

Citation for published version:

HODGSON, G., GAGLIARDI, F., & GINDIS, D., 'From Cambridge Keynesian to institutional economist: The unnoticed contributions of Robert Neild', *Journal of Institutional Economics*, February 2018.

DOI:

<https://doi.org/10.1017/S1744137417000534>

Document Version:

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From Cambridge Keynesian to institutional economist: the unnoticed contributions of Robert Neild

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Abstract. Robert Neild (born 1924) has made a major contribution to economics and to peace studies. This paper provides a brief sketch of Neild's life and work. While noting his research in economic policy and peace studies, this essay devotes more attention to his largely unnoticed contributions to institutional and evolutionary economics since 1984. These are important in their own right, but they are especially notable because Cambridge heterodox economists have been devoted mainly to other approaches, including Marxism and post-Keynesianism. Neild's distinctive contribution is partly explained by his closeness to both Nicholas Kaldor and Gunnar Myrdal. Myrdal made explicit his adherence to the original American institutionalism: Neild extended that link to Cambridge.

1. Introduction

Robert Neild (born 1924) is a Cambridge economist who, in his long career, has made a major contribution in several fields, including economic policy and peace research.¹ In recent years he has written important work on the role of institutions, and on the need for an evolutionary approach in economics. His personal reminiscences also cast further light on the history of the Faculty of Economics at the University of Cambridge, from a largely 'heterodox' and 'left' institution in the 1945–80 period – under the leadership of Richard Kahn, Nicholas Kaldor, Joan Robinson and Piero Sraffa – to a much more mainstream and mathematics-driven department after 1985.

The purposes of this article are (1) to provide a brief sketch of Neild's life and work and his experience of economics in Cambridge, and (2) to focus more extensively on his more recent and relatively neglected contributions to modern

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1. The authors are very grateful to Geoffrey Harcourt, Robert Neild, Tony Thirlwall and anonymous referees for comments on earlier versions of this essay.

institutional and evolutionary economics.² Neild's other major contributions – to economic policy, to peace studies and to the financial history of the University of Cambridge – are mentioned briefly, but fuller analyses of these are beyond the scope of this article.

Neild was born on 10 September 1924 in Peterborough (now in Cambridgeshire), UK. His family included Liberals and Quakers. He boarded as a pupil at Charterhouse School – one of the leading British public schools. Neild (2013b) described his education there as 'indifferent'. But he 'was lucky in history because I had a remarkable teacher in the shape of Walter Sellar, who was part-author [with R. J. Yeatman] of *1066 and All That*'.

Neild joined the Royal Air Force in 1943 but was invalided out in 1944 and saw no action. He then joined the operational research section of RAF Coastal Command where he was put to work in a team of scientists trying to assess how high patrols should be flown when searching for U-boats that stayed underwater equipped with a breathing pipe. Neild has described this as a formative influence and the best education he received. In the summer of 1945 he moved to the continent to join a team assessing the effects of attacks on ground targets by tactical aircraft. As he travelled through Germany he saw the bombed city of Hamburg, the residues of the concentration camp at Belsen and other horrors of war. In the autumn of 1945 he returned to Trinity College, Cambridge.

Section 2 gives a sketch of Neild's subsequent life and work, focusing on his experiences at Cambridge and his observations concerning the Faculty of Economics and its evolution. Section 3 discusses his major work on the role of institutions in the very different fates of the oyster industries in Britain and France. Section 4 examines his major work on the theory of corruption and his development of an evolutionary approach. Section 5 concludes the paper.

2. Leaving and re-entering Cambridge

Neild was allowed to obtain his degree in two years because of his previous attendance at Cambridge on an RAF short course. Neild (2013b) related how he was 'taught or not taught by Piero Sraffa'. Partly because of his disdain for mainstream economics, 'Piero would not teach anything, he would only criticize'. Also Sraffa felt uncomfortable in front of audiences and could not face giving lectures.³ Neild taught himself by reading Alfred Marshall's *Principles* and other works. He and Sraffa became good friends, but Neild was

2. Professor Neild was interviewed by the authors on 10 December 2013 and 7 February 2017 (Neild 2013b, 2017b). He openly embraces an 'evolutionary approach' but does not describe himself as an 'institutional economist'. We use the term 'institutional economist' in the broad and relatively baggage-free sense of any researcher into the nature and functions of institutions in the economy. In this sense, Neild surely qualifies as one.

3. Thirlwall (1987, p. 78) related an incident in 1943 when Sraffa was due to give a lecture in Cambridge on Ricardo but couldn't face it, so Nicholas Kaldor stepped in at short notice, giving the lecture using Sraffa's notes.

never persuaded that Sraffa's system of analysis – consummated in his famous *Production of Commodities* (Sraffa 1960) – could serve as an engine of enquiry for understanding the real world.

Neild saw John Maynard Keynes in early 1946 when, shortly before his death, Keynes gave a talk at the Trinity Political Economy Club:

[Although he] looked tired and weak . . . he came to life in an extraordinary way. It was not what he said but how he said it. He had a gift with words I have never seen equalled. . . . I liken him to Mozart: one could pluck musical notes from the air with magical effect, the other words. (Neild 2007)

Neild graduated with a first and 'could have stayed on as a research student'. Contemplating economics at Cambridge, he did not 'see anything that represented research as I understood it – that is exploring the real world'. At that time, relatively few lecturers in economics in the UK had PhDs (Locke 1988). Neild (2013b) regarded Cambridge then as an 'ivory tower' and declared: 'I wasn't sure what to do.'

Sraffa enabled Neild's first escape from Cambridge by introducing him to Nicholas Kaldor, who was then joining the Economic Commission for Europe, in Geneva. There Neild became part of an inspirational group of free-thinking economists, including Gunnar Myrdal. Myrdal was the Executive Director of the Commission and Kaldor was Director of its Research and Planning Division (Thirlwall 1987, pp. 104–6). In 1951 Neild returned to the UK to work as an economist in the Cabinet Office and Treasury.

Neild returned to Cambridge in 1956 as a Teaching Fellow at Trinity College. In addition to lectures, he had to do 12 hours of college supervision a week (Neild 2012b, p. 73), which in the Cambridge system entails tutoring individual students, one or two at a time. 'The other dark aspect of life was the political goings-on in the economics faculty' (Neild 2012b, p. 73). 'I found the faculty awful, it was so political and savage and full of prima donnas' (Neild 2013b).⁴

Neild (2012b, pp. 73–4) related the following illustrative incident. 'Within weeks of my arrival I was approached by Richard Kahn, saying that annual elections to the faculty board were coming up and that he thought I should know how "we are voting"'. Neild asked the meaning of 'we' in this statement: 'I didn't mind being told his list, but I would decide for myself how to vote'. Neild voted for a mixed ticket. Later, in the presence of Joan Robinson,

Kahn led me aside and . . . said he was sorry to see how I had voted at the faculty election. . . . I felt I was caught by a mafia and had been subjected to bullying by its capo. My distaste for the ways of the faculty was one reason

4. It is beyond the scope of this paper to compare this appraisal fully, with those of the many other people involved. Our intention here is to (1) report Neild's view for the record, and (2) highlight aspects of the Cambridge culture and institutions that affected Neild. It is also far beyond the scope of this paper to appraise Cambridge heterodox economics as a whole. See the important analysis by Martins (2014).

why I left Cambridge after two years. . . . I was interested in doing research into how the economy worked, for which I had little time while committed to so much teaching.

Also his first wife Nora was unhappy in Cambridge.

It was in pursuit of research ‘into how the economy worked’ that Neild left Cambridge in 1958 for the National Institute for Social and Economic Research (NIESR) in London. He became Editor of its *Quarterly Economic Review*. Then he was promoted to Deputy Director of the Institute. After the election of a Labour government under Harold Wilson in 1964, Chancellor of the Exchequer James Callaghan appointed him as Chief Economic Advisor to the Treasury. Neild’s appointment coincided with the recruitment of Kaldor as the Chancellor’s Special Advisor on the Social and Economic Aspects of Taxation Policy (Thirlwall 1987, p. 231–4). In 1966–8, Neild served as a member of the Fulton Committee on the Civil Service.

Among his contributions at the NIESR was an important study of *Pricing and Employment in the Trade Cycle* (Neild 1963). With the aim of improving the NIESR’s economic forecasts, Neild tested and confirmed the hypothesis, suggested by Wynne Godley, that output prices were correlated with an index of wages divided by the *trend* of productivity (and an index of material prices) – not with wages divided by *actual* productivity. He further showed that actual productivity fell in the recession and rose in the boom, as workers were not sacked or taken on in line with output changes. Since employers retained labour in recessions, the income of workers held up relatively well and profits suffered. Neild saw that the result had significant implications for Keynesian macro-economics. It explained why the multiplier was lower than was commonly expected. It supported the view that prices of manufactures were administered on a ‘full-cost’ basis in a world of increasing returns: as manufacturers introduced new machinery and new techniques that increased productivity, they typically reassessed their full costs and reset their prices.

In 1967 at the height of the Cold War and the East–West arms race Neild was appointed the founding director (with Alva Myrdal and Gunnar Myrdal as chairman) of the Stockholm International Peace Research Institute (SIPRI). He and his team, with the backing of the SIPRI governing board, created the SIPRI Yearbook with information on arms levels. They undertook major studies of the arms trade and the problem of chemical and biological warfare. By alerting governments to the dangers, SIPRI helped to bring about the subsequent treaties banning chemical and biological weapons, but they did not slow the nuclear and non-nuclear arms race or check the arms trade. Neild came to the view that the East–West arms negotiations failed because they were based on the pursuit of a balance in arms, a condition that was impossible to define, given all the asymmetries of geography and military capabilities, and was not a condition of stability.

When Neild returned to the problem of the arms race in the 1980s, he and Anders Boserup critically analysed the theoretical and practical defects of the

pursuit of balance and studied how the adoption of alternative, less threatening, non-nuclear strategies might bring the arms race to an end (Boserup and Neild 1990; Neild 1981, 1990). With others, Neild was influential in promoting the approach, and it was adopted by USSR General Secretary Mikhail Gorbachev (Spencer 2010).

Neild's approach was empirically driven yet strategically sophisticated. Other economists have tried to make a contribution in this area using game theory. Neild (2013b) took a different view: 'there is no game, because if either of us shoots with a nuclear weapon we are both dead and the game is over, there are no repetitive moves'. In this strategic context game theory 'was always useless . . . except perhaps for telling you that you were in a hopeless impasse'.

A chair in the Cambridge economics faculty became vacant in 1971. There were several strong candidates, including others that were backed by the left, but Kaldor's influence over the appointment proved decisive. Neild returned from Stockholm to take up the chair. This was during a period of global leftist resurgence and political turmoil. The Cambridge capital controversies were at their height. But Neild was highly sceptical of their value.⁵

Joan Robinson had made visits to China during the Cultural Revolution, returning to report 'how wonderful China was' under Mao Zedong (Neild 2013b). Robinson (1969, pp. 35–6) had reported that Mao's Great Leap Forward in 1958–61 (which in fact had led to a catastrophic famine and about 40 million deaths) 'was not a failure after all'. Neild did not share these illusions.⁶ Neild (2012b, pp. 95–6) wrote on the general state of the Faculty of Economics:

The faculty was unpleasant for several connected reasons. Economics was being taken over, with Americans in the lead, by mathematicians . . . My earthbound approach was out of fashion. . . . Politically the faculty was a snake pit in which the rise of the mathematical economists was being resisted by a combination of Keynesians, empiricists and communists. As a Keynesian/empiricist I was in the latter camp. Ruled by the mafia-like methods I had encountered in the 1950s, its members had a majority on the faculty board.

Ideological divisions within the faculty were complex. Events in the 1980s confirmed that normative or ideological positions did not always correspond

5. See Harcourt (1972) and Cohen and Harcourt (2003). In his classic account of these controversies, Harcourt (1972, p. 13) claimed that 'if one were to be told whether an economist was fundamentally sympathetic or hostile to basic capitalist institutions, especially private property and the related rights to income streams, or whether he were a hawk or a dove in his views of the Vietnam War, one could predict with a considerable degree of accuracy both his general approach to economic theory and which side he would be on in the present controversies.' But this particular correspondence between economic theory and politics may be due to academic circumstances rather than direct causation in either direction. Politically, Neild was on the left. But by regarding the controversies as largely a waste of time, he was out of line with many of his colleagues.

6. As Tahir *et al.* (2002) have shown, Robinson's position on the Chinese regime did evolve and she became more critical of some of its policies.

one-to-one with theoretical positions.⁷ When Margaret Thatcher was elected UK Prime Minister in 1979, she began her infamous experiment in monetarism. Opposition to monetarism was found among general equilibrium theorists, as well as others who were Keynesians or Marxists.

In 1981 Neild co-drafted with Frank Hahn – a mainstream general equilibrium theorist and also a Keynesian – a letter against monetarism that was signed by 364 economists and ‘created rather a stir when it was published’ (Neild 2012c). The signatories pointed to the absence of theoretical foundations and empirical support for the monetarist proposition that economic activity and employment will recover automatically from any fiscal or monetary squeeze.

Another of Neild’s influential contributions during his 1971–84 employment at Cambridge was on budgetary policy. In *The Measurement and Reform of Budgetary Policy*, Terry Ward and Neild (1978) advocated the use of the ‘constant employment’ balance in the budget as the measure by which fiscal policy should be judged. They criticized the existing British system whereby public expenditure was planned for five years ahead in real terms and taxation was decided separately for one year ahead with the aim of stabilizing effective demand. They advocated that expenditure and tax be planned together on a constant employment basis. Rechristened the ‘structural’ budget balance, its use is now standard practice in the EU and beyond.

From 1979 to 1980 Neild was Vice-Chairman of the Armstrong Committee on UK Budgetary Reform. Neild (2013b) noted ironically that it was ‘thanks to Maggie Thatcher’ that he was able to retire in 1984 when he was aged 60: ‘She cut university budgets so savagely that Cambridge and other universities introduced a golden handshake system’, enticing people to take early retirement. He was keen to retire from the faculty in-fighting and delighted with the opportunity to devote his time to research. He became a Life Fellow of Trinity College. Two of his major post-retirement contributions are examined in sections 2 and 3 below.

One of Neild’s quips has become famous. In 1998, rebutting Tony Blair’s claims concerning the threat of Saddam Hussein’s biological weapons in Iraq, Neild responded:

To say that the UN inspectors found ‘enough to have killed the world’s population several times over’ is equivalent to the statement that a man in his prime can produce a million sperm any day, therefore he can produce a million babies a day. The problem in both cases is that of delivery systems.⁸

7. Note, for example, that the Marxist Oskar Lange (1936–7) deployed Walrasian general equilibrium theory in his defence of socialism, while Friedrich Hayek (1937) criticised the same mainstream theoretical approach in his vindication of a market economy. The prominent advocacy in Cambridge (and elsewhere) of the term ‘left-wing economics’ is misleading for these and other reasons.

8. *Financial Times*, 16 February 1998. Note here Neild’s continuing pre-occupation with matters of peace and his related criticism of T. H. Huxley cited in section two below.

Neild's testimony concerning the Faculty of Economics in Cambridge dovetails with accounts by others. For example, in his memoirs of the university in the 1940s and 1950s, Neild's contemporary Harry Johnson painted a critical picture of Cambridge academic life. Its domination by an arcane and disjointed institutional system of autonomous colleges gave disproportionate institutional bias towards undergraduate teaching rather than postgraduate research.⁹ Consequently, as Robert Locke (1988, p. 99) observed, 'isolating ... students and tutors in colleges ... denied them the specialized instruction taught by acknowledged experts in specific fields of economics, which is the hallmark of American undergraduate and graduate education.'¹⁰

Robinson and Sraffa died in 1983. Kaldor followed in 1986. Three giants of Cambridge economics were gone. The vacuum was partly filled by a younger generation of mathematically driven economists, keen to emulate the perceived best practice in the USA. Furthermore, as Neild (2017b) noted, there was now unprecedented pressure to publish after the introduction of the first government-driven Research Assessment Exercise in 1986. This does not overlook, of course, the hugely important contributions of Keynes, Kaldor, Robinson, Sraffa and others before the 1980s.

3. Oysters and institutions

The English, the French and the Oyster (Neild 1995) is a succulent feast of a book, with rewards for readers of different kinds. Neild wrote the book as a result of his love of that mollusc and his interest in the evolution of its consumption. He wondered why oysters were more scarce and expensive in Britain than in France. He looked for an explanation but could not find one. So he researched the topic himself (Neild 2013b). While the book was not primarily an academic study, it dovetailed with his enduring interest in the 'diversity of cultural evolution that shaped institutions' (Neild 2017a, p. 6).

The book can be read with reward by gourmets with no interest in economics, while economists and other social scientists can revel in its historical and institutional analysis of the oyster industry, as an illuminating complement to the

9. The Cambridge colleges and the university are all separate legal entities, albeit bound together by numerous contracts and agreements. Consequently, it is possible to be employed by a college and not the university, by the university but not a college, or employed by both. Oxford also has legally separated colleges but it has developed more fully a university-wide system where some colleges specialise in academic disciplines, thus deploying greater concentrations of particular disciplinary expertise at the college level. Note that Neild (2008, 2012a) himself carried out studies of the financial history of Cambridge University and Trinity College.

10. Johnson saw Cambridge economics as 'only a tool for furthering left-wing politics at the level of intellectual debate' (Johnson and Johnson, 1978, p. 150). For more on the Cambridge institutional environment see Winch (1969) and Tribe (2000). Pasinetti (2007) and Harcourt (2009) add other recollections of the faculty. Thirlwall (1987, 2015), Pasinetti (2007), Harcourt and Kerr (2009), King (2009) and Martins (2014) give accounts of the ideas of leading Cambridge economists.

more famous study of other common-pool resources by Nobel Laureate Elinor Ostrom (1990).¹¹

In the middle of the 19th century, oyster production and consumption were as extensive and popular in Britain as in France. Charles Dickens in *The Pickwick Papers* (1836), and Henry Mayhew in his classic *London Labour and the London Poor* (1851), noted that oysters were plentiful and consumed by the poor as well as by the rich. The new railways brought fresh oysters from the coasts to London and other cities. Some estimates suggest that per capita oyster consumption was higher in Greater London than in France (Neild 1995, p. 30).

The railways had facilitated an increase in the demand and supply of oysters in both England and France. In both countries the result was severe over-fishing of the oyster, leading to a precipitous fall in oyster production in England between the 1850s and the 1880s. Estimates suggest that the number of oysters sold in Billingsgate – their principal market in London – fell by 90%. During this period of overall price deflation, the nominal price of some types of oyster increased about sevenfold (Neild 1995, p. 55). France faced a similar problem.

Neild compared the responses of the French and UK governments to this mid-century crisis. He showed that differences in institutional heritage and ideological predilection led to very different recommendations and policies. The result was the near-extirpation of the oyster industry in Britain but its survival and prosperity in France.

Neild (1995, p. 52) defined a ‘common property right’ in terms of ‘no exclusion of anyone from the use of a property’. This is close to Ostrom’s (1990) definition of ‘common pool resources’, although he was unaware of her work. These are ensembles of assets, which are depleted by use, but where it is too costly to exclude other users. Common-pool resources differ from public goods (such as lighthouses), which are not depleted by use but are similarly non-excludable. Club goods (such as film shows in cinemas) are by definition excludable but not depleted by use (they are non-rivalrous).

Notably, Neild thought about the solution to the commons problem in terms of the standard private *versus* public and market *versus* state distinctions, whereas Ostrom showed that other workable governance arrangements had been used. Ostrom showed in her case studies that arrangements to manage common-pool resources effectively had evolved over time, but without recourse to individual property rights, market pricing or overall planning. Instead customs and rules had evolved to ensure the survival and continuing exploitation of the assets.¹²

In both France and England, longstanding custom and legislation had enforced a closed season in the summer months, ensuring that the oyster population

11. Neild (2017b). Neild also omitted any discussion of Douglass North’s work on the role of property rights in economic development (e.g. North 1981) or of the relevant literature on legal origins (Glaeser and Shleifer 2002). But, to be fair, his intention in this case was not to write an academic book.

12. As well as Ostrom (1990) see Ostrom (2010) and Ostrom and Basurto (2011).

could recover. But unlike the case studies in Ostrom's book, Neild addressed a problem of common-pool resources facing massive economic and environmental pressures, obliging governments to investigate and make recommendations. The UK and French governments solicited the advice of oyster fishers and scientific experts. But the institutional conditions and the policy responses were very different.

A Royal Commission into Sea Fisheries was set up in 1866, which devoted attention to the problems with oysters, as well as to the supply of sea fish, particularly the herring. One of its three members was Thomas Henry Huxley – the famous friend and defender of Charles Darwin.¹³ Their report noted that a spawning oyster can produce hundreds of thousands of eggs, and wrongly inferred that the oyster shortage could not have resulted from over-fishing.¹⁴ Their report proposed that where possible oyster beds should be placed under private ownership, to encourage investment into and maintenance of the resource. But they also proposed the removal of all regulations and restrictions upon oyster fishing – including ending the closed season in the summer months (Neild 1995, p. 67). The free market should hold sway. This policy proved to be a disastrous failure. Neild (1995, pp. 71–2) commented on Huxley's role:

After his triumphs in the Darwinian battle, Huxley's appetite for laying down the law and striking down those with different beliefs caused him increasingly to address political and philosophical subjects which were far beyond the realms of the physical sciences and hard evidence. . . . It is the misfortune of the British oyster that it fell foul of him at that stage of his career, as well as meeting the high tide of *laissez-faire*.

Subsequent attempts to establish private property rights in oyster beds largely failed, because they proved to be too complex and costly as they were encumbered by the ancient entanglements and ambiguities of British property law.

England had experienced a long history, from the Magna Carta of 1215 to the Glorious Revolution of 1688, where the powers of the monarch were checked by strong countervailing powers. In particular, the barons had forced King John in the Magna Carta 'to stop enclosing the shore and seabed for his own purposes' (Neild 1995, p. 86). But this led to a complex maze of devolved property rights. These entanglements made the recommendations of the 1866 Royal Commission

13. Despite Huxley being described as 'Darwin's bulldog' it should be emphasized that their views were different in key respects. Huxley was not convinced that natural selection was the principal evolutionary mechanism and he gave less emphasis than Darwin to the importance of adaptation (Ruse 1979). Huxley drew the conclusions from his view of evolution that nature had made us self-seeking individualists, in contrast to the stress on the evolution of human cooperation and morality in Darwin's (1871) work. See also De Waal (2006).

14. Note the connection here with Neild's 1998 rebuttal, cited above, of Blair's claims concerning the threat of biological weapons in Iraq.

unenforceable. Problems in defining property rights over the shore and seabed persist in the UK.

The French response to their 19th-century oyster crisis rested on very different institutional foundations, stemming from the period before the 1789 Revolution:

In France the king stopped the private enclosure of the shore and seabed in order to make it a public domain where he – and the governments which succeeded the monarchy – were able to grant concessions and take other steps to conserve and develop the supply of oysters. . . . Thus the authoritarian actions of the French monarchy providentially furthered the interests of the producers and consumers of oysters better than the anti-authoritarian actions of English barons. (Neild 1995, p. 86)

Neild thus revealed a hardly noticed paradox concerning the development and nature of property rights in different contexts. The prevailing narrative of modern institutional economists is that clear property rights became well-established, first in England, by placing the powers of the monarch in check, thus reducing the risks of arbitrary confiscation.¹⁵ By contrast, without citing this rival narrative, Neild showed that checks on the king's power had led to an impossible tangle of rights over the shore and seabed in the UK.

Regarding France on the other side of the Channel, a prevailing account is that its centralized monarchy restricted the development of property rights, trade and industry. There is probably some truth in this, but the argument does not apply neatly to fisheries and oyster beds. Neild showed that concentrated ownership of the shore and seabed, in the hands of first the monarch and then the republican state, created the opportunity to establish clear leasehold property rights that could be exploited by the oyster producers.

There are further issues concerning the comparison of the English and French political and legal systems that need to be brought into the account. Edward Glaeser and Andrei Shleifer (2002, pp. 1195) argued that in medieval England 'judges and juries faced both physical and financial incentives to cater to the preferences of local feudal lords'. By contrast, feudal France developed a system of state-employed judges who were 'better insulated' from local pressures and interests: 'France chose to rely on state-employed judges precisely because local feudal lords were too powerful.' This does not necessarily imply that English lords were less powerful, but that France, unlike England, was capable of a centralizing state response. In France there was a massive tax-funded state bureaucracy, surmounted by a relatively more powerful king (Carruthers 1996,

15. Prominent versions of this thesis are found in North and Weingast (1989) and Acemoglu *et al.* (2005). Both works identify the 1688 Glorious Revolution as crucial in restraining monarchical powers. For criticisms of this argument see Hoppit (2011), Ogilvie and Carus (2014) and Hodgson (2017). The evidence suggests that 1688 made little difference to the security of property rights, but eventually led to financial institutions and other circumstances that made landed wealth more alienable and usable as collateral for loans.

p. 23). While the 1789 Revolution dismantled much of the feudal state, Napoleon Bonaparte and others followed by building a stronger system of centralized political and legal powers in the early 19th century.

Paradoxically, it was thus easier to establish clear and effective property rights over oyster resources in *étatist* France than liberal Britain. The British fostered the myth that *laissez-faire* was a longstanding natural condition, as proclaimed by Huxley – the influential naturalist. But in reality all property rights depend on historically specific, complex, political and legal institutions, which are not universal for all time. Property rights themselves involve several aspects or incidences (Hodgson 2015a; Honoré 1961).

Neild understood that property rights are systems of legal rules, not merely instances of control or possession, as in the manner of ‘the economics of property rights’ (Hodgson 2015b). Hence the response to an existing chaos of complex legislation and overlapping jurisdictions should not be to do nothing (as many proposed in the UK) but to ‘tidy up’ by legislative reform (Neild 1995, p. 112).

In France in the 1860s the authoritarian Emperor Napoleon III accepted scientific advice on how to safeguard the oyster supply and granted concessionary seabed leases to oyster producers. Conservationist policies were further developed after the Franco-Prussian War. The two world wars in the 20th century severely interrupted French production, but it has recovered thereafter.

Of course, the relative success of the policy of Napoleon III does not imply that state ownership of assets is superior in this particular case, or more generally. Neild made no such claim. Peculiar political conditions impelled the French Emperor to take a beneficial course of action. The most important overall message is that market solutions cannot work unless clear property rights concerning use, benefit and responsibility are established; historically, at least in this particular French case, the state facilitated their development.

Neild also shows that the evolution of the British and French oyster industries were affected by laws and cultural practices dating back centuries. They are cases of strong, path-dependent evolution (Arthur 1989; David 1985, 1994).

Neild (1995, ch. 12) related how the regulation of the British oyster industry remained in an ‘unsatisfactory condition’ until 1993 when new and better regulations were introduced as a result of membership of the Single Market of the European Union. It seems that supra-national forces are needed to shake the British oyster industry from its century of path-dependent relapse.

4. Corruption and institutional evolution

In his next major study, Neild turned to the problem of corruption in many economies. Myrdal (1968) had discussed corruption extensively in his major book on economic development. Neild (2002, p. 223) reported a conversation with Myrdal in the 1970s, ‘where we talked at length about corruption in India, a country in which we had both lived, and ended up agreeing that it would be

interesting to turn the question on its head'. As Neild (2012b, p. 106) put it later: 'what needs to be studied is not why is there corruption, but why rulers ever get rid of corruption' which has 'been normal throughout history'. As Neild (2017a, p. 6) pointed out: 'For if rulers gain and hold power by corrupt means, for them to abolish corruption is likely to be political suicide.' Neild (2002, p. 223) suggested this approach 'unsuccessfully to others, and, at about the end of 1995' he decided to tackle it himself.

Unlike his book on the oyster industry, *Public Corruption* moves quickly towards a theoretical framework. Neild defined public corruption and put forward an evolutionary theory to why it was largely cleaned up in Northern Europe in the 18th and 19th centuries.

Neild recognized the existence of corruption in both public and private organizations. This itself is worth underlining, because as Arvind Jain (2002, p. 73) reported, 'there is a consensus that corruption refers to acts in which the power of public office is used for personal gain in a manner that contravenes the rules of the game'. But if corruption is confined to the public sphere *by definition*, then it can be diminished by reducing the size of that sector. This commonplace but flawed definition is blind to private sector corruption and it has skewed policy initiatives in favour of exclusively market-based and state-minimizing solutions to the problem (Hodgson and Jiang 2007).

Neild did not take that route, but chose to concentrate on public sector corruption because it is tied up with the evolution of states and because the extent of corruption in the public sphere influences the scale of its presence in private organizations. Neild (2002, p. 6) defined public corruption in terms of the breaking of rules for private gain. He rejected the idea that the extent of corruption was necessarily correlated with the size of government:

But a moment's consideration of history shows that this is not so. For example, the reduction of corruption and the great improvement of the quality of government in Britain in the latter part of the nineteenth century went hand in hand with an extension of the scope of government; they were both part of a general wave of reform.

Neild (2002, p. 6) pointed out that as government becomes more complex, more rules and decisions are involved. The degree of corruption is the proportion of decisions made corruptly, i.e. by breaking the rules. When relatively uncorrupt governments developed in Northern Europe, 'new rules were introduced which forbade practices that were previously permitted, and the enforcement of rules was improved'. By contrast, some countries have tried more recently to stem corruption by reducing the public sector. Neild explained:

[A] policy of trying in a heavily governed country to reduce the scope of government, and hence the number of rules that have to be enforced, may be accompanied by denigration of public service and cuts in its pay and conditions of such severity that, in combination with an idealization of private gain, it may

produce an increase rather than a decrease in the rate of corruption. Russia today is an example.

He then discussed a number of factors that may influence the level of corruption, from religion to geography. Neild (2002, p. 13) pointed out that the ‘establishment of a career public service, selected by competition and given security and high status, was the common means of reforming the civil and military services in Europe’. A relatively free press is also important to expose corruption and campaign for reform.¹⁶

Neild (2002, p. 13) then made a crucial move: ‘Since these various factors do not fit coherently together, I have sought a theoretical framework within which to try to bring them into some order.’ For all his commendable devotion to empirical grounding, Neild was fully aware of the need for a theoretical framework to organize factual information, to make some kind of sense and to generate a positive heuristic of further enquiry.¹⁷

Accordingly, Neild turned to the evolutionary theory of the sociologist Gary Runciman (1989, 1998) who was also a fellow at Trinity College (Neild 2012b, pp. 106–7). Neild (2017a) confirmed the theoretical influence of Runciman as crucial. While most sociologists eschew all ideas from biology, Runciman had applied Darwinian principles to the evolution of social entities.¹⁸

Taking his cue from this evolutionary perspective, Neild took nation states as the objects of selection in a competitive process. Levels of corruption became outcomes of this competitive selection. He focused on the period from around the late 17th century (when public corruption was rife) until end of the 19th century (when it was much diminished) in the main states of Northern Europe. During this period, military competition involved mass mobilizations of large numbers of trained troops and the support of state bureaucracies. Under these conditions, Neild (2002, p. 14) argued that:

[M]ilitary competition between nations has favoured the expansion of the less corrupt *vis-à-vis* the more corrupt: those nations that have developed efficient, relatively uncorrupt governments have been able to mobilize their resources for war and military domination more effectively than the more corrupt and less efficient . . .

Clearly this is not the only explanatory factor, but Neild argued that it has been a major one. The needs of war set up an imperative to gather taxes more effectively and to mobilize human and material resources. Combined with the

16. It would have been useful if Neild had compared his arguments here with those emanating from the large literature on public choice, emanating from the work of Buchanan and Tullock (1962) among others.

17. Neild’s overall methodological approach here is comparable to that of Marshall (1885). On Marshall’s methodological outlook see Groenewegen (1995), Hodgson (2001, ch. 8) and Hart (2012).

18. Precedents include Veblen (1898, 1899) and Campbell (1965). For a brief history and further development of this approach see Hodgson and Knudsen (2010).

effects of the Enlightenment on science and politics, ‘a combination of domestic and international forces combined to foster less corrupt government’ (Neild 2002, p. 19).

Neild then outlined a number of case studies, including Prussia (which eventually dominated united Germany), France, the United States and (at much greater length) Britain. He showed how evolutionary forces helped to diminish corruption – albeit to different degrees – in these countries. Neild puts the main burden of explanation on selection pressures at the national level. He goes into limited detail into what and how rules changed within nations in response to the selection pressure.

The conclusions of this book are pessimistic. Conventional military competition has diminished among developed countries since the Second World War. Instead, the form of any military conflict between developed nations would involve high-technology weapons of mass destruction, rather than the mobilization of large numbers of troops requiring a relatively efficient state machine. Consequently, military competition cannot play the role it formally did in reducing corruption. Solutions to the problem of stemming corruption in both the developed and less-developed world must be sought elsewhere.

Since the publication of his book on corruption, he has argued for the adoption of a Darwinian-style evolutionary approach in economics. Neild (2012b, p. 107) wrote: ‘I became convinced that evolutionary theory is the right approach to the social sciences and they will not become useful again till they adopt it.’

In his most recent statement of his evolutionary approach, Neild (2017a, p. 2) criticized mainstream economics for placing an emphasis on unrealistic static, equilibrium outcomes and for taking the institutional framework of the economy for granted. In particular, neoclassical economics ‘concentrates on the allocation of scarce resources and does not consider how the ownership of those resources comes about, and it offers a vague vision of an ideal future brought about by market forces alone. An evolutionary approach avoids these defects.’ Neild cited works by Thorstein Veblen (1898), Joseph Schumpeter (1942), Kenneth Boulding (1981), Richard Nelson and Sidney Winter (1982) and Christopher Freeman (2008).

Neild made a strong plea that an empirically grounded, evolutionary approach would help to integrate the social sciences and build them upon a fuller scientific theory of human behaviour. Neild’s (2017a, p. 166) research relies on “direct observation of what has been and is happening in the world, and description and interpretation of the findings in words and numbers that are comprehensible to politicians and other interested citizens . . . It [also] requires a revival of narrative economic history”. These features are illustrated in his studies of the oyster industry and of corruption. Both works show the evolution of institutional rules of ownership and behaviour, in a dynamic framework. Both use theory, empirical findings and historical narratives to inform policy.

Neild did not engage in recent debates concerning different usages of the term ‘evolution’ and the arguments within the ‘evolutionary’ camp for and against a ‘generalized’ Darwinian approach (Aldrich *et al.* 2008; Buenstorf 2006; Hodgson and Knudsen 2010). But he did express concern that some non-Darwinian evolutionary approaches had not escaped the mainstream predilection with equilibria. Neild (2013b) reported that he had ‘skimmed’ issues of the *Journal of Evolutionary Economics*: ‘Nearly all of it ... consists of starting from existing market economics and saying how can we modify it to make it a bit evolutionary’.¹⁹

Neild’s plea to move economics in an evolutionary direction retains its force and relevance today. Although he makes it clear that some bits of mainstream theory can be retained and fitted within an evolutionary framework, Neild (2013a, p. 1) does not mince his words: ‘Economics is, deservedly, a subject in disgrace.’ Advocacy or complicity in ‘the theory that financial markets should be freed has been applied with disastrous effect across the world’. He attacked the notion that individuals are merely ‘self-serving individuals’, while also rejecting oversimplifying assumptions about the availability of information and an ultimately static conception of the market system. For him, an evolutionary approach is the way forward.

5. Conclusion

Neild’s case studies of the oyster industry and of corruption fit in well with the themes that he highlights in his essay on ‘The future of economics: the case for an evolutionary approach’ (Neild 2017a). His book on oysters shows how institutions evolved – or failed to do so – in response to technological, cultural and economic developments. The study of corruption posits evolutionary forces of selection that indirectly act upon levels of corruption the theatre of war.

It is striking that Neild, without embracing it explicitly, was drawn closer and closer to the tradition of institutional and evolutionary economics that emanates from Veblen and other earlier American institutionalists. This gravitational pull is acknowledged by modern evolutionary economists such as Nelson and Winter.²⁰ This trajectory is particularly striking for a Cambridge economist. While Cambridge became a hotbed of heterodoxy in the 1960s and 1970s, evolutionary and institutional approaches made little impact. Instead, versions of post-Keynesian, Sraffian, Kaleckian and Marxist economics held sway.

19. Notably, Schumpeter’s greater inspiration was Léon Walras rather than Charles Darwin. Schumpeter followed Walras by giving extended emphasis on disturbances from equilibria, including examination of their causes and effects (Hodgson 1993, ch. 10).

20. Nelson (1995) and Winter (1990) have both referred approvingly to Veblen. Nelson (1996) has gone so far as to write: ‘[I now] understand fully that I am part of the old institutional economics’.

Neild's unique intellectual evolution becomes more understandable when one takes into account his early grounding in operational research and his close personal and intellectual connections with Kaldor and Myrdal. After starting out as a mainstream economist, Myrdal (1978) became influenced by the American institutionalists. This was not so true for Kaldor, but while at the London School of Economics he was inspired by the American economist Allyn Young. Young (1928), in turn, had drawn some inspiration from the American institutionalists, particularly their stress on the need for a dynamic approach (Hodgson 2001). Both Kaldor (1985) and Myrdal pursued a non-equilibrium principle of 'cumulative causation' – a term originally promoted by Veblen. In Myrdal's (1939, 1957) case the first inspiration was probably the positive feedback mechanisms in the monetary economics of fellow Swedish economist Knut Wicksell. Taken together, the Kaldor–Myrdal conduit provides a 'missing link' between Cambridge and the original institutionalists (Hodgson 1989). Neild greatly benefitted from their inspiration.

Neild's own contribution is worthy of much more attention than it has been given hitherto. As well as emphasizing the role of institutions in determining economic behaviour, Neild has stressed the value of a Darwinian and evolutionary framework in economics and other social sciences. But he did not pursue theory for its own sake. He has constantly stressed the need for empirical grounding in research, against the prioritization of mathematical techniques. His practical achievement has not been negligible.

References

- Acemoglu, Daron, Johnson, S. and Robinson, J. A. (2005) 'Institutions as a Fundamental Cause of Long-Run Growth', in P. Aghion and S. N. Durlauf (eds) *Handbook of Economic Growth: Volume 1A* (North Holland: Elsevier), pp. 385–472.
- Aldrich, H. E., G. M. Hodgson, D. L. Hull, T. Knudsen, J. Møkyr and V. J. Vanberg (2008) 'In Defence of Generalized Darwinism', *Journal of Evolutionary Economics*, 18(5), 577–96.
- Arthur, W. B. (1989) 'Competing Technologies, Increasing Returns, and Lock-in by Historical Events', *Economic Journal*, 99(1), 116–31.
- Boserup, A. and R. Neild (eds) (1990) *The Foundations of Defensive Defence* (Houndmills: Macmillan).
- Boulding, K. E. (1981) *Evolutionary Economics* (Beverly Hills, CA: Sage Publications).
- Buchanan, J. M. and G. Tullock (1962) *The Calculus of Consent: Logical Foundations of Constitutional Democracy* (Ann Arbor, MI: University of Michigan Press).
- Buenstorf, G. (2006) 'How Useful is Generalized Darwinism as a Framework to Study Competition and Industrial Evolution?' *Journal of Evolutionary Economics*, 16(5), 511–27.
- Campbell, D. T. (1965) 'Variation, Selection and Retention in Sociocultural Evolution', in H. R. Barringer, G. I. Blanksten and R. W. Mack (eds) (1965) *Social Change in Developing Areas: A Reinterpretation of Evolutionary Theory* (Cambridge, MA: Schenkman), pp. 19–49. Reprinted in *General Systems*, 1969, 14, 69–85.

- Cohen, A. J. and G. C. Harcourt (2003) 'Whatever Happened to the Cambridge Capital Theory Controversies?' *Journal of Economic Perspectives*, 17(1), 199–214.
- Carruthers, B. G. (1996) *City of Capital: Politics and Markets in the English Financial Revolution* (Princeton NJ, Chichester UK: Princeton University Press).
- Darwin, C. R. (1871) *The Descent of Man, and Selection in Relation to Sex*, 2 vols (1st edn) (London: Murray and New York: Hill).
- David, P. A. (1985) 'Clio and the Economics of QWERTY', *American Economic Review (Papers and Proceedings)*, 75(2), 332–7.
- David, P. A. (1994) 'Why are Institutions the "Carriers of History"? Path Dependence and the Evolution of Conventions, Organizations and Institutions', *Structural Change and Economic Dynamics*, 5(2), 205–20.
- De Waal, F. B. M. (2006) *Primates and Philosophers: How Morality Evolved* (Princeton: Princeton University Press).
- Freeman, C. (2008) *Systems of Innovation: Selected Essays in Evolutionary Economics* (Cheltenham UK and Northampton MA: Edward Elgar).
- Glaeser, E. L. and A. Shleifer (2002) 'Legal Origins', *Quarterly Journal of Economics*, 117(4), 1193–229.
- Groenewegen, P. D. (1995) *A Soaring Eagle: Alfred Marshall 1842–1924* (Aldershot: Edward Elgar).
- Harcourt, G. C. (1972) *Some Cambridge Controversies in the Theory of Capital* (Cambridge, Cambridge University Press).
- Harcourt, G. C. (2009) 'A Revolution Yet to be Accomplished: Reviewing Luigi Pasinetti, "Keynes and the Cambridge Keynesians"', *History of Economic Ideas*, 17(1), 203–8.
- Harcourt, G. C. and P. Kerr (2009) *Joan Robinson* (London: Palgrave Macmillan).
- Hart, N. (2012) *Equilibrium and Evolution: Alfred Marshall and the Marshallians* (London and New York: Palgrave Macmillan).
- Hayek, F. A. (1937) 'Economics and Knowledge', *Economica*, 4(1), 33–54.
- Hodgson, G. M. (1989) 'Post-Keynesianism and Institutionalism: The Missing Link', in J. Pheby (ed.) (1989) *New Directions in Post Keynesian Economics* (Aldershot: Edward Elgar), pp. 94–123. Reprinted in G. M. Hodgson (1991) *After Marx and Sraffa: Essays in Political Economy* (London: Macmillan).
- Hodgson, G. M. (1993) *Economics and Evolution: Bringing Life Back Into Economics* (Cambridge, UK and Ann Arbor, MI: Polity Press and University of Michigan Press).
- Hodgson, G. M. (2001) *How Economics Forgot History: The Problem of Historical Specificity in Social Science* (London and New York: Routledge).
- Hodgson, G. M. (2015a) *Conceptualizing Capitalism: Institutions, Evolution, Future* (Chicago: University of Chicago Press).
- Hodgson, G. M. (2015b) 'Much of the "Economics of Property Rights" Devalues Property and Legal Rights', *Journal of Institutional Economics*, 11(4), 683–709.
- Hodgson, G. M. (2017) '1688 and All That: Property Rights, the Glorious Revolution and the Rise of British Capitalism', *Journal of Institutional Economics*, 13(1), 79–107.
- Hodgson, G. M. and S. Jiang (2007) 'The Economics of Corruption and the Corruption of Economics: An Institutionalist Perspective', *Journal of Economic Issues*, 41(4), 1043–61.
- Hodgson, G. M. and T. Knudsen (2010) *Darwin's Conjecture: The Search for General Principles of Social and Economic Evolution* (Chicago: University of Chicago Press).
- Honoré, A. M. (1961) 'Ownership', in A. G. Guest (ed.) (1961) *Oxford Essays in Jurisprudence* (Oxford: Oxford University Press), pp. 107–47.

- Hoppit, J. (2011) 'Compulsion, Compensation and Property Rights in Britain, 1688–1833', *Past and Present*, **210**(1), 93–128.
- Jain, A. K. (2001) 'Corruption: A Review', *Journal of Economic Surveys*, **15**(1), 71–120.
- Johnson, E. S. and H. G. Johnson (1978) *The Shadow of Keynes: Understanding Keynes, Cambridge and Keynesian Economics* (Oxford: Basil Blackwell).
- Kaldor, N. (1985) *Economics without Equilibrium* (Cardiff: University College Cardiff Press).
- King, J. (2009) *Nicholas Kaldor* (London: Palgrave Macmillan).
- Lange, O. R. (1936–7) 'On the Economic Theory of Socialism', Parts 1 and 2, *Review of Economic Studies*, **4**(1), 53–71, and **4**(2), 123–42.
- Locke, R. (1988) 'Educational Tradition and the Development of Business Studies After 1945 (an Anglo-French-German Comparison)', in R. P. T. Davenport-Hines and G. Jones (eds) *The End of Insularity: Essays in Comparative Business History* (London: Frank Cass), pp. 84–103.
- Marshall, A. (1885) 'The Present Position of Economics', in A. C. Pigou (ed.) (1925) *Memorials of Alfred Marshall* (London: Macmillan), pp. 152–74.
- Martins, N. O. (2014) *The Cambridge Revival in Political Economy* (London and New York: Routledge).
- Myrdal, G. (1939) *Monetary Equilibrium*, translated from the Swedish edition of 1931 and the German edition of 1933 (London: Hodge).
- Myrdal, G. (1957) *Economic Theory and Underdeveloped Regions* (London: Duckworth).
- Myrdal, G. (1968) *Asian Drama: An Inquiry into the Poverty of Nations* (Harmondsworth and New York: Penguin and Twentieth Century Fund).
- Myrdal, G. (1978) 'Institutional Economics', *Journal of Economic Issues*, **12**(4), 771–84.
- Neild, R. (1963) *Pricing and Employment in the Trade Cycle: A Study of British Manufacturing Industry, 1950–1961*, National Institute for Economic and Social Research, Occasional Paper XXI (Cambridge: Cambridge University Press).
- Neild, R. (1981) *How to Make up Your Mind about the Bomb* (London: Andre Deutsch).
- Neild, R. (1995) *The English, the French and the Oyster* (London: Quiller).
- Neild, R. (1990) *An Essay on Strategy: As it affects the Achievement of Peace in a Nuclear Setting* (Houndmills: Macmillan).
- Neild, R. (2002) *Public Corruption: The Dark Side of Social Evolution* (London and New York: Anthem).
- Neild, R. (2007) Letter to Simon Keynes of 19 February.
- Neild, R. (2008) *Riches and Responsibility: The Financial History of Trinity College Cambridge* (Cambridge: Granta).
- Neild, R. (2012a) *The Financial History of Cambridge University* (London: Thames River Press).
- Neild, R. (2012b) *What Next? A Memoir* (privately published).
- Neild, R. (2012c) 'The "1981 Statement by 364 Economists" revisited', *Royal Economic Society Newsletter*, issue no. **159**, 11–14. Available at www.res.org.uk/view/article4Oct12Feature.html (accessed 10 October 2017).
- Neild, R. (2013a) *Economics in Disgrace: The Need for a Reformation*, GIDS Discussion Paper No. 01–13 (Lahore: Graduate Institute of Development Economics).
- Neild, R. (2013b) Interview with Robert Neild by F. Gagliardi, D. Gindis and G. M. Hodgson, 10 December.
- Neild, R. (2017a) 'The Future of Economics: The Case for an Evolutionary Approach', *Economic and Labour Relations Review*, **28**(1), 1–9. Available at <http://journals.sagepub.com/doi/10.1177/1035304616687445> (accessed 10 October 2017).

- Neild, R. (2017b) Interview with G. M. Hodgson, 7 February.
- Nelson, R. R. (1995) 'Recent Evolutionary Theorizing About Economic Change', *Journal of Economic Literature*, 33(1), 48–90.
- Nelson, R. R. (1996), Personal Communication to G. Hodgson, dated 6 March.
- Nelson, R. R. and S. G. Winter (1982) *An Evolutionary Theory of Economic Change* (Cambridge, MA: Harvard University Press).
- North, D. C. (1981) *Structure and Change in Economic History* (New York: Norton).
- North, D. C. and Weingast, B. R. (1989) 'Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England', *Journal of Economic History*, 49(4), 803–32.
- Ogilvie, S. and A. W. Carus (2014) 'Institutions and Economic Growth in Historical Perspective', in P. Aghion and S. Durlauf (eds) *Handbook of Economic Growth*, Vol. 2A (Amsterdam: Elsevier), pp. 403–513.
- Ostrom, E. (1990) *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press).
- Ostrom, E. (2010) 'Beyond Markets and States: Polycentric Governance of Complex Economic Systems', *American Economic Review*, 100(3), 641–72.
- Ostrom, E. and X. Basurto (2011) 'Crafting Analytical Tools to Study Institutional Change', *Journal of Institutional Economics*, 7(3), 317–43.
- Pasinetti, L. L. (2007) *Keynes and the Cambridge Keynesians: A 'Revolution in Economics' to be Accomplished* (Cambridge and New York: Cambridge University Press).
- Robinson, J. (1969) *The Cultural Revolution in China* (Harmondsworth: Penguin).
- Runciman, W. G. (1989) *A Treatise on Social Theory. Volume 2: Substantive Social Theory* (Cambridge: Cambridge University Press).
- Runciman, W. G. (1998) 'The Selectionist Paradigm and Its Implications for Sociology', *Sociology*, 32(1), 163–88.
- Ruse, M. (1979) *The Darwinian Revolution: Science Red in Tooth and Claw* (Chicago: University of Chicago Press).
- Schumpeter, J. A. (1942) *Capitalism, Socialism and Democracy* (London: George Allen and Unwin).
- Spencer, M. (2010) *The Russian Quest for Peace and Democracy* (Lanham, MD: Lexington Books).
- Sraffa, P. (1960) *Production of Commodities by Means of Commodities: Prelude to a Critique of Economic Theory* (Cambridge: Cambridge University Press).
- Tahir, P., G. C. Harcourt and P. Kerr (2002) 'On Joan Robinson on China', in P. Kerr (ed.) with the collaboration of G. C. Harcourt (2002) *Critical Assessments of Leading Economists*, vol. 5 (London and New York: Routledge), pp. 267–80.
- Thirlwall, A. P. (1987) *Nicholas Kaldor* (Brighton and New York: Harvester and New York University Press).
- Thirlwall, A. P. (2015) *Essays on Keynesian and Kaldorian Economics* (London: Macmillan).
- Tribe, K. (2000) 'The Cambridge Economics Tripos 1903–1955 and the Training of Economists', *Manchester School*, 68(2), 222–48.
- Veblen, T. B. (1898) 'Why is Economics Not an Evolutionary Science?' *Quarterly Journal of Economics*, 12(3), 373–97.
- Veblen, T. B. (1899) *The Theory of the Leisure Class: An Economic Study in the Evolution of Institutions* (New York: Macmillan).
- Ward, T. S. and R. Neild (1978) *The Measurement and Reform of Budgetary Policy* (London: Heinemann).

- Winch, D. (1969) *Economics and Policy: A Historical Study* (London: Hodder & Stoughton).
- Winter, S. G. (1990) 'Survival, Selection, and Inheritance in Evolutionary Theories of Organization', in J. V. Singh, (ed.) (1990), *Organizational Evolution: New Directions* (London: Sage), pp. 269–97.
- Young, A. A. (1928) 'Increasing Returns and Economic Progress', *Economic Journal*, 38(4), 527–42.