bear on Cambridge economics took place, as we have seen, in October 1909 with the establishment of the Political Economy Club. However, Keynes's stock only began to enjoy a marked uplift 10 years later with the appearance of the *Economic Consequences*, before being further bolstered by various books and pamphlets. But this may be overstating the case, especially when we recall Keynes's own admission in 1931 about how little influence he had exerted on public policy and opinion in the 1920s and Kahn's comment to Harrod as late as 1934 that the level of support for Keynes's ideas at Cambridge was, at that time, 'vanishingly small'.

As such, despite the discussions centred on the Circus and Keynes's occasional lectures at Cambridge where he would outline some of his latest thinking, it seems that for a significant proportion of the economics staff and students, the revolutionary nature of Keynes's emerging theories had not yet taken hold as of late 1934 when Kahn wrote to Harrod. In addition, as already noted, some of the more senior figures at Cambridge, notably Pigou and Robertson, were not devotees, Pigou in particular still a firm Marshallian. Thus, if Kahn's comments are accurate, an explanation has to be found as to why the *General Theory* was published with so much anticipation only

a little over a year later: What happened in the very late part of 1934 and in 1935 to bring about this change? One possible explanation is that Keynes began lecturing from the first proof version of the General Theory in the Michaelmas Term of 1934 (see CW XIII: 485), aware perhaps that this would give a strong taster of what would be in his forthcoming book while also helping to simplify the lectures he had delivered in 1932 and 1933, where many of the ideas, albeit new, had simply gone over students' heads (see Rymes 1989: 17-18). But given the subsequent difficulty that many readers had with the *General Theory*, this explanation is not particularly convincing. What seems more likely is that students somehow understood that Keynes was writing an important book, even if they may not have fully appreciated what he was trying to say. Considered alongside Keynes's reputation for controversy, this seems to have helped to ensure strong interest come February 1936. A similar explanation can be posited for the *General Theory*'s keen reception at Harvard. Either way, in Cambridge, England, Keynes's theories had been firmly institutionalized by 1940, as witnessed by Pigou's observation that students were using them to answer Tripos questions regardless of relevance.

By the same year, Keynes's attention had already turned away from Cambridge and towards Whitehall. In fact, his effort to institutionalize the *General Theory* into the government's wartime planning provides us with an opportunity to extend the institutionalization criterion beyond the university setting originally intended by Morrell-Geison and into the political realm. A number of factors help to explain Keynes's growing sphere of influence in the Treasury and other departments during the war, including his charisma, his reputation as a groundbreaking theorist, and, at a more practical level, the pre-existing lack of economic advice available to ministers. The years after the war were also important in helping to advance the Keynesian paradigm: even if the effectiveness of the ES was blunted between 1945 and 1947 due to Meade's poor health and frustrations with the machinations of Whitehall, the tenure of Robert Hall saw it enjoy a new lease of life in the 1950s.

Marshall:

Before Marshall's tenure as Professor of Political Economy at Cambridge, the standard of instruction in economics at the University was poor to say the least.

Although the first set of lectures in political economy at any British university had been delivered at Cambridge by George Pryme¹⁰⁵ in 1816, teaching there continued to operate on a fairly informal basis for a number of years. Marshall's predecessor, Henry Fawcett, had been professor since 1863 and despite being well published, he had done little to advance the standing of economics within the Cambridge curriculum: Fawcett was still very much an amateur, with time to spare to pursue a political career in London.

However, Cambridge was not the only British university where economics failed to gain a foothold during the 19th century. At Oxford, Bonamy Price was Professor of Political Economy from 1868 to 1888 and even though he published various critical expositions on the subject, Price was a man who was 'never quite sure whether economic theory was impossible or merely undesirable' (Maloney 1985: 9).¹⁰⁶ Economics was clearly in a neglected state: Marshall's intelligence, his reputation at Cambridge, his administrative diligence (helped by six years as Principal at University College, Bristol), his crusading zeal – which, as far as establishing the Tripos was concerned, seemed to more than offset his dislike of confrontation – and the convenient fact that the generally ineffective (albeit popular) Fawcett had died prematurely in 1884, meant that he was the ideal man to lead the professionalisation of British economics.

There had been some tradition at Marshall's undergraduate college, St John's, for producing good economists (see Collet 1936: 589); apart from Marshall, Cunningham and Foxwell were also alumni. Nevertheless, Marshall does not seem to have made any special effort to continue this tradition, instead being happy to rely on getting good students where he could, irrespective of which college they happened to be attached to. As it turned out, both Pigou and Keynes were Kingsmen (as was Kahn). As time went by, Pigou must have felt increasingly isolated at King's, not only as a

¹⁰⁵ Pryme was the first Professor of Political Economy at Cambridge. Somewhat surprisingly, the history of economics at Cambridge has still to be written.

¹⁰⁶ The personalities involved were not the only hindrance to the advancement of economics at university level. Groenewegen (1988: 628, 632) notes that economics teaching was in decline by the early 1880s as a result of a hostility to business education, this development outweighing the search for replacements for the weakening in religious beliefs that had been taking place since the 1860s.

result of Keynes's increasing popularity but also because of his own reclusive nature which, amongst other things, meant that he was largely unable to carry forward the curricular reforms instigated by Marshall. Indeed, the establishment of the Political Economy Club just a year after Marshall's retirement can be seen as one of the first steps in the division of the Economics Faculty into those who, like Pigou, supported Marshall and those who sided with Keynes. At the same time, the influence of the Cambridge School was still partly dependent on filling in the gaps in the Organon; Weintraub's (2005: 144) comment that, 'Henderson, Robertson, Shove, and Pigou of course were just as Cambridge, just as legitimately heirs to Marshall's creation, as were Keynes, [Joan] Robinson, and Kahn', should be considered within this context.

Hayek:

Despite its strong reputation today as a leading institution in the social sciences, the LSE is relatively young, having only started issuing degrees in 1902. Conversely, Cambridge already had a tradition of teaching and researching political economy well before the Economics Tripos, even if this tradition was a generally weak one until Marshall's appointment as Professor of Political Economy in 1884. Cambridge therefore had something of a reputational advantage over London; challenging this advantage was arguably one of the reasons behind the LSE's founding. Furthermore, with the early appointment to the School's staff of William Acworth (an expert on the economics of railways), Cunningham and, to a lesser extent, Cannan – who remained a Marshallian at heart, despite outward appearances – the foundations of the battle with Cambridge (read: Marshall to begin with and Keynes later on) were laid.

We have already documented a large part of the role that Hayek played in the Cambridge/LSE saga and so there is no need to repeat it here. However, it is worth noting that as far as Austrian economics was concerned, Hayek had a number of important predecessors, notably Menger and Mises. Eugen von Böhm-Bawerk was also a key figure; in fact, at the end of the 19th century he was second only to Marshall in worldwide fame (see Caldwell 2004: 81). Unfortunately for the Austrian School, Böhm-Bawerk spent his whole career in his home country, thereby severely limiting his influence on debates going on in England. Had he created a base in England, Hayek might, in turn, have had a greater opportunity to convey his own

ideas through a research school at the LSE. This is not to say that the School was devoid of good thinkers: the influential Cannan had retired in 1926 and Robbins was an important economist in his own right. However, neither man could hold a candle to Marshall when it came to theory. As such, the absence of an intellectual challenge either from the LSE or any other economics department in the domestic university system meant that Marshall and his disciples – including Keynes and his own circle – were able to build and enhance Cambridge's reputation as the leading economics institution in England and the world right up until the 1960s.

On a more practical note, Hayek's efforts to institutionalize his ideas at the LSE were also made difficult by the previously highlighted lack of intimacy between staff and students. Aware of the role played by supervisions at Cambridge as well as the Political Economy Club and his own experience of the Mises Seminar in Vienna, Hayek may have tried to make up for this lack of contact with students by the seminar he set up at the LSE with Robbins. But despite these meetings providing Hayek with an excellent opportunity to put his ideas across, he still failed to convert his audience.¹⁰⁷

Kalecki:

In terms of the institutionalization of his theories, the best that Kalecki could have achieved in the early part of his career would have been the founding of a school at the Institute of Research on Business Cycles and Prices in Warsaw. For various reasons, this proved to be a non-starter. It would be unfair to Kalecki to argue that he was always inherently resistant to the idea of establishing a presence within a university setting (even if he was not pro-active in seeking out disciples). Testament to this was his informal leadership, along with Oscar Lange, in the second half of the 1950s of Polish economists' pioneering interest in socialist and development economics respectively, an interest that was formalised in the early 1960s with the

¹⁰⁷ Any possibility that Hayek might at some point have returned to the Institute for Business Cycle Research in Vienna once his decline at the LSE had set in was out of the question after the *Anschluss* in 1938. Under the Nazis, the Institute became a centre for South and East European Studies (Klausinger 2006: 626-627). Other prominent members of the Austrian School to leave the country during the 1930s included Haberler, Machlup, and Mises.

founding of CRUE, 'the [then] Mecca [for these two subject areas] to which students and economists flocked from many parts of the world' (Eshag 1977: 4). Kalecki did exhibit a greater willingness to collaborate with others during his time at CRUE. For example, he was one of the co-authors of a collection of essays on planning and economic development put out by the Centre in 1963, the other contributors being Zofia Dobrska, Ignacy Sachs and Jerzy Tepicht. Had Kalecki had the opportunity in the early 1930s to establish something akin to CRUE, his subsequent influence might have been much greater.

Summary:

Keynes and Marshall successfully institutionalized their ideas at Cambridge. Both men had an advantage in this respect over Hayek and Kalecki, neither of whom was able to institutionalize their theories at university level during the 1930s and 1940s.

Table 18. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'xiii. Institutionalization in university setting'

Criterion	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
xiii. Institutionalization in university				
setting	+	+	-	-

Note: ¹ '+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

The strong reputation of the Keynes family name was already firmly apparent at Cambridge by the time Maynard Keynes began teaching there in the early part of 1909. Keynes would go on to significantly strengthen this reputation as a result of his work and activities at the University, his often controversial and, at times, revolutionary written output and, later on, through his work in Whitehall during the Second World War.

Notwithstanding all of this, he still did not have it all his own way at Cambridge, both Pigou and Robertson being strongly opposed to the *General Theory*. As far as the student body of the 1930s was concerned, they may not all have fully understood Keynes's ideas as he described them in his lectures, but they did have a sense that they were of the highest importance. Furthermore, Keynes benefited from the considerable effort made by Marshall to formalise the teaching of economics at Cambridge, and in spite of the serious subsequent disagreements between Keynes and his group on the one hand and, again, Pigou and Robertson – to name but two – on the other, both sides owed much to their Marshallian heritage.

Marshall's success in establishing the Tripos was the crystallisation of a long Cambridge tradition in 'political economy', a tradition which could not be matched by the LSE. This meant that Hayek was already at something of a disadvantage when he arrived at the School in 1931. He was also hampered by the lack of a supervision system – an inbuilt institutional advantage enjoyed by Cambridge – and by infighting, some of it directed at him, in the seminar he ran with Robbins. Meanwhile, although Kalecki was an integral part of CRUE in the 1960s, he never had the opportunity to oversee a similar institutional presence in the 1930s. On a final note, in stark contrast to Keynes, both Hayek and Kalecki failed to have any institutional impact at governmental level in the 1930s and 1940s, Hayek having to wait until the Thatcher years before his theories were revived.

xiv. Adequate financial support

According to Morrell-Geison, funding is the final important determinant of a research school's success or failure. Financing may come from the research director's own pocket, but more often than not it is sourced from the university or institution in which the school exists. Where there is a good provision of money, a research school is more likely to flourish, everything else being equal.

Keynes:¹⁰⁸

The successful establishment of a Keynesian research school was probably less dependent on funding compared with the predominantly laboratory-based disciplines examined by Morrell-Geison: the research carried out by Keynes and his acolytes was

¹⁰⁸ Parts of the following draw on Cord (2007: 52-54).

mostly theoretical, the direct financial cost being no more than a pen and paper. This is, however, a somewhat simplistic view, the actual interaction between financial considerations and the Keynesian Revolution being a rather interesting one.

In spite of the fact that the professorship of political economy at Cambridge had become a salaried position when Fawcett secured the post in 1863 and even though the Economics Tripos had become part of the Cambridge curriculum, funding for economics was generally poor, with the first University lectureship in the subject only being created in 1911 and the second more than a decade later in 1923 (see Groenewegen 1988: 648). A flavour of how bad things were can be inferred from the fact that Marshall first and Pigou after him had to sometimes resort to using their own income in order to finance lectureships. In fact, it was only after Marshall wrote to Keynes informing him that Pigou would be prepared to take on the burden of paying £100 a year towards the cost of supporting Keynes's proposed lectureship that Keynes took the decision to leave the India Office in July 1908 and return to Cambridge. Without this incentive plus additional money provided by the Worshipful Company of Girdlers, it remains uncertain whether Keynes would have gone back to academia at that point, even given his well-documented boredom in Whitehall.

Keynes's departure from the civil service was the catalyst for a ramping up in his personal investment activities as well as providing him with the opportunity to get involved in the financial affairs of his old college. At a personal level, Keynes already had the benefit of coming from a reasonably wealthy middle-class family. His grandfather, John Keynes, had been a successful businessman, and Maynard was keen to become financially independent, mindful that this would give him the freedom to concentrate on his writing. Some money (albeit rather limited) was to be made from lecturing and supervising, and Keynes also derived income from journalism and from his appointment to the board of the National Mutual Life Assurance Company in 1919; the worldwide success of the *Economic Consequences* meant that Keynes was able to call on yet another source of money to, amongst other things, help pay for his forays into the stock market. However, the claim by Backhouse and Bateman (2006: 2) that the book gave Keynes 'financial security' is accurate only in a narrow sense: royalties were indeed significant, but Keynes had to rely on the same money to bail him out of difficulty in mid-1920 when a syndicate he had invested in went wrong.

Keynes's wealth only really began to grow markedly and on a sustainable basis in the early years of the 1920s, his net worth standing at nearly £64,000 in 1924 (approximately £2.7 million in today's money), before reaching a high of just over £500,000 in 1936 (£25 million). There were bad years, including, of course, 1929. But these were more than outweighed by the good, such that by the end of the Second World War, Keynes was worth around £411,000 (£13 million).¹⁰⁹ This level of wealth had various implications for Keynes's work. First, as alluded to, it gave him more time to pursue his research interests (Keynes had resigned his lectureship at Cambridge in 1920, albeit prematurely given the financial difficulties he faced that year). Although he remained deeply attached to Cambridge, much of his most important thinking took place at Tilton, purchased in 1925 on the back of stock market profits. Second, Keynes's first-hand experience of the financial markets fed directly into his work, notably his ideas on futures contracts. Third, Keynes's wealth opened up new avenues on the publishing front. This manifested itself in two ways. To begin with, he was part of a group of investors who took over The Nation and Athenaeum in March 1923; Keynes would often use its pages to publicise his theories on unemployment. In addition, we have already seen how Keynes was able to negotiate the financial terms on which his books were published by Macmillan, the most obvious example being the cheaply priced *General Theory*.¹¹⁰

Keynes's financial generosity was well known, the main recipients of his regular handouts being needy artists. As far as Cambridge was concerned, he was never forced – in contrast to Marshall and Pigou – to use his own financial resources to support promising talent first, because of the gradually strengthening Economics Tripos, and second, because Keynes used his financial acumen in other ways to enrich the University, in particular King's. With regard to the former, the expansion and consolidation of the Tripos meant that Richard Kahn and Joan Robinson were able to secure appointments in the Faculty of Economics and Politics without awkward

¹⁰⁹ See CW (XII: 11) for a detailed breakdown of Keynes's wealth on a year-by-year basis from 1919 to 1945.

¹¹⁰ Once the *General Theory* had been published, Keynes was aware of the importance of bolstering its theoretical claims with empirical support. As part of this, he was able to secure funds from the National Institute of Economic and Social Research to help finance investigations into British spending habits and used the results to influence Treasury thinking during the Second World War (see Booth 1989: 65).

questions having to be asked about funding. Meanwhile, Keynes's financial involvement with King's became almost legendary. His first interest in College finances began in 1909 when he was made an Inspector of Accounts. This was followed by an appointment as Second Bursar in 1919 and First Bursar in 1924, a post which Keynes occupied up until his death. From the beginning, the College gave him extensive leeway in placing its money, and during the period 1920-36 he turned £30,000 into £200,000, a near sevenfold increase. It does not seem unreasonable to suggest that this new-found wealth played some part in making King's a more popular choice for those students wanting to study economics at Cambridge, in turn helping to maintain the College's strong tradition in the subject.

Marshall:

Marshall was not a natural fundraiser. His preference for avoiding controversy meant that he probably felt averse to getting involved in what he no doubt regarded as the messy business of securing financial resources for the Economics Tripos. This may explain why, in its early years, the Tripos was characterised by a distinct element of pecuniary self-sufficiency: apart from Marshall and Pigou using their own income to finance lectureships, Marshall put in place financial incentives to entice some of the best students into economics well before 1903. Thus, in March 1886, he set up a £15 prize which was awarded to the best student performance in the political economy papers of the Moral Sciences Tripos (see Groenewegen 1988: 638).

There were additional factors at work. Cambridge University was not a wealthy institution in the late 19th and early 20th centuries, having to increasingly rely on unstable agricultural rents (ibid., 649). There was also little financial help available from the government, the prevailing orthodoxy being an emphasis on private patronage as opposed to state support for higher education (see Kushner 1993: 222). Moreover, despite its prestige, Cambridge found it difficult to compete with the growing threat from the new civic universities and colleges – notably Birmingham, the LSE and Manchester – whenever attracting private money was at stake: around the same time as the Economics Tripos was created, Cambridge had failed in an attempt to secure significant private funding, losing out to more recently established institutions (see Whitaker 1996: xix-xx). Marshall's attitude to private money was

ambiguous: he was concerned that Cambridge might find it problematic to retain its independence if it relied too much on private support, but he was also aware that it would suffer financially (with regard to both private and state funding) if it failed to reform (see Groenewegen ibid., 643). The creation of the Tripos can be seen as Marshall's contribution to this reform process.

Apart from contributing towards the cost of lectureships and offering prizes, Marshall also compensated for Cambridge's financial difficulties by his 'at homes'. These were provided free of charge, in stark contrast to common practice across the rest of the University, where students were more or less obliged to seek out the services of a costly private tutor in order to have a better chance of securing a good degree, aspiring Wranglers in the Mathematical Tripos being the obvious example (see Warwick 2003). As well as the 'at homes', the more able economics students were given the run of Marshall's extensive library, Keynes (1924: 366) describing how he and his contemporaries would labour along the Madingley Road under the weight of books that Marshall had picked out for them to read. Upon his death, Marshall donated his library to the University and requested that all royalties from future sales of his books should go towards strengthening the Economics Tripos (ibid., 368).

Hayek:

Given the laissez-faire attitude towards the financing of higher education in Britain towards the end of the Victorian age, those attempting to put the teaching of economics on to a firmer footing had to try even harder than their counterparts in more mainstream subjects in their efforts to raise money. Summing up the views of William Hewins, the first director of the LSE, Coats (1967: 409) writes that prior to 1895, 'scarcely any branch of English higher education was so ill provided for as economics. Scientific work had usually been subordinated to the study of practical questions, and economics had been neglected by existing educational institutions and starved of both state and private funds.' While Hewins may have been correct in his claim of a general lack of financial support for economics, this was not entirely true in the LSE's case. Indeed, the School may never have got off the ground had it not been for a generous bequest from the estate of solicitor Henry Hutchinson to the Fabian Society. There was also support form the London Chamber of Commerce and the Royal Society of Arts, whilst within only five years of its foundation, the LSE was receiving half of its revenue from London County Council (see Cole 1963: 763).¹¹¹

For many years, it remained the case that the LSE could only operate as a relatively small college, this being down, to some extent, to the part-time status of many of its students. But this all changed in 1919 with the arrival of William Beveridge as director.¹¹² From the beginning, Beveridge set himself the task of rapidly expanding the School, accompanying this with a strengthening of the quality of the teaching staff, not only within economics but across the social sciences. In both endeavours, Beveridge was singularly successful, his initial triumphs being underpinned by funds made available by institutions such as the Rockefeller Foundation (see Harris 2008). With reference to the teaching staff, a number of prominent names taught at the LSE during the 1920s and 1930s, including Harold Laski, Bronislaw Malinowski, R.H. Tawney and, of course, Hayek. Furthermore, the Economics Department was spoilt for choice because of an abundance of talented young students, Robbins (1971: 131) commenting that 'it was not difficult...to make very suitable appointments.' This favourable situation would continue after the Hicks-Kaldor-Lerner generation, with later luminaries including Ronald Coase and Arthur Lewis. In Hayek's particular case, financial factors operated in at least two ways in getting him to take up a post at the LSE: first was the easy availability of money at the School's disposal already noted. Second, for a talented young man looking to make his way in the world, Hayek must have been concerned by his job prospects, this against a background of deteriorating economic conditions in Austria caused by the Depression which, in its turn, had set in motion the displacement of parliamentary democracy and replaced it with corporatism or Ständestaat (Klausinger 2006: 621-622).

Kalecki:¹¹³

Kalecki's life and career was unconventional and eventful, and this reflected itself in questions of money. As far as his family background was concerned, we might be

 $^{^{111}}$ The Council had also contributed £500 towards the foundation of the LSE.

¹¹² Keynes had been offered the directorship, but decided to turn it down.

¹¹³ The following two paragraphs draw on Harcourt (2006a: 160-161).

forgiven for thinking that financial issues would not be of any great worry given that Kalecki's father was the owner of a textile manufacturing company. However, any hopes that young Michal's progress through university would be a serene one were dashed after the failure of his father's business in 1923, the result being that Kalecki was unable to finish his university studies.¹¹⁴

Even if these events turned out to be 'sources of strength' (Steindl 1981: 590) for Kalecki, his lack of a degree effectively ruled out any chance he had of securing the university appointment which may have otherwise put him in a much stronger position from which to launch a research school in the 1930s. Instead, he was forced to make a living by writing about the creditworthiness of small businesses. Granted, his financial position would have been made a little more secure after he began work at the Polish Institute of Research on Business Cycles and Prices in 1929, but due to the many factors already identified, he was unable to build a school either at the Institute or anywhere else during his early professional career.

Summary:

'Adequate financial support' is one of only four of the Morrell-Geison criteria where Keynes and Hayek both score positively. It also one of only three criteria in which each of our four protagonists scored a rating which was either ambiguous or better.

Table 19. Performance of Keynes, Marshall, Hayek and Kalecki against Morrell-Geison criterion 'xiv. Adequate financial support'

Criterion	Keynes	Marshall	<u>Hayek</u>	<u>Kalecki</u>
xiv. Adequate financial support	+	±	+	±

Note: 1 + 2 means that this feature is present; -2 means that this feature is absent; and 2 ± 2 means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

The broad focus of the Morrell-Geison analysis is on laboratory-orientated disciplines. Nevertheless, its identification of the potential importance of funding to the relative

¹¹⁴ As with Hayek but unlike Keynes, Kalecki spent some time as a soldier, serving as a conscript in the Polish army.

success of research schools is, to a degree, also applicable to non-laboratory subjects, such as economics. Whether directly or indirectly, finance played a role in helping to establish the Keynesian School at Cambridge, some of it the product of Keynes's own actions – most importantly, his stock market activities – and some of it that of his predecessors, notably Marshall and Pigou, who were instrumental in 'rescuing' Keynes from Whitehall. Also, given the relative poverty of Cambridge University in the late 19th and early 20th centuries, Marshall, in particular, had to make extra provision to promote the study of economics, including giving free supervisions at his home.

Meanwhile, upon his arrival at the LSE, Hayek found his new employer to be in a relatively prosperous position, underpinned by Beveridge's successful fundraising activities during the 1920s; Hayek's appointment to the LSE staff, along with those of a number of other rising stars, was only made possible by this increase in wealth, Hayek all the time aware that the prospects for career development in Depression-hit Austria were highly uncertain. As such, it was not a lack of funding provision which compromised Hayek's ability to establish a successful research school at the LSE, but rather other factors. Finally, Kalecki's lack of a university degree and, as a consequence, his inability to obtain a post in a university in Poland in the early 1930s meant that the outlets for his work and influence were constrained from the beginning. At the same time, he was rather unlucky as his failure to graduate was largely attributable to the fact that his parents could not afford to pay for him to finish his engineering degree after the collapse of his father's business, although his securing of a research position later on (in 1929) would have made him financially more comfortable.

Section 5. Summary and Conclusion

A range of explanations have been proposed by historians of economic theory to explain the success of the *General Theory*. This thesis has attempted to bring together these explanations under one overarching framework, namely the methodology pioneered by Jack Morrell and Gerald Geison in the history of science literature examining the success and failure of research schools. In addition, we have looked at

why what took place in the 1930s and 1940s was specifically a 'Keynesian' Revolution rather than one led by Hayek or Kalecki, and to what extent Marshall had a hand in laying some of the foundations for Keynes's success.

The main message to emerge is that Keynes met a good majority of the Morrell-Geison criteria required for a successful research school and that this success was of a sustained nature (see Table 20 on the next page).¹¹⁵ Even of the two or three criteria over which there is a question mark, Keynes was able to secure some measure of potency. For example, when we considered 'Invasion of new field of research' we saw that Keynes made use of a number of extant ideas, notably effective demand. But to his credit, he was able to synthesise these ideas with new ones in a manner which offered a fresh approach to addressing the problem of mass and sustained unemployment; in this respect, the *General Theory* was without doubt an improvement on the 'veritable morass of contending explanations of the periodicity of business fluctuations' (Blaug 1991: 180) which had been doing the rounds prior to 1936.

Indeed, the *General Theory* was able to successfully establish a new and lasting paradigm in economics, one which, although it also utilised some aspects of theory associated with the classicals¹¹⁶ – the very tradition which Keynes was trying to displace – provided, for the first time, a convincing theoretical rationale as to why equilibrium can occur and persist at levels below full employment. In a Kuhnian world, many theories can compete during the crisis phase which follows the realisation that old theory has been shown to be deficient and which precedes the emergence of the new paradigm. This competition is what happened during the 1930s and 1940s in macroeconomics, with Keynes emerging as the winner, at least during the period in question. Compared to Kuhn, the Morrell-Geison framework arguably provides a broader set of explanatory factors which help to throw light on why one particular theory is able to secure the new paradigm while contemporaneous theories fail.

¹¹⁵ In his analysis of various scientific research schools, Geison (1981: 24) uses the total number of '+'s and '-'s assigned to each school as a rough guide to whether they achieved 'sustained success', 'temporary success', or suffered 'partial or relative failure'.

¹¹⁶ Such as Marshall's price theory (see Leijonhufvud 1976: 105).

Criterion	<u>Keynes</u>	<u>Marshall</u>	<u>Hayek</u>	<u>Kalecki</u>
i. 'Charismatic' leader(s)	+	+	-	-
ii. Leader with research reputation	+	+	+	±
iii. 'Informal' setting and leadership style	+	±	-	-
iv. Leader with institutional power	±	+	±	-
v. Social cohesion, loyalty, esprit de				
corps, 'discipleship'	+	+	-	-
vi. Focused research program	+	+	<u>+</u>	<u>+</u>
vii. Simple and rapidly exploitable				
experimental techniques	+	+	-	-
viii. Invasion of new field of research	<u>+</u>	\pm	<u>+</u>	+
ix. Pool of potential recruits (graduate				
students)	+	±	+	-
x. Access to or control of publication				
outlets	+	+	+	-
xi. Students publish early under own				
names	+	+	-	-
xii. Produced and 'placed' significant				
number of students	±	+	-	-
xiii. Institutionalization in university				
setting	+	+	-	-
xiv. Adequate financial support	+	<u>±</u>	+	±
Total of '+'s	11	9	4	1

 Table 20. Overall performance of Keynes, Marshall, Hayek and Kalecki against

 the Morrell-Geison criteria¹

Note: 1'+' means that this feature is present; '-' means that this feature is absent; and '±' means that this feature is partly present and partly absent.

Source: Adapted from Geison (1981: 24)

A large part of Keynes's success was the force of his personality, a major advantage over the more austere Hayek and Kalecki. But this was not the only factor. There were also the many advantages which Keynes accrued from being at Cambridge and through his association with Marshall, including the establishment of the Economics Tripos overseen by Marshall which (eventually) provided Keynes with a stream of disciples. Meanwhile, in Britain and the United States, the controversial nature of the *General Theory* (especially its attack on the classicals) and the opportunities it opened up by way of empirical research – national income accounting being but one example – helped to attract the interest of younger economists in particular; indeed, the doggedness of some of the young in promoting Keynesian ideas at governmental level was testament to their support for the new paradigm. Neither Hayek nor Kalecki was able to influence official policy-making in either the 1930s or the 1940s.

Over time, there also accumulated a large degree of published support for the *General Theory*, much of it again emanating from Britain and the United States. To his credit, even if Keynes could have made more of his editorship of the *Economic Journal* to promote his revolution, he was, for the most part, restrained. Granted, there was Kahn's article on the multiplier, the attack on Hayek's *Prices and Production*, and the publication of Meade and Stone's work on national income. But Keynes was conscious of his privileged position and instead sought to promote his ideas largely through newspaper articles, pamphlets, and, most importantly, books. *Prices and Production* the younger generation of staff and students at the LSE, despite the founding of the *Review of Economic Studies* in 1933. Meanwhile, Kalecki made the fatal mistake of publishing his theories on the cycle in non-English-language journals.

Aside from the Morrell-Geison criteria, some mention does have to be made of the temporal relevance of the General Theory. It was published in 1936, only a short time after the Great Depression had reached its peak. With classical theory failing to provide a convincing explanation as to why unemployment had occurred, the timing of the General Theory's publication has been held by some to be opportune. Although this argument does have some compelling aspects, it fails to account for various other important factors as set out in Section 2, including the point that the Great Depression had more or less been ridden out by 1936. In addition, the temporal argument does not explain why the General Theory stood out amongst so many competing accounts of the Depression, including Kalecki's which, although technically more demanding, was more dynamic than Keynes's static model. The Morrell-Geison analysis provides some relief here. Its basic aim is to explain the success or failure of research schools. If then we are to employ it to explain what happened with respect to cycle theory during the 1930s and 1940s and, within this, new views on the determination of output levels over the short period, a simple question arises: Are we justified in employing Morrell-Geison when neither Hayek nor Kalecki in fact established a recognisable research school during this period? After all, Morrell's 1972 paper was a comparison of two pre-existing schools. However, a trick may have been missed here. More specifically, Hayek and Kalecki were at a distinct disadvantage precisely because they *did not* establish research schools and Keynes *did*; had either of them founded a school, the playing field might have been levelled to an extent that their

chances of ultimately being successful would have been enhanced, if not necessarily guaranteed. This may seem unsympathetic towards Kalecki in particular. In response, however, it is worth recalling Geison's (1993: 234) comment that the work of research schools has 'a better chance of surviving and flourishing in the crowded environment of modern intellectual life than do the ideas put forth by individual "mutant" scientists, whether cranks or geniuses.' Although the 1930s and 1940s may not have been as crowded as 'modern intellectual life', Geison's point is surely still relevant to that period.

But even this is not enough. As Brock (2003: 25) points out about Morrell's original paper, it 'identified the necessary and sufficient conditions for the creation of a successful research school.' With respect to Keynes, et al., we have just looked at the necessary aspect above. In terms of sufficiency, a research school created by Hayek or Kalecki would have had to have met a similar number or more of the Morrell-Geison criteria in order to have properly competed with the Keynesians. We are not, of course, saying that an economist or any other academic has to have a research school in order to be successful. Rather, in terms of the events that took place during the 1930s and 1940s within the field of business cycle theory, any successful challenge to Keynes by Hayek, Kalecki or any other economist for that matter would have had to at least match, if not surpass, Keynes in the research school stakes. Put another way, the *General Theory* and the research school built around it was the necessary aspect of Keynes's revolution; Keynes's success in meeting most of the Morrell-Geison criteria was the sufficient part.

There are a number of related issues which are relevant to the Keynesian Revolution. To begin with, the claim by some historians of economic theory that biographical information is useful in helping to explain why the ideas of some economists are successful and others are not receives some considerable support from our analysis.¹¹⁷ Similarly, research school analysis also gives backing to what has been dubbed 'thick' history, which embraces both the internal and external influences on a thinker and his thought, in contrast to 'thin' history, which stresses just internal factors (see Runde and Mizuhara 2003: 6). Given the important role played by a number of different

¹¹⁷ Jaffé (1965), for one, argues that biography is important, a position opposed by Stigler (1982: 92).

schools of thought throughout the history of economic theory – to take an extreme example, Schumpeter (1946: 515) points to the Physiocrats and the Marxists as being the only rivals to the Keynesians with respect to the speed of success – the potential for further thick histories would appear to be significant.

A further potential area of interest concerns the so-called 'Planck Principle'. In his autobiography, Max Planck (1950: 33-34) argued that, 'A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it.' It is unclear whether Shackle (1967: 296) was aware of the Planck Principle when he made reference to the fact that a number of the great Victorian economists – including Marshall, Menger, and Wicksell – all died within a few years of each other in the 1920s and that this left the way open for a new start to be made on, amongst other things, cycle theory, 'without these giants peering over men's shoulders.' Granted, in Kalecki's case, the relevance of the Planck Principle is less clear given his lack of exposure to classical theory. However, a stronger case can be made in relation to Keynes, especially given Marshall's passing in 1924, whilst Cannan's retirement from the LSE in 1926 perhaps also helps to explain the onset of Robbins's subsequent attack on Cambridge.¹¹⁸

On a final, more esoteric note, there has so far been little attempt by historians of economic theory to examine the specific personality traits of eminent economists within the context of creativity studies conducted by psychologists. Two examples will give a flavour of the potential for such analyses. First, Simonton (2004: 111) points out that creative individuals often exhibit particular behaviours which help to make their thoughts less predictable and thus supportive of chance combinations. Simonton highlights *openness to experience* as being the most important of these traits, manifested, as it can sometimes be, in a diversity of interests, a preference for novelty, and a tolerance of ambiguity. Keynes, for one, fits the bill on all three counts. Related to openness to experience is what Simonton refers to as *defocused attention*,

¹¹⁸ It has to be said that statistical studies have provided only weak support, if that, for the Planck Principle. The interested reader should refer to Hull, et al. (1978) and Levin, et al. (1995).

characterised by an individual's ability to conceive of two or more associations which are then employed to construct new combinations. Again, Keynes's use of concepts such as the multiplier, animal spirits, and liquidity preference to produce a theory of underemployment equilibrium seems to be a good fit.

Second are the various investigations which have been performed on the family backgrounds of creative individuals. By way of example, Roe (1952) (cited in Simonton 1988: 108) looks at the family histories of 64 eminent scientists. She finds that he was typically the first-born child of a middle-class family, the son of a professional man, suffered periods of poor health when he was young, had a very high IQ, and was a bookworm. All of these factors ring true of Keynes's early life. The only factor which Roe identifies as regularly being present in creative individuals, but which was not a feature of Keynes's childhood, was the loss of a parent. Rather, Keynes's parents enjoyed a long and happy marriage, both outliving their eminent son.

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