

THE INTELLECTUAL ISOLATION OF MAINSTREAM ECONOMICS

Tim B. Thornton

A distinctive aspect of mainstream (neoclassical) economics is its profound inability to engage in meaningful co-informing dialogue with other disciplines¹. Given that economic and social reality cannot be neatly segmented into disciplinary boundaries, such extreme isolationism is a problem. Leijonhufvud's faux anthropological *Life Among the Econ* satirises the situation well:

The Econ tribe occupies a vast territory in the far North. Their land appears bleak and dismal to the outsider, and travelling through it makes for rough sledding; but the Econ, through a long period of adaptation, have learned to wrest a living of sorts from it. They are not without some genuine and sometimes even fierce attachment to their ancestral grounds, and their young are brought up to feel contempt for the softer living in the warmer lands of their neighbours, such as the Polscis and the Sociogs...Despite a common genetical heritage, relations with these tribes are strained – the distrust and contempt that the average Econ feels for these neighbours being heartily reciprocated by the latter – and social intercourse with them is inhibited by numerous taboos. The extreme clannishness, not to say xenophobia, of the Econ makes life among them difficult and perhaps even dangerous for the outsider (Leijonhufvud 1973:327).

¹ At the fringes of mainstream economics, particularly at the research frontier, analysis can be less constrained by the neoclassical assumptions that will be analysed here. However, the vast majority of teaching and research continues to be neoclassical and so the critique remains reasonable in that it applies to the work of most economists.

Thornton, T.B. (2017)
'The Intellectual Isolation of Mainstream Economics'
Journal of Australian Political Economy
No. 80, pp. 11-25

This high level of isolationism has not always existed: classical political economists such as Adam Smith and Karl Marx saw themselves as practising a unified social science (Fine and Milonakis 2009a, 2009b), an ‘integrated field of moral, economic, and political inquiry’ (Gourevitch 2004: 1) that was the forerunner of contemporary social science (Burnham 2009). Of course, contemporary political economy² (or what is sometimes called ‘heterodox economics’³) continues the interdisciplinary orientation of classical political economy, but because political economy is also an area of knowledge eschewed by mainstream economics, it cannot function as any sort of conduit between mainstream economics and the social sciences. This journey of economic inquiry from being something close to a unified social science to becoming a field that is largely isolated from social science raises three obvious questions: what accounts for this situation? what form does this isolation take? and what can be done? This article addresses these three questions.

What accounts for the intellectual isolation?

Explaining the intellectual isolation of economics is an involved process and the concise account that will be provided here cannot do it full justice (interested readers may wish to consult Backhouse and Fontaine 2010; Fine and Milonakis 2009b; Weintraub 2002). Key explanatory variables include historical events such as the Second World War (Backhouse 2010), the Cold War (Fullbrook 2001) and the rise of neoliberal capitalism (Howard and King 2008). A role can also be ascribed to work of interest groups and think tanks (Cahill 2004), the media and universities (Stilwell 2011:Ch.40). The aesthetic and psychological appeal of mainstream economics is also a significant variable (Samuels 1989; Thornton 2017). Whilst a wide range of factors

² ‘Contemporary political economy’ is defined here to refer to schools such as institutional political economy, Post Keynesian political economy, Marxian/radical political economy, feminist political economy, ecological political economy and social economics. These schools analyse the production and distribution of goods and services from within a political, social, historical and philosophical context. This contrasts to mainstream economics which primarily focuses on market exchange without reference to any political, social, historical context.

³ For both intellectual and pragmatic reasons, political economy is my preferred term (for a rationale see Stilwell 2016; Thornton 2017).

are involved, significant explanatory weight should be placed on the marginal revolution of the 1870s that established the core theoretical and ontological foundations of neoclassical economics. Indeed, the reader will find that the analysis in this article continually goes back this particular intellectual fork in the road⁴.

The marginal revolution sought to establish a new line of analysis that imported ideas from the ‘hard’ sciences such as physics (Mirowski 1989) and which primarily utilised mathematical methods. Notably, there was a clear intention to distance this new analysis from the previous ‘political economy’ and its grounding in politics, history and philosophy. Consider the following statements from W.S. Jevons, one of the three principal architects of the marginal revolution:

Among minor alterations, I may mention the substitution for the name political economy of the single convenient term economics. I cannot help thinking that it would be well to discard, as quickly as possible, the old troublesome double-worded name of our science (Jevons 1879: 5).

I do not write for mathematicians, nor as a mathematician, but as an economist wishing to convince other economists that their science can only be satisfactorily treated on an explicitly mathematical basis. When mathematicians recognise the subject as one with which they may usefully deal, I shall gladly resign it into their hands (Jevons 1879: 4).

The principal problem with seeking to make economics a primarily mathematical undertaking was that the only mathematics then available required some rather incredible simplifications, omissions and distortions of social reality⁵ such as assuming given preferences, costless and complete contracting and full rationality. Historical time and institutions are also essentially excluded from analysis.

The marginal revolution also put mainstream economics on ontological foundations that were not only radically different to classical political economy, but to social science in general. In particular, mainstream

⁴ Marginalism posited the existence of agents that can accurately and instantly calculate the cost and benefit of making (incremental) increases or decreases in consumption or production, optimising their utility at the point where the marginal benefit is equal to marginal cost (for further information see Bloch 2012).

⁵ More advanced mathematics may not require such simplifications though the correct scope for mathematics (advanced or otherwise) continues to elicit a range of opinions (see for example Chick 2000; Keen 2009; Lawson 2003).

economics pre-supposes a closed-system ontology (Dow 2007; Lawson 2003) that is simple and fully connected, rather than complex and partially connected (Foster 2005; Potts 2000). As Wakeley puts it:

Connections exist between elements of the real world and the nature and pattern of these connections matter. Orthodox theory is not capable of meaningful analysis of these connections because in essence the mathematics upon which it is built requires theoreticians to posit that connections between all the elements of the economic system are complete and in so doing it trivializes their importance (Wakeley 2002: 280).

Having such a fundamentally different conception of social reality creates real obstacles to mainstream economists having any sort of co-informing dialogue with other disciplines. The profound ontological schism helps to explain why the mainstream, when it attempts to import ideas from other disciplines, often ends up distorting those ideas; it needs to distort the outside ideas in order to get them to mesh with its fundamentally different ontological fabric. One can see the same ontological issues at play when we look at how new ideas get translated in mainstream economics versus how the original ideas are developed and applied in political economy. Indeed, it is perhaps the primary explanation as to why we have a Keynesian versus Post-Keynesian economics, a new versus old institutionalism, a new versus old behavioural economics and a new versus old economic history. In each case, two different competing ontologies generate two competing schools.

Three examples of intellectual isolation

The nature and consequences of the lack of articulation between mainstream economics and other elements within the social sciences can be further illuminated by considering three important cases: the disciplines of history, politics and psychology⁶. In each, the lack of articulation is shown to be profound. Furthermore, the attempts by mainstream economics to transcend its intellectual isolation have often

⁶ Of course, it would have be possible to include many other disciplines, most obviously philosophy, sociology, management and law.

produced perverse analysis that simply illustrates how wedded the mainstream is to its foundational premises.

History

The discipline of history is primarily concerned with understanding historical processes – something that is not only valuable within itself but is also central to properly understanding the present, as well as being helpful in forming hypotheses about the future. Studying history develops an appreciation of the role of path-dependence and of the circular and cumulative nature of much economic and social change. The centrality of historical processes has long been appreciated within political economy. As the founder of institutional political economy, Thorstein Veblen, stated:

The economic life history of the individual is a cumulative process of adaptation of means to ends that cumulatively change as the process goes on, both the agent and his environment being at any point the outcome of the past process. His methods of life today are enforced upon him by his habits of life carried over from yesterday and by the circumstances left as the mechanical residue of the life of yesterday (Veblen 1898: 391).

However, despite the awareness of historical dynamics in political economy and the social sciences in general, the variable of history is essentially absent in mainstream theory. The marginal revolution ushered in a form of economic analysis where time itself, in any normal understanding of the term, does not really exist. At best, there is a type of logical time that allows theory to run just as well in reverse as it does going forward (Henry 2012). In other words, this amounts to thinking that the toothpaste can always be put back in the tube, or even better, that it will end up back in the tube of its own accord. This is a conception of time deeply at odds with the ontology of our *complex* social system. As already mentioned, the essence of such a system is that not all elements of the system are connected with each other. The connections that do exist are the result of path-dependent historical processes that are usually irreversible, circular and cumulative in nature and which give rise to novel emergent properties.

The absence of any real historical dimension to mainstream theory means that it is locked into a nomothetic orientation that is unable to cope with specificities of time and place (Hodgson 2001). Notably, this lack of any

idiographic dimension is seen by some prominent mainstream economists as a *virtue* rather than a vice. For example, Lawrence Summers, former Chief Economist at the World Bank exhorts us with a seeming religious fervour to ‘spread the truth – the laws of economics are like the laws of engineering; one set of laws works everywhere’ (cited in Klein 2007:218). Such a statement provides us with a prime example of what feminist political economists identify as a masculinist bias within mainstream economics that is prone to manifest as a ‘misguided attempt to achieve certainty and absolute control’ (Nelson 2002:1).

Having history-blind theory is obviously a poor foundation for any sort of co-informing dialogue with professional historians. It also helps to explain the marginalised status of economic historians within the discipline of economics. Mainstream economics has struggled with genuine history, opting to *try* and absorb historical ideas via ‘cliometrics’ or the ‘new economic history’. This new economic history has been criticised for assuming that rational choice utility maximisation applies to all times and places, regardless of specific social, political and cultural context (Boldizzoni 2011). Mirowski, reflecting on his own early dalliances with cliometrics, points out that it should always have been apparent to all that history and neoclassical economics were like ‘oil and water’ (Mirowski 2004). Indeed, a research and teaching programme that seeks to examine historical time, with theory that cannot incorporate historical time, in order to prove the existence of timeless laws, is a powerful illustration of the inability of the mainstream to break free from its theoretical and ontological shackles.

Politics

Defined in broad terms, the discipline of political science is concerned with ‘the study of the nature, distribution and dynamics of power, usually at the national or international level, but sometimes at a very micro level (Robertson 1993: 385). In the last 100 years the focus of what is understood to be political science has changed over time. Initially focused on the art of government (see for example Laswell 1958), it has broadened to include many other social phenomena and settings.

One might think that economics and politics were as linked together in the academy as they are in real-life phenomena. Not so: the distinctive intellectual foundations that were established during the marginal

revolution have again closed off meaningful interdisciplinary dialogue. A theoretical assumption that particularly limits the capacity of mainstream economics to engage with political science is the assumption of costless and complete contracting. This theoretical foundation stone, seldom explicitly specified, but almost ever-present, assumes agents always and everywhere have recourse to a legally enforceable contract that covers all terms of exchange. When this assumption is combined with other foundational assumptions of exchange being voluntary and mutually beneficial, of full information being available to all parties, of full rationality being possessed by all agents, and of individual preferences being given, then economics becomes a politics-free zone because there is nothing for the exercise of political power to be about (Bowles 2005; Hart 1995). In fact, under the assumptions listed above, every market exchange is a solved political problem (Lerner 1972).

The assumption of completing contracting within neoclassical economics suggests that a neoclassical analysis of politics is a contradiction in terms. However, neoclassical political science does exist and has some adherents within political science (see for example Weingast and Wittman 2006) where it is sometimes referred to as ‘public choice theory’, or (erroneously) as ‘political economy’. Such analysis is best understood as an example of ‘economic imperialism’ – the extension of neoclassical rational choice analysis into all areas of social science. It is highly controversial and contested intellectual enterprise (Harcourt and Kerr 1982; Stretton and Orchard 1994; Lloyd 2008). The most obvious problem that besets neoclassical political science is that if contracts are complete, agents are fully rational and preferences are exogenous, then the analysis is confined to a particularly narrow form of rational-choice utility maximisation. Unfortunately, this amounts to non-political political analysis, or to put it more severely, non-social social science.

Psychology

Psychology is the study of the brain and its conscious and unconscious processes. Whilst usually seen as belonging to the health sciences, its focus on understanding human thoughts and actions means it articulates with the social sciences, particularly through sub-disciplines such as social psychology.

Mainstream economics initially eschewed any relationship with psychology but, since the 1980s, the ‘new’ behavioural economics has developed within the research frontier of mainstream economics. Does the new behavioural economics represent at least one instance of mainstream economics genuinely embracing interdisciplinarity? Not really: whilst the assumption of perfect rationality is relaxed, many important insights offered by psychology continue to be ignored. Furthermore, the ideas that have been imported have been applied in such a way that they do not threaten the neoclassical hard core. The way the new behavioural economics has utilised psychological ideas can best be understood as a defensive manoeuvre to prop up the economic mainstream (Earl 2010) rather than as exhibiting meaningful interdisciplinarity.

Earl (2010), in part drawing on the work of Sent (2004), makes the point that the ‘new’ behavioural economics is in key ways a betrayal of the ‘old’ behavioural economics that was founded in the 1950s and which had more genuine links to psychology (see for example Simon 1957) and also to political economy. Many of the original insights of the old behavioural economics have been ignored or mangled in the new behavioural economics. Supposedly ground breaking work in the new behavioural economics can often better be understood as being a perverse extension of the rational choice approach where the cognitive limits of the human brain are just treated as one more constraint and theorising is undertaken in terms of *optimal* decision rules (Earl 2016). Whilst the new behavioural economics offers some improvements and new insights over the traditional mainstream, it is nonetheless, in an overall sense, a ‘tragedy of missed opportunities’ (Earl 2016: 30). More vividly, on the same theme:

For heterodox economists who have long been employing and advocating the approach of the old behavioural economists, watching the rise of new behavioural economics is an experience akin to that suffered by a European art-house movie director whose film is re-made Hollywood-style and in the process is ‘dumbed down’ and has its ending changed (Earl 2010: 218).

The distortions and omissions in the new behavioural economics can also be linked back to the perverse ontological foundations of mainstream theory. For example, a concept from the old behavioural economics like satisficing (opting for good-enough rather than optimum choices) makes no sense in a simple fully connected system where agents *necessarily*

have complete information and full rationality. Optimisation, rather than satisficing is what logically plugs into such a system (Potts 2000; Wakeley 2002). Small wonder that key texts in the new behavioural economics do not even include an index entry for satisficing (Earl 2010).

That much of the ‘new’ behavioural economics is heavily constrained by being spliced together with neoclassical economics is directly evident in statements of its proponents. For example, the prominent new behavioural economist Matthew Rabin states that, ‘in terms of many critiques of the mainstream, I actually feel like a conservative’ (Rabin 2007: 151). New behavioural economics textbooks are similarly conservative, defining behavioural economics as an approach that ‘extends rational choice and equilibrium models; it does not advocate abandoning these models entirely’ (Ho, Lim and Camerer, cited in Wilkinson 2008: 4).

What can be done?

Although it would be possible to continue to elaborate on how mainstream economics is intellectually isolated, it is more useful at this point to consider how best to improve the situation. There are three broad strategies: continuing to struggle for reform from within, disciplinary differentiation and institutional separation, and hybrid strategies that combine elements of the first two options. Each of these options is now discussed in turn⁷.

Option 1: Reform from within

Pushing for reform of economics from within the discipline of economics is currently the dominant strategy and it occurs at multiple levels, ranging from the efforts of students and staff within particular departments, right up to coordinated initiatives at the national and international level. In recent years those calling for change have become far better organised with many national and international entities being

⁷ For a more extensive exploration of these options, including detailed case studies of strategy in each, see Thornton (2017). Also, it should be noted that each of the categories can be pursued in different ways. For example, ‘operating by stealth’ (see Earl and Peng 2012) versus pursuing collective mobilisation and struggle (see Butler, Jones and Stilwell 2009).

established. Much admirable and valuable work has been done by many people. Such efforts might bring the required reform at some point in the future. However, significant reform obviously remains elusive thus far. This simple fact raises questions about whether it is prudent to continue to direct nearly all our efforts at reform to this strategy alone.

Option 2: Disciplinary differentiation and institutional independence

This strategy centres on conceiving and operating a pluralist and interdisciplinary political economy as something explicitly separate to the discipline of economics. This could take three forms: (1) as an independent and fully fledged discipline in its own right (2) as a trans-disciplinary area of knowledge, or (3) as a sub-discipline of another discipline (most obviously political science). Of these three options, the third may often be the most promising and practical (see Thornton 2017), with some evidence that departments of politics may be relatively more open to a pluralist and interdisciplinary political economy than departments of economics (Argyrous and Thornton 2014). Obviously, one cannot assume this will always be the case; indeed, as a strategy it is not without its own challenges and risks. However, it is a strategy that is rightly starting to be considered more seriously and widely than has been the case previously (see in particular Lavoie 2015) and it warrants further investigation, consideration and debate.

Option 3: Hybrid strategies

Hybrid strategies involve establishing degrees that structurally integrate the study of economics with other disciplines. The most obvious vehicle for this is Politics, Philosophy and Economics Degrees (Thornton 2017) which first emerged at Oxford University in the UK in the 1920s and are now increasingly offered around the world. If students are studying mainstream economics, doing so alongside politics and philosophy can inoculate them from the sort of hubris and tunnel vision that can afflict students doing a dedicated economics degree or, at least, give them some basis and support for developing a critical perspective on mainstream economics. Recommending some electives in other disciplines such as history, sociology or psychology can also contribute to developing a richer understanding of economic phenomena and provide students with

a better understanding of what mainstream economics can and cannot offer. Within PPE degrees, political economy can function as the bridge or glue to bring the core disciplines together, particularly if offered at every year level within the degree. Obviously, much depends on how the degree is designed. However, mainstream economists will seldom be in the position to be the sole authors of such degrees (in the way they often are with a degree like a Bachelor of Economics), and this creates a more level playing field for political economists to influence and be involved in the development of such degrees.

None of the three strategies just discussed are advanced as being easy, risk-free or as offering guaranteed results. Much depends one's particular context, agency and view of what should happen. The support of others inside and outside one's own university, and a degree of luck are also likely to be important variables. The importance of specific institutional context, and also a level of uncertainty as to what will work where, and the basic logic of risk diversification, suggests that it would be prudent for reformers everywhere to support a plurality of strategies and a division of labour in pursuit of those strategies:

- Those who are willing and able to continue to work from within should do so (calling themselves 'political economists' or 'heterodox economists' as they see fit).
- Those who think they have better prospects outside economics departments can try to establish themselves in politics and social science departments (in this context using the term 'political economy' takes on a compelling logic).
- Seeking to establish degrees such as PPE degrees can be tried by any political economist/heterodox economist regardless of where they are. It is in many ways the easiest and lowest-risk strategy. It can be also be pursued concurrently with other strategies; indeed, it may work well in synergy with them.

That the means to plural and interdisciplinary political economy is via a pluralism of strategies, a division of labour, and the support and involvement of other disciplines is something that is rather fitting: plural ends via plural means.

Conclusion

It has been argued here that the marginal revolution of the 1870's established mainstream economics on a theoretical, and in particular ontological, foundation that is fundamentally incompatible with the social and economic world. It has caused, and will likely continue to cause, profound problems for any sort of co-informing dialogue between mainstream economics and other disciplines. The stark intellectual differences between mainstream economics, on one hand, and political economy and the rest of social science, on the other, feeds into strategic questions about what should be done. There are two key questions for political economists to consider. Should the vast majority of political economists continue to explicitly affiliate themselves as economists - thus leg-ironing themselves to the ontological renegades of mainstream economics? Alternatively, should a greater percentage of political economists seek to explicitly affiliate with mainstream social science as political economists? In doing this they may need to be more open and agile in shaping how political economy is intellectually, organisationally and institutionally understood and nested within social science, and in their specific institutional circumstances. However, the risks and challenges of doing this do not seem to be any higher than with any other strategy. The potential gains also seem to be at least as plausible and as least as substantial.

Dr Tim Thornton is Lecturer in Politics, Philosophy and Economics and Director of the Politics, Philosophy and Economics Degree at La Trobe University

t.thornton@latrobe.edu.au

References

- Argyrous, G. and Thornton, T. (2014) 'Disciplinary Differentiation and Institutional Independence: A Viable Template for a Pluralist Economics', *International Journal of Pluralism and Economics Education*, vol. 5, issue. 2, pp. 120-32.
- Backhouse, R. (2010) 'Economics', in R Backhouse and P Fontaine (eds), *The History of the Social Sciences since 1945*, , Cambridge University Press, pp. 38-70.
- Backhouse, R. and Fontaine, P. (2010) *The History of the Social Sciences since 1945*, New York, Cambridge University Press.

- Bloch, H. (2012) 'Marginalism', in J E King (ed.), *The Elgar Companion to Post Keynesian Economics*, Edward Elgar, pp. 383-87.
- Boldizzoni, F. (2011) *The Poverty of Clio: Resurrecting Economic History*, Princeton, Princeton University Press.
- Bowles, S. (2005) *Microeconomics: Behavior, Institutions, and Evolution*, New Jersey, Princeton University Press.
- Burnham, P. (2009) 'Political Economy', in I McLean and A McMillan (eds), *The Concise Oxford Dictionary of Politics*, Oxford, Oxford University Press, pp. 1-2.
- Butler, G. Jones, E. and Stilwell, F. J. B. (2009) *Political Economy Now! The Struggle for Alternative Economics at the University of Sydney*, Sydney, Darlington Press.
- Cahill, D. C. (2004) *The Radical Neo-Liberal Movement as a Hegemonic Force in Australia, 1976-1996*, PhD thesis, University of Wollongong.
- Chick, V. (2000) 'On Knowing One's Place: The Role of Formalism in Economics', *Economic Journal*, vol. 108, issue. November, pp. 1859-69.
- Dow, S. C. (2007) 'Pluralism in Economics', in J Groenewegen (ed.), *Teaching Pluralism in Economics*, Edward Elgar, pp. 22-39.
- Earl, P. E. (2010) 'Economics Fit for the Queen: A Pessimistic Assessment of Its Prospects', *Prometheus*, vol. 28, issue. 3, pp. 209-25.
- (2016) 'Evolution of Behavioral Economics', in R S Frantz (ed.), *Routledge Handbook of Behavioral Economics*, London, Routledge, pp. 19-32.
- Earl, P. E. and Peng, T. C. (2012) 'Brands of Economics and the Trojan Horse of Pluralism', *Review of Political Economy*, vol. 24, issue. 3, pp. 451-67.
- Fine, B. and Milonakis, D. (2009a) *From Economics Imperialism to Freakonomics*, London, Routledge.
- (2009b) *From Political to Economics: Method, the Social and the Historical in the Evolution of Economic Theory*, London, Routledge.
- Foster, J. (2005) 'From Simplistic to Complex Systems in Economics', *Cambridge Journal of Economics*, vol. 29, issue. 6, pp. 873-92.
- Fullbrook, E. (2001) 'Real Science in Pluralist', *Post-Autistic Economics Review*, vol. March.
- Gourevitch, P. (2004) 'Political Economy', in *The Oxford Companion to the Politics of the World*, Oxford University Press, pp. 1-3.
- Harcourt, G. C. and Kerr, P. (1982) *The Social Science Imperialists: Selected Essays of G.C. Harcourt*, London, Routledge.
- Hart, O. (1995) *Firms, Contracts and Financial Structure*, Oxford, Clarendon Press.
- Henry, J. F. (2012) 'Time in Economic Theory', in J E King (ed.), *The Elgar Companion to Post Keynesian Economics*, Edward Elgar, pp. 528-32.
- Hodgson, G. M. (2001) *How Economics Forgot History: The Problem of Historical Specificity in Social Science*, New York, Routledge.
- Howard, M. C. and King, J. E. (2008) *The Rise of Neoliberalism in Advanced Capitalist Economies : A Materialist Analysis*, Basingstoke, Palgrave Macmillan.

- Jevons, W. S. (1879) *The Theory of Political Economy*, London, Macmillan and Company.
- Keen, S. (2009) 'Mathematics for Pluralist Economists', in J Reardon (ed.), *The Handbook of Pluralist Economics Education*, London, Routledge, pp. 150-68.
- Klein, N. (2007) *The Shock Doctrine: The Rise of Disaster Capitalism*, Camberwell, Allen Lane.
- Lasswell, H. D. (1958) *Politics: Who Gets What, When How*, New York, Meridian Books.
- Lavoie, M. (2015) 'Should Heterodox Economics Be Taught in or Outside of Economics Departments?', *International Journal of Pluralism and Economics Education*, vol. 6, issue. 2, pp. 134-50.
- Lawson, T. (2003) *Reorienting Economics*, London, Routledge.
- Leijonhufvud, A. (1973) 'Life among the Econ', *Economic Inquiry*, vol. 11, issue. 3 September, pp. 327-37.
- Lerner, A. P. (1972) 'The Economics and Politics of Consumer Sovereignty', *The American Economic Review*, vol. 62, issue. 1/2, pp. 258-66.
- Lloyd, C. (2008) 'Political Economy Today and Tomorrow: The Contribution of the Oxford Handbook of Political Economy', *Australian Journal of Political Science*, vol. 43, issue. 2, pp. 341-45.
- Mirowski, P. (1989) *More Heat Than Light : Economics as Social Physics, Physics as Nature's Economics*, Cambridge, Cambridge University Press.
- (2004) *The Effortless Economy of Science?*, Durham, Duke University Press.
- Nelson, J. A. (2002) 'What Should Be Retained from Standard Microeconomics?', *Post-Autistic Economics Review*, vol. 14, issue. June.
- Potts, J. (2000) *The New Evolutionary Microeconomics: Complexity, Competence, and Adaptive Behaviour*, Cheltenham, Edward Elgar.
- Rabin, M. (2007) 'Matthew Rabin', in D Colander, R Holt and B Rosser (eds), *The Changing Face of Economics: Conversations with Cutting-Edge Economists*, University of Michigan Press, pp. 137-56.
- Robertson, D. (1993) *The Penguin Dictionary of Politics*, London, Penguin.
- Samuels, W. J. (1989) 'In Praise of Joan Robinson: Economics as Social Control', *Society*, vol. 26, issue. 2, pp. 73-76.
- Sent, E-M. (2004) 'Behavioral Economics: How Psychology Made Its (Limited) Way Back into Economics', *History of Political Economy*, vol. 36, issue. 4, pp. 735-60.
- Simon, H. A. (1957) *Models of Man: Social and Rational - Mathematical Essays on Rational Human Behavior in a Social Setting*, New York, Wiley.
- Stilwell, F. (2011) *Political Economy: The Contest of Economic Ideas*, South Melbourne, Oxford University Press.
- Stilwell, F. (2016) 'Heterodox Economics or Political Economy?', *World Economics Association Newsletter*, vol. 6, issue. 1, pp. 1-3.
- Stretton, H. and Orchard, L. 1994, *Public Goods, Public Enterprise, Public Choice: Theoretical Foundations of the Contemporary Attack on Government*, New York, Macmillan.

Thornton, T. B. (2017) *From Economics to Political Economy: The Promise, Problems and Solutions of Pluralist Economics*, London, Routledge.

Veblen, T. (1898) 'Why Is Economics Not an Evolutionary Science?', *Quarterly Journal of Economics*, vol. 12, pp. 373-97.

Wakeley, T. (2002) 'Review of 'the New Evolutionary Microeconomics: Complexity, Competence and Adaptive Behaviour'', *Journal of Economic Psychology*, vol. 23, issue. 2, pp. 279-86.

Weingast, B. R. and Wittman, D. A. (2006) *The Oxford Handbook of Political Economy*, Oxford ; New York, Oxford University Press.

Weintraub, E. R. (2002) *How Economics Became a Mathematical Science*, Durham, Duke University Press.

Wilkinson, N. (2008) *An Introduction to Behavioral Economics*, Basingstoke, Palgrave Macmillan.

Australian Options

Discussions for social justice and political change

Australian Options is a quarterly journal featuring the analysis and views of Australia's foremost activists and progressive thinkers. Issues of current attention include responding to the evolving global economic crisis, strategies to combat climate change, public transport, problems of Australian cities, education, jobs and facing the challenges of right-wing governments

Each edition also has reviews of relevant books, films and music, as well as cartoons by Simon Kneebone

Subscriptions are as follows:

\$25 for one year (4 issues)

\$17.50 concession

\$10 for students

Send payment or credit card details (cardholder name, 16 digit card number, expiry date and the cardholder signature) to P.O. Box 380, Blackwood, SA 5051

For subscription details or more information, see

www.australian-options.org.au;

or email treasurer@australian-options.org.au