

**The possibility of a pluralist economics curriculum in Australian
universities: historical forces and contemporary strategies**

Submitted by
Tim Thornton (Master of Arts, Monash University)

A thesis submitted in total fulfilment
of the requirements for the degree of
Doctor of Philosophy

School of Economics
Faculty of Business, Economics and Law
La Trobe University
Bundoora, Victoria 3086
Australia

April 2013

Table of Contents

1	Introduction	17
1.1	The central question	18
1.2	Key related questions	18
1.2.1	<i>Why seek a plural economics curriculum?</i>	<i>19</i>
1.2.2	<i>How plural is the current curriculum?</i>	<i>19</i>
1.2.3	<i>Are traditional centres of economics teaching capable of creating a plural curriculum?</i>	<i>19</i>
1.2.4	<i>Where might the future for a pluralist economics lie?</i>	<i>20</i>
1.3	Major Findings	20
1.3.1	<i>The necessity of pluralism</i>	<i>20</i>
1.3.2	<i>The increasingly non-plural curriculum</i>	<i>21</i>
1.3.3	<i>The inability of traditional centres of economics to embrace pluralism</i>	<i>21</i>
1.3.4	<i>The benefits of greater integration with other social sciences</i>	<i>21</i>
1.3.5	<i>The nature of economics and the economics curriculum is heavily influenced by the functions it is required to perform</i>	<i>22</i>
1.4	Rationale	22
1.4.1	<i>Does the study of economics curriculum really matter?</i>	<i>22</i>
1.4.2	<i>Can anything new be said about this topic?</i>	<i>24</i>
1.5	Structure	25
2	Methodology	31
2.1	Introduction	32
2.2	Methods	32
2.3	Institutional and evolutionary economics	33
2.4	An idiographic school of economics	36
2.5	Cognition, instincts, habits and institutions	36
2.5.1	<i>Cognition</i>	<i>37</i>
2.5.2	<i>Instincts</i>	<i>39</i>
2.5.3	<i>Habits</i>	<i>40</i>
2.5.4	<i>Institutions</i>	<i>42</i>
2.6	Circular and cumulative causation	43
2.7	Power	44
2.8	Evolution	45
2.9	Emergence	48
2.10	The challenge of an evolutionary economics	50
2.11	Freeman and Hannan	53
2.12	Nelson and Winter's theory of the firm	54
2.13	The sociology of scientific knowledge	58
2.14	Developments in SSK since Kuhn	61
3	The changing face of economics?	67
3.1	Introduction	68
3.2	Traditionalists, dissenters and dissenting optimists	68
3.2.1	<i>Traditionalists</i>	<i>68</i>
3.2.2	<i>Dissenters</i>	<i>69</i>
3.3	Dissenting optimism	71
3.4	David Colander	72
3.5	Complexity economics	80
3.6	Colander's critique of heterodox economists	82
3.7	Conclusion	83

4	Economic pluralism and economics as a science	85
4.1	Introduction.....	86
4.2	What is economic pluralism?.....	86
4.3	Why embrace economic pluralism?	87
4.3.1	<i>Different levels of pluralism</i>	89
4.3.2	<i>Open versus closed systems</i>	91
4.3.3	<i>Anything goes?</i>	93
4.4	Economics as a science.....	97
4.4.1	<i>Economics as a science within mainstream economics</i>	100
4.4.2	<i>Popular conceptions of science</i>	102
4.5	Conclusion.....	105
5	Orthodoxy, heterodoxy and political economy.....	107
5.1	Introduction.....	108
5.2	Orthodoxy and heterodoxy in economics	109
5.3	What is wrong with the conventional categorisation?.....	113
5.4	The dualism utilised in this thesis.....	118
5.5	Use of the term 'political economy' to describe a pluralist economics ..	124
5.6	Heterodox economics versus political economy	124
5.7	Conclusion.....	128
6	The economics curriculum in Australian universities	129
6.1	Introduction.....	130
6.2	Creating the datasets	130
6.3	Possible limitations of the data	134
6.4	Location of economics teaching	135
6.5	Universities offering an undergraduate degree in economics	138
6.6	The quiet death of Australian economics	143
6.7	Poor perception of the curriculum	144
6.8	Increasing competition and choice from other disciplines	147
6.9	Vocationalism	150
6.10	Anti-intellectualism	153
6.11	The Economics curriculum	154
6.12	Neoclassical economics	157
6.13	Econometrics and mathematical methods	159
6.14	Political economy	159
6.15	Economic history	160
6.16	History of economic thought (HET)	163
6.17	Heterodox economics (HE)	165
6.18	Comparative economic systems (CES).....	169
6.19	Development economics (DE).....	170
6.20	Modern hybrid economics (MHE).....	171
6.21	Graduate education.....	173
6.22	Conclusion.....	176
7	Economics textbooks.....	177
7.1	The importance of textbooks	178
7.2	Mankiw's Principles of Economics	186
7.3	The difficulty of establishing progressive textbooks	191
7.4	Microeconomics in context	194
7.5	Zero tolerance	197
7.6	A textbook for the mainstream research frontier	199
7.7	Conclusion.....	201

8	Economics departments	203
8.1	Introduction.....	204
8.2	Teaching.....	204
8.3	Research	212
8.4	What is to be done?	220
8.5	The overall regulatory environment for universities.....	223
8.6	Conclusion.....	224
9	Reform from within	225
9.1	Introduction.....	226
9.2	The University of Western Sydney	227
9.3	The School of Economics and Finance.....	227
9.4	Pluralist foundations	228
9.5	Change and attempted restructuring.....	232
9.6	The 2010 ERA.....	234
9.7	Merger into School of Business.....	235
9.8	Conclusion.....	239
9.9	Postscript.....	240
10	A hybrid model.....	243
10.1	Introduction.....	244
10.2	The PPE Degree at La Trobe University	244
10.3	Description	246
10.4	History	246
10.5	Structure.....	249
10.6	Potential benefits to the social science wing of the discipline	254
10.7	The role of student activism	258
10.8	Future of the degree.....	260
10.9	Conclusion.....	263
11	Reform from without.....	265
11.1	Introduction.....	266
11.2	A long and complex dispute	269
11.3	The issue of balance	269
11.4	Basic description	270
11.5	History	271
11.6	The role of collective struggle.....	278
11.7	Why was the opposition to political economists so strong?	280
11.7.1	<i>Bruce Williams</i>	281
11.7.2	<i>Warren Hogan</i>	283
11.7.3	<i>Colin Simkin</i>	286
11.7.4	<i>Peter Groenewegen</i>	288
11.8	The role of proactive marketing and networking	291
11.9	Criticisms by heterodox economists.....	293
11.10	A general model?	299
11.11	Conclusions.....	304
12	The market for economic knowledge.....	306
12.1	Introduction.....	307
12.2	An employer backlash?	307
12.3	Survey Evidence	309
12.4	The Public Service	324
12.5	The Private Sector.....	327
12.6	Conclusions.....	330

13 The three purposes of economics	333
13.1 Introduction.....	334
13.2 Economics as science	334
13.3 Economics as social control	337
13.4 Economics as psychological balm.....	338
13.5 Feminist perspectives.....	349
13.6 Conclusion.....	352
14 Conclusion	353
14.1 Introduction.....	354
14.2 Review.....	354
14.3 Some caveats.....	355
14.4 A final response to the arguments of Chapter three.....	357
14.5 Future areas of research	362
14.5.1 <i>Internationalising the research</i>	362
14.5.2 <i>Economics education outside of universities</i>	363
14.5.3 <i>Online learning</i>	363
14.5.4 <i>Political neuroscience</i>	364
14.5.5 <i>Finding the right mindset</i>	364
14.6 Final thoughts.....	365
References.....	367
Appendices.....	388

Tables

Table 3.4.1 Scope for using analytical methods to solve mathematical problems	78
Table 4.3.1 Criteria for the evaluation of theory	95
Table 5.2.1 The conventional view of the orthodox heterodox divide.....	112
Table 5.3.1 A tripartite classification of contemporary economics.....	114
Table 5.4.1 A categorisation of contemporary economics.....	123
Table 5.6.1 Understanding of the terms heterodox economics and political economy	126
Table 6.2.1 Universities in Australia 2011	132
Table 6.2.2 Australian universities in 1980.....	133
Table 6.4.1 Location of economics teaching in Australian universities in 2011.	136
Table 6.4.2 Location of economics teaching in Australian universities in 1980.	137
Table 6.5.1 Universities offering a bachelor of economics degree in 2011	139
Table 6.5.2 Universities without a major in economics in a business degree ...	141
Table 6.5.3 Universities offering a bachelor of economics degree in 1980	142
Table 6.11.1 Subject categories	155
Table 6.11.2 Economics curriculum 1980 to 2011 by category.....	156
Table 6.11.3 Economics curriculum in 1980 and in 2011 via subcategory.....	156
Table 6.17.1 Economics outside business faculties and traditional economics departments in 2011.....	166
Table 6.17.2 Introductory political economy subjects in Australian universities 2005 and 2009	168
Table 6.20.1 Modern hybrid economics in Australian universities in 2011.....	172
Table 7.1.1 Orthodox economics in twentieth century textbooks	181
Table 7.1.2 Australian adaptations of US textbooks 1970-96	185
Table 8.3.1 Ranking of Australian universities for the research in economics ..	217
Table 10.5.1 PPE tutorial content for first-year microeconomics.....	253
Table 10.5.2 PPE content for first-year macroeconomics	253
Table 11.1.1 Subjects offered by the Department of Political Economy 2012...	268
Table 12.3.1 Opinions of Australian economists on the economics curriculum	311
Table 12.3.2 Australian undergraduate economics degree programs should contain more subjects that place economics in a broader context, such as economic history, history of economic thought and political economy.....	313

Table 12.3.3 Australian undergraduate economics degree programs should contain more behavioural economics and experimental economics	315
Table 12.3.4 In Australia, undergraduate economics is taught with excessive mathematical rigour.....	317
Table 12.3.5 Undergraduate degrees in economics should be four years	320
Table 12.3.6 Doctoral programs in economics in Australia generally offer high quality training	322

Figures

Figure 2.5.1 Relationship between instincts, habits and institutions	42
Figure 5.4.1 Complex versus complicated systems	120

Abbreviations

ABM	Agent-Based Modelling
ARC	Australia Research Council
DPE	Department of Political Economy, University of Sydney
ERA	Excellence in Research Australia
Go8	Group of Eight Universities
NIE	New Institutional Economics
OIE	Old Institutional Economics
PPE	Politics, Philosophy and Economics Degree
SEF	School of Economics and Finance, University of Sydney
SSK	Sociology of Scientific Knowledge
UWS	University of Western Sydney

Summary

This thesis seeks to identify how a pluralist economics curriculum in Australian universities might be achieved. This task has four dimensions. First, the desirability of a plural economics is established. Second, the existing degree of non-plurality in the curriculum is documented. Third, the historical forces that have shaped the curriculum into its currently non-plural nature are identified. Fourth, strategies to move the curriculum towards plurality are identified and assessed. Particular emphasis is given to a strategy of establishing a separate institutional base for a pluralist economics and differentiating such an economics under the title of 'political economy'.

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis or any other degree or diploma.

No other person's work has been used without due acknowledgment in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

Signed:

Date:

Acknowledgements

In undertaking this thesis I have very much benefited from the expertise and generosity of others. The list of people who have helped me in some way or another is longer than I can easily document, or even systematically recall. Apologies in advance to anyone I have inadvertently left off what is a long, long list.

A general thanks is due to Professor Marika Vicziany, Associate Professor Ian Ward, Professor Frank Stilwell and Dr George Argyrous for their help and encouragement. These individuals have really been mentors to me and have been key figures in my professional development.

I am also grateful for the friendship and encouragement of my fellow PhD students, particularly Pablo Ahumada, Timur Behlul, Adrian Soh and Linda O'Mullane. I also thank my colleagues at the School of Economics at La Trobe University, in particular Troy Lynch, Michael Schneider and Wayne Geerling.

Thanks are also due to all my current and past students, particularly those who have become actively involved in supporting and developing the teaching of political economy at La Trobe University. They have been proactive, persistent and at times rather bold. Nick Vecchi, Lillian Falconer, Beni Cakitaki, Nick Pringle, Lance Taylor, Cameron Scott have been particularly stalwart, but there are many others that been both inspiring and supportive.

A number of academics read and provided helpful feedback on earlier drafts of chapters (the usual disclaimer applies) and/or gave detailed interviews. In this regard I thank Associate Professor Ian Ward, Dr Alex Millmow, Professor Geoffrey Hodgson, Professor John Lodewijks, Professor Brian Pinkstone, Associate Professor Steve Keen, Associate Professor Peter Kriesler, Professor Michael Johnson, Dr George Argyrous, Dr Lynne Chester, Professor Belinda Probert, Professor Don Harding, Professor Gary Magee, Professor Frank Stilwell, Professor Peter Groenewegen, Professor Fred Lee, Professor Tony Aspromourgos, Professor Stuart Rosewarne, Professor Rod O'Donnell, Professor Paul Redding, Dr Joseph Halevi, Assoc Professor Sean Conney and Mr Chris Mouratidis. I am also grateful to four anonymous referees who provided detailed feedback when an extract of chapter six was published in *Economic Papers*, and

to the two referees who have provided useful feedback for an article currently in the final stages of consideration with the *Economic Record*. Ms Jonelle Bradley at La Trobe University Library was very helpful in procuring archival material from universities across Australia, and the archives department of the Fisher Library at the University of Sydney was also of important assistance.

I am grateful to my co-supervisor Professor Gary Magee for providing valuable help, expertise and judgement whenever it was asked. I would also like to thank my father Bruce Thornton, and particularly my mother Margaret Thornton for proofing early drafts of the thesis. Katherine Wilson was also very kind in agreeing to proof the final copy of the thesis. A special thanks is due to my supervisors Professor John King and Dr Miriam Bankovsky for their help and expertise. Finally, I would very much like to express my love and appreciation for my daughters Tallulah and Bella and my partner Amanda Lawrence: it is fine thing to come home from work each day and be reminded that I have the love of my wonderful little family.

“...if reforms to economics depend on the tolerance, good will and liberalism of mainstream economists I wouldn't have too much confidence of success. There is nearly always a resident dissident or two. They may try and do innovative things, teach in a way that's engaging to students and put on different types of courses, but they come and go. The courses come and go with them and the mainstream flows on forever. That is why I think it is important to have a separate institutional base. In an ideal world you wouldn't have to separate groups in this way, but in a less than ideal world this is probably the optimal situation” (Stilwell in Thornton 2008 p.6).

1 Introduction

1.1 The central question

By what means might the Australian university economics curriculum become genuinely plural? This is the central question to which this thesis has sought to provide an answer (and is hereafter referred to as 'the central question'). To provide such an answer has been an involved task, as it has required gaining an understanding of the historical and contemporary forces that have shaped the evolution of the curriculum. However, such a task has been worthwhile, because the understanding gained has been used to assess, and adjudicate between, some markedly different strategies that have been put forward by others about how best to reform the economics curriculum. Such strategies include continuing to push for change in various ways within economics departments; establishing a curriculum outside traditional centres of economics teaching; or simply waiting for a supposedly inexorable 'complexity economics' revolution to remake every aspect of the discipline, including the economics curriculum.

The analysis in this thesis is meant to be of assistance in creating a more plural and thus improved economics. In other words, it is very much about using the insights that have emerged from studying the recent past, to inform the choices that need to be made in the present, and thereby achieve a better outcome in the future.

1.2 Key related questions

Answering the central question relies on answering some other subsidiary questions that are quite substantial in their own right. Four questions are particularly important (and are hereafter referred to as 'key related questions'): Why seek a plural curriculum? How plural is the current curriculum? Are traditional centres of economics teaching capable of creating a plural curriculum? Where might the future of a pluralist economics lie? These key questions will now be described in more detail.

1.2.1 Why seek a plural economics curriculum?

The first key question ‘why seek a plural economics curriculum?’ must be answered almost at the outset, as not everyone views a plural curriculum as a desirable objective. The concept of pluralism is foreign to most mainstream economists, who might well assume that the concept sounds dubious and antithetical to the idea of economics as a rigorous science. Even amongst heterodox economists the concept is controversial, with some arguing that it is neither intellectually warranted, nor of practical use to the heterodox agenda (Davidson 2004). Careful justification is therefore required.

1.2.2 How plural is the current curriculum?

The second key question ‘how plural is the current economics curriculum?’ is also an elemental prerequisite for answering the central question of this thesis. It is elemental because unless one can clearly establish both the level of non-plurality in the current curriculum and that the historical trend has veered away from pluralism, this entire thesis might be accused of being focused on a non-existent problem. Indeed, it might even be claimed that the Australian university economics curriculum is already reasonably plural, or at least is trending towards greater pluralism, and is therefore in no real need of any deep analysis or novel strategies to further speed its inexorable improvement and reform.

1.2.3 Are traditional centres of economics teaching capable of creating a plural curriculum?

The third key question is ‘are traditional centres of economics teaching capable of creating a plural curriculum?’ The phrase ‘traditional centres of economics teaching’ refers here to economics departments and business schools within faculties of business. Answering this question is of fundamental importance to answering the central question of this thesis, as one cannot formulate plausible possibilities for a pluralist economics and map out specific contemporary strategies, without reliable knowledge of where such a pluralist economics is best based. The question of exactly where economics should be based is very much an open question. While most subjects in economics are currently taught within economics departments and business schools within faculties of business, there is no iron law that says that this should remain so: economics is a social science

and can be (and sometimes is) taught in social science faculties. The answer to this question of where best to base a pluralist economics curriculum is the work of several chapters. It involves, among other things, examining the institutional detail of economics departments, the larger institutional context of the tertiary education sector, and the nature of contemporary capitalist society.

1.2.4 Where might the future for a pluralist economics lie?

The fourth key question ‘where might the future for a pluralist economics lie?’ is very much about the identification of viable contemporary strategies for developing a pluralist economics curriculum, so answering this question thoroughly is also required to answer the central question properly. Given that there is no particular reason why economics should be exclusively taught within economics departments and faculties of business, it is reasonable to ask whether looking outside of traditional centres of economic teaching might be where the future for a pluralist economics does reside. Economics is already being taught within social science faculties, and there are also instances of traditional centres of economics teaching structurally integrating their teaching of economics with other social sciences, so there is clear empirical evidence that we can assess as part of our inquiries.

1.3 Major Findings

What are the answers to the central and the key related questions just outlined? Obviously, fully detailed and justified answers need to wait until the chapters ahead, but summary findings can be made now, they follow (in sequence) the four key questions just described. The fifth finding is more general, though it is particularly relevant to answering the central question of the thesis.

1.3.1 The necessity of pluralism

Chapter four, ‘Economic pluralism and economics as a science’, makes it clear that a plural economics curriculum is essential for economics to become more intellectually defensible and useful in making the world a better place. Economic pluralism is not something only of interest to economic methodologists and dissidents: it is something that needs to be core business for all economists and thus at the core of the curriculum.

1.3.2 The increasingly non-plural curriculum

Chapter six demonstrates that the economics curriculum is not sufficiently plural, and is becoming less plural. The key problem is that the curriculum is dominated by a single approach (the neoclassical approach). Neoclassical economics, when taught carefully and with appropriate nuance, does have a place in the curriculum, but there is no intellectual basis for neoclassical economics having such a dominant place that it largely excludes other approaches.

1.3.3 The inability of traditional centres of economics to embrace pluralism

Multiple chapters of the thesis (particularly chapters six to thirteen) make it very clear that despite the intellectual and practical merits of economic pluralism, most traditional centres of economics teaching in Australia will most probably continue to ignore calls for greater pluralism in the curriculum. While it is desirable that reformers based within economics departments continue to push for reform (and whatever success is achieved there is to be welcomed), we cannot usually expect traditional centres of economics teaching to become the locus of a genuinely plural economics curriculum.

1.3.4 The benefits of greater integration with other social sciences

There is much evidence to suggest that outside traditional centres of economics teaching, the prospects for a plural economics are much brighter than within traditional centres of economics teaching. In particular, teaching economics in faculties of social science¹ under the banner of political economy has shown impressive results to date. Another promising option is to adopt a hybrid strategy whereby the traditional centres of economics education structurally integrate their teaching with other departments of social science. This integration can take the form of jointly taught subjects and explicitly collaborative degrees, such as a Bachelor of Politics, Philosophy and Economics.

¹ 'Faculties of social science' is used here to refer to any faculty that is centred on the social sciences, and thus includes faculties of arts.

1.3.5 The nature of economics and the economics curriculum is heavily influenced by the functions it is required to perform

In the course of seeking to answer the central and related questions of this thesis it was regularly apparent that economics and the economics curriculum is shaped less by an objective and invisible hand of truth, and much more by the functions society asks economics and the economics curriculum to perform. What are these functions? Following Samuels (1989), it is argued that economics has three *interrelated* functions: to be a science, to be a means of social control and to supply psychological comfort. While Samuels's triptych cannot function as a complete explanation, a proper understanding of these functions, including a clear understanding of their interrelationship, offers a useful framework to understand and organise one's arguments concerning economics and the economics curriculum. It offers the best structure to bring together much of the evidence and reasoning presented across the fourteen chapters of this thesis.

1.4 Rationale

Any PhD thesis faces two immediate questions: is the topic important enough to warrant a doctoral thesis? Has the author been able to say something new and substantial about their chosen topic?

1.4.1 Does the study of economics curriculum really matter?

One can respond to the question of whether curricular evolution is a substantial and important topic with a clear 'yes'. This is primarily because what and how economists are taught will have an obvious and direct impact on the way they go about their work upon graduating. If the education of economists is not sufficiently broad and deep, this generates a number of problems.

First, economists currently exert a particularly strong influence on policy-making. For example, departments of treasury at both the state and federal level are the most influential departments in the public service. These departments are primarily managed and staffed by economists. As Pusey (1991) has shown in his classic study *Economic rationalism in Canberra: a nation building state changes its mind*, the economics education public sector economists receive has a very direct effect on how they then think and analyse policy options. It is therefore

important that such economists receive more than a narrow and uncritical education in neoclassical economics and econometrics.

The nature of the economics curriculum also has direct effects on the thinking of many non-economists. Many thousands of students choose, or are required, to undertake at least one introductory economics subject while at university. What these students learn in these introductory classes affects how they make sense of both economy and society; introductory economics thus exerts a strong influence over what a society deems as being acceptable economic analysis and policy advice. It can therefore heavily influence a society's view about what is and is not possible.

Another cause for concern is that the current curriculum may be detrimental to students' social and ethical development. For example, researchers who undertook a number of free rider/prisoner's dilemma games, found students with a training in economics to be more aggressive, less cooperative, more pessimistic about the prospects of cooperation, and more prone to cheating than students who had not undertaken any economics subjects (note that selection bias was controlled for in these experiments). The characteristics that developed as a result of taking these economics courses persisted long after their education had finished (Frank, Gilovich & Regan 1993, 1996).

Another identified problem lies in the content of the curriculum being neither properly understood nor retained by students (Clarke & Mearman 2001). Those who have done an introductory economics subject at high-school or university retain little of their knowledge; indeed, within a few months of completing their studies, doing little better than those who had not studied any economics at all (Hansen, Salemi & Siegfried 2002). This poor level of retention suggests that an enormous waste of society's resources is occurring. It raises real questions over both what is taught and the way it is taught.

A further problem is that the current curriculum, primarily due to its non-plural nature, is not only deficient as an input towards providing a liberal education and an informed society, it also fails to adequately supply the graduate knowledge, skills and attributes required by many employers (O'Donnell 2007). Again, this amounts to a missed opportunity and a large waste of resources.

1.4.2 *Can anything new be said about this topic?*

This thesis fills a number of important gaps in the literature. First, it provides a detailed survey of the economics curriculum in Australian universities in the years 1980 and 2011. This work is attached as appendix one and can now serve as a primary resource for anyone interested in analysing the evolution of economics teaching in Australia. The thesis also offers a significant amount of other primary research materials that may have ongoing use to scholars interested in curricular innovation. This primary research includes three departmental case studies, numerous interviews and archival work.

The thesis also provides a comprehensive explanation of the factors shaping the evolution of the curriculum. As such it provides a set of answers to some important and contentious questions. For example: is it true, as some have claimed, that mainstream researchers in areas such as behavioural and complexity economics are bringing about a revolution in economics? Should one concentrate on pushing for change within economics departments, or is this a futile activity? What are the realistic strategies for reform available to us? What are the advantages and disadvantages of pursuing each strategy? These are all questions that matter to the future of economics.

This thesis also seeks to make a contribution to answering a deeper question as to why economics is so different from the other social sciences. Backhouse and Fontaine (2010), in their history of the social sciences since 1945, point out that economics is unique amongst the social sciences in having a clearly identifiable and dominant orthodoxy and a notably marginalised heterodoxy. In other words, economics is notable for its lack of plurality. Because the curriculum is the primary mechanism whereby economics reproduces itself, understanding curriculum evolution helps to better understand economics itself.

Finally, the thesis offers a reasonably novel argument: those interested in a genuinely plural curriculum should seek to focus more of their efforts outside traditional centres of economics teaching. Such efforts might range from greater collaboration with other social scientists right through to the establishment of a separate base for a pluralist economics under the disciplinary title of political economy. To advocate this is very much a minority position. For example, the

Institute for New Economic Thinking's push to reform the economics curriculum (Institute for New Economic Thinking 2011) and Coyle's *What's the use of teaching economics? teaching the dismal science after the crisis* (Coyle 2012) do not really countenance the idea that the teaching of economics should occur from outside its traditional base and under a different name.

1.5 Structure

Chapter two, 'Methodology', is a standard chapter in any thesis, given that there is clear need to articulate and defend one's chosen framework of inquiry. Accordingly, this chapter duly outlines the various methodological, theoretical and conceptual positions that are deployed throughout the thesis. Because this study has a strong institutional dimension, the chapter draws upon the contributions of old institutional economics (OIE) to guide its analysis. Moreover, given that this study is focused upon the spread of economic ideas, it also draws upon the sociology of scientific knowledge (SSK). It is argued that OIE and SSK are largely compatible frameworks, with SSK providing the type of context-specific concepts and theory necessary to undertake an applied institutionalist analysis.

Chapter three² 'The changing face of economics?' provides an exposition of some provocative arguments made by David Colander about the forces that have shaped the recent history of economics and the contemporary strategies that are most desirable and viable in shaping its future. Colander argues that the mainstream research frontier (by which he means areas such as behavioural economics and complexity economics) is in the process of driving fundamental improvements across the discipline of economics, including improvements to the economics curriculum. Notably, Colander is heavily critical of the thinking and strategies adopted by many heterodox economists, arguing that they are neither recognising, nor capitalising on, this changed situation and are instead persisting with outdated and counterproductive habits of thought and action.

² It is not uncommon to have a dedicated literature review chapter at this point in the thesis. However, for this particular thesis a better structure has been to review the literature that relates to a particular chapter within that particular chapter.

Why include such a chapter at this point in the thesis? Colander's views on what shapes the economics curriculum and what strategies reformers should adopt are very different from my own; indeed, his views are almost the antithesis of my own. His arguments concerning the forces that shape the curriculum (as well as the strategies to be followed in responding to these forces) are antithetical to almost my entire thesis. As such, they function as a useful prelude for much of the subsequent analysis in this thesis. Certainly, later chapters often offer a strong rebuttal of many of the arguments documented in Chapter two.

Chapter four, 'Economic pluralism and economics as a science', provides a case in favour of a plural curriculum and thus supplies most of the support for finding 1.3.1 (the necessity of pluralism). The idea of theory as simplification and of economic and social reality existing as an open system are the central arguments put forward to support the concept of pluralism. The latter half of the chapter applies the concept of pluralism to differing conceptions of what is scientific and what is good scientific practice. What emerges from this analysis is that outdated notions of science within academia and also in the wider community serve as a key constraint on the development of pluralism in economics. This suggests that a strategy of promoting greater awareness of the history and philosophy of science would be beneficial for the cause of economic pluralism.

Chapter five, 'Orthodoxy, heterodoxy and political economy', is concerned with matters of definition and categorisation. Such a focus is necessary because if greater differentiation and institutional independence **are** required for a pluralist social science-orientated economics, then it is important to provide an intellectual basis for advocating for what amounts to the development of a separate academic discipline. Various attempts to provide a satisfactory dualistic categorisation are evaluated, with the ontological dualism developed by Potts (2000) emerging as the most warranted and useful.

Chapter five also addresses the question of what to call each side of the discipline. The issue of nomenclature is important, not just because it influences how we make sense of economics as a discipline, but also because it is likely to affect the numbers of students enrolling in economics, and also the student constituencies (business students, social science students, etc) enrolments are drawn from. It is argued that the most useful terminological approach is to refer to

the economic mainstream as 'neoclassical economics' and to the social science wing of the discipline as 'political economy'. Various lines of reasoning and evidence are used to support this taxonomy of contemporary economics.

Chapter six, 'The economics curriculum in Australian universities', is a heavily empirical chapter. This chapter provides much of the support for the second key finding of this thesis: that the trend in the economics curriculum is away from pluralism towards narrowness (1.3.2). The chapter presents the results of survey evidence on the economics curriculum in both 1980 and 2011. It initially focuses on the decline in the number of economics departments and economics degrees within Australian universities, with an analysis of some of the reasons this has occurred. The focus then turns to examining the content of the economics curriculum. While the survey evidence clearly shows that the Australian economics curriculum is narrow, and that it has become narrower since 1980, it is also revealed that a pluralist political economy, denied a place in traditional centres of economics teaching, has increasingly found a home for itself in faculties of arts and social sciences. Such evidence provides clear support for the fourth key finding of this thesis: that the prospects for a pluralist economics rely on greater integration with faculties of social science (1.3.4)

Chapter seven, 'Economics textbooks', examines the nature and evolution of economics textbooks, with a particular focus on introductory textbooks. A chapter such as this is warranted because it provides useful insights into why the economics curriculum is so moribund, with textbooks being both a contributing cause and an obvious symptom of the problem. The chapter gives particular focus to the difficulty of establishing progressive textbooks, with an examination of the fate of two such resources, *Microeconomics in context* by Goodwin *et al.* and *Microeconomics: behavior, institutions, and evolution*, a graduate microeconomics textbook by Samuel Bowles. It is argued that the lack of commercial success of either of these textbooks, and similar textbooks, is indicative of the general lack of demand for curricular renewal and reform within traditional centres of economics teaching. This argument supports another key finding of this thesis: that there is little prospect of traditional centres of economics embracing pluralism (1.3.3).

Chapter eight, 'Economics departments', examines the institutional features of economics departments and gives particular focus to the bias of research over teaching. Of particular note is how the assessment of research is biased against the social science wing of the discipline. This bias has damaging consequences for economics teaching, as it serves to narrow the group of economists being employed within economics departments, thus leading to a further narrowing of the curriculum within traditional centres of economics teaching. The final part of the chapter is focused on the overall regulatory environment in Australian Universities and the ways it impacts on the existence and subject offerings of individual departments. It is shown that the universities outside the elite Group of Eight are now having considerable difficulty in maintaining enrolments into disciplines such as economics, and that this problem badly undermines the pluralist agenda in these universities. In summary, this chapter explains some of the most important forces that have shaped the recent evolution of the economics curriculum: forces which current strategies need to recognise and respond to.

Chapter nine, 'Reform from within', is the first of three chapters that provide case studies of the various ways pluralism has been instituted in Australian universities. These case studies provide much insight into the historical forces that shape the curriculum, as well as providing clear test cases for the contemporary strategies available to those who seek reform of the curriculum. This first case study is of the former School of Economics and Finance at University of Western Sydney, which was notably pluralist, with about half of its academics being of a heterodox persuasion. The central argument of this chapter is that while a pluralist curriculum is possible within a traditional economics department, it requires some rather strong preconditions if it is to succeed. In the absence of such preconditions, the general strategy of greater integration with other social sciences will usually be the more productive strategy for reform.

Chapter ten, 'a hybrid model', is a case study of the Politics, Philosophy and Economics (PPE) degree at La Trobe University. It illustrates how a particular contemporary reform strategy works in practice, namely the pursuit of pluralism via structurally integrating the study of economics with other social science disciplines. It is argued that the possibilities for economic pluralism are considerably greater in a degree such as the PPE than in a standard economics degree or business degree. In other words, the chapter supports the key finding

that the possibilities for a pluralist economics lie with greater integration with the other social sciences (1.3.4). However, in this particular case it shows that this integration need not always require the complete transfer of economics teaching to the social science faculty.

Chapter eleven 'Reform from without' is dedicated to analysing the case of the Department of Political Economy (DPE) at the University of Sydney. This department is a breakaway department from the University's existing Department of Economics. DPE is a pluralist department, and since gaining institutional independence it has prospered. The chapter examines the history of the political economy dispute at Sydney University. Particular emphasis is given to evaluating how a strategy of full institutional independence and differentiation has worked in practice and why the DPE appears to offer a viable and desirable strategy of reform that could be adopted by other universities. As such, it offers particularly strong support to the key finding that the future for a pluralist economics lies in greater integration in the social sciences (1.3.4). In this case, it is integration in its strongest form: an independent institutional base within the social sciences and full differentiation as the separate discipline of political economy.

Chapter 12, 'The market for economic knowledge', is focused on what employers currently require from the economics curriculum. Such a subject warrants attention as employer needs are a potentially powerful driver of reform of the curriculum, as students and university administrators are increasingly keen for a university education to meet the needs of employers. This pressure of vocationalism can be harnessed to promote a plural economics curriculum, as there is evidence that the knowledge, skills and attributes that many employers require is best served by a pluralist, rather than a narrow economic curriculum (O'Donnell 2010). However, it should also be noted that this evidence is based on the expressed needs of employers in general, rather than employers of economists (where the evidence is shown to be more ambiguous). This suggests that reformers should pursue a strategy of educating employers (particularly employers of economists) on the benefits of a pluralistic economics education.

Chapter 13, 'The three purposes of economics', seeks to tie the reasoning and evidence presented in previous chapters into a cohesive whole, and lays the groundwork for the concluding chapter. It does this by relating the structure of

contemporary economics to the functions it is asked to perform. As such, it provides much support to the last of the central findings of this thesis: that the nature of economics is very heavily influenced by the social functions it is asked to perform (1.2.5). The chapter is indebted to an unduly overlooked article by Warren Samuels (1989), who, building on the work of Robinson, Shackle and others, argues that there are three interrelated purposes for economics in society: scientific explanation, social control and psychological comfort. It is argued that these three purposes exert a powerful influence on the nature of economics and that a proper understanding of them, including an understanding of their circular and cumulative interrelationship, offers a deeper understanding of the forces that have shaped the recent history of the economics curriculum.

Chapter 14, 'Conclusion', draws together the analysis of previous chapters and makes some final observations. The chapter then outlines some areas of future research.

2 Methodology

2.1 Introduction

Whenever one is looking at something complex, how one decides to look can exert significant influence on what one ends up seeing. Given this, there is a need to articulate and defend one's chosen framework of inquiry. This chapter therefore outlines the methods, theories and concepts that have guided the analysis of subsequent chapters. The primary source of concepts and theories comes from a branch of heterodox economics known as old institutional economics (OIE) and also from a branch of the philosophy of science known as the sociology of scientific knowledge (SSK).

At various points in this chapter I make linkages between some of the concepts and theories discussed and the main arguments of this thesis. However, the main focus in this chapter is to provide a clear exposition of the concepts and theories themselves, with subsequent chapters applying or referring back to these ideas. The first section of this chapter explains the choice of methods employed. The focus then turns to outlining the key concepts and theories utilised.

2.2 Methods

Consistent with the philosophy of economic pluralism advanced in Chapter four, this study has adopted pluralism of method. The methods used include surveys, questionnaires, interviews and literature reviews. Details of how the survey and questionnaire work was undertaken have been held over to the chapter where such work is presented. However, it is appropriate at this point to say something about the interviews that were undertaken and to also explain the participant-observer nature of some of the analysis.

The undertaking of interviews was useful in ascertaining what occurred in particular departments. The interviews themselves ranged from formal face-to-face recorded interviews conducted for a number of hours, to brief conversations conducted either in person or via phone. Email correspondence served as a follow up method to clarify points made in interviews. The interviews were primarily of political economists. This focus was due to the fact that I was interested in gaining information on how such economists operated in an environment in which orthodox economists currently hold most of the institutional power.

At times the thesis also adopted a participant-observer method of analysis. This was appropriate given that for the past ten years I have sought to advance the pluralist agenda in economics departments and have thus accumulated experience and insights of relevance. The first five years of this experience took place at the Department of Economics at Monash University (a Group of Eight University) and the most recent five years have been at the School of Economics at La Trobe University (a middle ranking university). My writing on these experiences is not only descriptive, but also discursive and reflective. In particular, there is a focus on what ways of thinking and operating are viable, productive and sustainable.

2.3 Institutional and evolutionary economics

OIE is a school of economics founded by Veblen, Mitchell and Commons in the late nineteenth and early twentieth centuries. The central contention is that formal and informal rules (institutions) are central to understanding economic and social phenomena. Behaviour and thinking are not only institutionally constrained, but are also significantly institutionally formed. Institutionalism, while not currently a dominant school in economics, is an approach that has always had direct appeal for many economists who view economics as a social science rather than a form of social physics. Steinmo explains it thus: “if you think history and ideas matter, institutions structure actors’ choice but are subject to change by actors themselves, and real people make decisions that are not always efficient or purely self-interested, then you are probably an institutionalist” (Steinmo 2008 p.136).

OIE rejects methodological individualism, optimisation, and neoclassical conceptions of rationality. It assumes we both make and follow rules, but also, that the rules we make partially make us. In other words, they shape our preferences, beliefs and habits of thought. OIE has clear links to other disciplines, particularly other social science fields such as politics, history, sociology and anthropology. It is sometimes referred to as ‘economic sociology’ — though within mainstream economics this is not usually meant as a compliment (Myrdal 1976). OIE has a level of internal diversity. A key strand, and the strand adopted in this thesis, is that of Veblenian institutionalism. Veblenian institutionalism is explicitly Darwinian in nature. However, it should also be noted that there are

other contemporary strands of institutionalism such as the more Schumpeterian 'evolutionary' approach that, while having much common ground with Veblenian institutionalism, eschews its comprehensive embrace of Darwinian evolution (Witt 2008).

Institutionalists also reject the idea of an objective, value-free 'positive' economics. Indeed, one of the most famous institutionalists, Gunnar Myrdal, was co-awarded a Nobel Prize in 1973 for explaining why values are always with us (Boumans et al. 2010 pp.169-184). What this means for the researcher is that rather than assuming they are producing value-free analysis, they should be aware of their own values and how these values influence their research. However, they should still seek to be factually accurate, open to different ways of understanding and to not intentionally mislead (Stretton 1969; 1999, pp. 19-29).

There is ongoing debate within institutionalism concerning the *precise* definition of an institution (Nelson 2003; Potts 2007a; Searle 2005). Nonetheless, there is a common core understanding that institutions can be defined as the rules of economic and social life (Nelson 2003). There are formal institutions such as property rights or contract law, but equally there are informal institutions such as customs, traditions and social mores. Institutions are many and varied, ranging from a national constitution to table manners (Gardner 1998). The sheer breadth of what an institution is can sometimes be a burden when trying to theorise about institutions. However, it is still possible to generalise. Institutions provide the shared expectations as to what is proper, and usually contain some level of social or legal sanction if these expectations are breached (Neale 1993). Institutions provide social interaction with some level of predictability; as they help us to anticipate the reactions of others and vice-versa. Interaction and collective action cannot occur without them (Neale 1993).

An institution does not usually operate as a discrete entity: it generally operates in connection with other institutions. In particular, informal institutions are often necessary to give formal institutions practical effect and can be the precursor to the development of a formal institution (Hodgson 1998). North (2005) points out that transplanting an institution from one culture into another is likely to transform its character and effectiveness. For example, the Philippines constitution is tightly

modelled on the US constitution, yet because it sits in an entirely different institutional setting it is a very different entity in practice (Chavance 2009).

Walton Hamilton, who coined the term institutional economics in 1918, provided a useful analysis of institutions. Hamilton (1932) asserts that institutions are subject to inertia and persistence and can often outlive the conditions that brought them into existence. Hamilton also points out that institutions are as capable of embodying ignorance and fear as they are of embodying knowledge and hope: they can define and sustain the very best and the worst of human endeavour. Hamilton also points out that institutions can end up playing roles that are quite different to their original roles.

Veblen made a useful distinction between instrumental versus ceremonial institutions. Instrumental institutions were seen as making a positive contribution to the task of social provisioning. By contrast, he saw ceremonial institutions as being primarily orientated to upholding status and privilege. Later institutionalists, particularly Clarence Ayres, made too much of this distinction, arguing it constituted a fundamental dichotomy (see Hodgson 2004a). However, the distinction between instrumental versus ceremonial institutions is still a useful one, as long as it is not applied too dualistically and simplistically.

While the focus in this thesis is on old institutional economics, it is worth briefly explaining the nature of new institutional economics (NIE). Oliver Williamson, Douglas North and others developed NIE in the 1970s and 1980s. It should be stressed at the outset that its boundary with the old institutionalism is not entirely clear-cut,³ but *roughly* one can say that NIE is different from OIE because it often adopts many of the key features of neoclassical economics: given preferences, optimisation, rationality, and in particular, methodological individualism. NIE recognises that we make institutions, yet gives little or no recognition to the fact that institutions (partially) make us. For many in NIE, institutions (beyond the

³ The boundaries between NIE and OIE have become more blurred over time: see for example North (2005). Furthermore bounded rationality (albeit of an incoherent sort) can sometimes feature in transaction cost economics (Douma & Schreuder 2008)

institution of the market itself) arise primarily because markets suffer from information problems whenever they are not perfectly competitive and goods are not homogeneous (Douma & Schreuder 2008). From an NIE perspective, institutions are primarily concerned with providing external constraints and opportunities to given rational individuals who then optimise accordingly.

2.4 An idiographic school of economics

Because OIE has always acknowledged how the existing institutions of a particular society shape the preferences and beliefs of the individuals within that society, it has consequently acknowledged the importance of historical, social and political context. This makes OIE a more idiographic, rather than nomothetic, undertaking. A nomothetic approach is concerned with the study or discovery of underlying general laws that are assumed to lie below the surface. It is “looking to establish the general law, principle, or theory. The fundamental assumption in the sciences is that behind all the blooming, buzzing confusion of the real world, there are patterns or processes of a more general sort, an understanding that enables prediction and explanation of the particulars” (Bates 2005 p.9). By contrast, an idiographic approach stresses the unique context and processes that are seen as decisive in understanding any given situation. Knowing the particular circumstances is seen as the cornerstone of building a genuine understanding. The end result is “a nuanced description and assessment of the unique facts of a situation or historical event, in which themes and tendencies may be discovered, but rarely any general laws” (Bates 2005 p.9). Orthodox economics has adopted a notably nomothetic approach. For example, Lawrence Summers has argued, “spread the truth – the laws of economics are like the laws of engineering; one set of laws works everywhere” (cited in Klein 2007 p.218).

2.5 Cognition, instincts, habits and institutions

An important aspect of contemporary Veblenian institutionalism is its understanding of the relationship between, cognition, instincts, habits and institutions. The initial work in this area was done by Veblen (1898), yet for a long time this part of his work was either ignored or misunderstood (Hodgson 2004a; O'Hara 2000, 2002). It is only quite recently that the recovery, refinement and extension of this aspect of his work has been undertaken. The scholar most

active in this area is Geoffrey Hodgson (Hodgson 1988, 1993b, 1999, 2001, 2006a) and this section of the chapter is particularly indebted to his scholarship.

A distinctive aspect of the following set of ideas is that they posit a particular response to the structure-agency problem. The structure-agency problem centres on the difficulty of developing theoretical explanations that can meaningfully account for the relationship between the individual and society: does society make the individual or do individuals make society? The structure-agency problem is a manifestation of a more common challenge of accounting for the relationship between the part and the whole: does the part make the whole, or does the whole make the part? Is causation upwards or downwards? Within economics, the relationship between microeconomics and macroeconomics is an obvious example of this general problem.

One response to the structure-agency problem is to acknowledge co-determination between structure and agent. This is helpful to a degree, but it elides the actual causal processes by which such co-determination occurs. Another response is to simply ignore the problem, in which case one is forced towards either methodological holism (the whole makes the part) or methodological individualism (the whole is simply the sum of the parts). Mainstream theory almost exclusively opts for the latter, severely limiting its capacity to explain real-world phenomena such as the evolution of the economics curriculum. There is an obvious benefit in transcending both methodological individualism and methodological holism.

2.5.1 Cognition

To explore OIE's understanding of the structure-agency relationship, it is useful to outline the cognitive processes of the human brain as it receives the inputs that flow from the senses of sight, hearing, touch, taste and smell (Hodgson 1993a). For this vast amount of sensory data to be of any use to us at all, our brain must *impose* some meaning and order. It can only manage this by drawing upon its previously established understandings of the way the world works: its prior conceptual frameworks (Hodgson 2006a). These conceptual frameworks should not be understood as coded into our DNA; they are primarily the product of past socialisation:

Perception is an act of categorisation, and in general such categories are learned. It involves our acquisition of language and our education and socialization in early years. These processes are social and institutional rather than purely individual, involving socially formed signs and meanings and habits of thought (Hodgson 1993a pp.58-59).

Human cognition is a path-dependent process: incoming data is made sense of through a conceptual framework that is the result of historical experience. Beinhocker picks up on this point arguing that people learn within the context of a mental model and that established mental models can often get in the way of gaining new understanding and insights. One of the consequences of this is that resistance to change is “a deep feature of human cognition” (Beinhocker 2006 p.357).

These understandings of human cognition help explain why people can hold tenaciously to established ideas, even in the face of new evidence that would otherwise suggest these established ideas warrant modification, or even outright rejection. The path-dependent nature of cognition helps explain the existence of intellectual paradigms, including economic paradigms (discussed in Section 2.13). It is also helpful in explaining the pervasiveness of habits and institutions in social and economic life.

Of course, new incoming sense data can potentially change an established conceptual framework. Even so, rapid change is unlikely. This strong path-dependency in our cognitive processes helps to illuminate why “economists need to explain their theories in terms which are already somewhat familiar to the audience” (Dow 2002 p.15). It also suggests that even if there is good theory to replace bad theory, the established mental framework may prevent economists from recognising the need to discard the old and embrace the new. The strong social component of our cognitive processes means that, from a structure-agency perspective, the direction of causation runs largely, but not entirely, from structure to agent.

2.5.2 *Instincts*

While the gaining of a conceptual framework via social means is important, the human mind is not a blank computer hard drive, ready for its cognitive processes to be entirely programmed via social institutions. Biological evolution has provided us with instincts. Instincts can be defined as biologically inherited chemical and neural responses that predispose, but do not entirely dictate, a particular response to certain external stimuli (Hodgson 2004a):

Many general human behaviours, including social behaviour, such as a predisposition to cooperate in groups, engage in sexual and other forms of display, territoriality, selfishness and altruism, as well as an ability to formulate and follow ethical rules may have at least some instinctual basis that resides in the way the human brain is structured (Hodgson 1999 p.97).

It is important to emphasise that instincts are about *tendency* or *inclination* and can thus be overruled.

While instincts are biological in nature, they co-evolve with social institutions. To be more specific, productive institutions enhance human survival, so this means that there is a premium placed on instinctual propensities that can efficiently internalise productive institutions (Clifford 2008).

Veblen argued that there are four instincts: the parental bent, the predatory bent, the instinct of workmanship and idle curiosity. But the seeming precision of his list is largely undercut by his argument that instincts never appear in single and pure form; we have multiple instincts that overlap, cut across one another and compound one another (Chavance 2009). Veblen conceded that his assertions concerning instincts were scientifically imprecise, but he defended them as being philosophically and methodologically strong (Jennings 1999). To this one could add that modern cognitive psychology has verified that “human behaviour, though irreducible to biology, has fundamental moorings in some (more or less) universal psychological predispositions” (Jennings 1999 p.520). Nonetheless, contemporary institutionalists tend to refer only to instincts in broad and general terms, rather than trying to name particular instincts as Veblen did (Hodgson

2010). From a structure-agency perspective, the existence of instincts sets up a path of causation that runs largely from agent to structure.

2.5.3 Habits

A habit can be defined as a “self-actuating disposition or tendency to engage in a previously acquired form of action” (Hodgson 1993d p.60). Habits are not only largely ignored in orthodox economics, they are somewhat neglected across all the sciences (Fuller 2010). It has not always been so. Early work in psychology focused on habits. For example, William James’s 1890 *Principles of psychology* stated that “when we look at living creatures from an outward point of view, one of the first things that strikes us is that they are bundles of habits” (James 1950 p.104). Similarly, Veblen argued that fully deliberative decision-making is the exception: it is habits that are ubiquitous and central to human thoughts and behaviour (Veblen 1898). The pragmatist philosopher W S Pierce (who with other pragmatist philosophers, influenced Veblen) also made an insightful point about the connection between habit and belief, arguing that the “essence of belief is the establishment of habit” (Pierce 1878 p.29).

To focus on habits is very appropriate when it is considered that we have known since the 1950s that fully rational calculation on most matters is well beyond the computational abilities of the human mind (Simon 1957). We cannot generally compute the optimum solution, and therefore opt to *satisfice*, which is to find a good enough solution, usually arrived at via a rule-based procedure that is itself deemed as ‘good enough’ on the basis of historical experience. Such rules are a basic constituent of habits. While it is true that habits are required because of the limited computational capacity of our brains, they are also required because often the information we most need for truly rational calculation does not even exist. This is because it resides in a yet to be determined and fundamentally uncertain future (Keynes 1936; Knight 1921). One’s own habits, and the habits of others, assist in managing this uncertainty via making human behaviour somewhat more predictable.

Habits and routines (firm-level habits) are also a necessary requirement for workplace productivity, and are particularly important in retaining and transferring tacit knowledge: knowledge that is difficult to codify or explain and which is often

held collectively, rather than individually, within an organisation (Douma & Schreuder 2008). As explained later in this chapter, habits and routines supply the necessary fixity and cohesion for organisations such as economics departments, to function. Habits also allow us to avoid psychological distress as individuals, stopping us constantly appraising and reappraising and thus allowing the mind to function effectively and to engage in learning, expedite tasks and cope with incoming sense data.

Fuller (2010), drawing on the literature of contemporary neuroscience (Graybiel 2008; Lally 2009), explains that as a habit is acquired, it transitions from largely conscious processing in the cerebral cortex to less conscious, deeper structures of the brain. The process of habituation can vary (depending on the habit and the context) from between as little as 18 days up to 250 days. The key point is that once this process is complete, habits can be strikingly automatic, constant and resistant to revision (Graybiel 2008).

Within economics, the difficulty in shifting habits of thought is recognised. In the preface to the *General Theory*, Keynes talks about his own long and difficult path of escape from established habits of thought; indeed his *General Theory* is sometimes accused of failing to truly break free from such habits. Given that Keynes was such an agile and creative thinker, such an admission of the difficulty of breaking free from habitual thoughts might offer sobering implications for the rest of us.

The neurological research on the fixity of habits helps explain the previously mentioned point that habits are such an important source of economic and social stability, ensuring that the world of tomorrow is not completely different from the world of today. Habits are so powerful in this role that the habitual is commonly understood as natural or 'common sense'. Economic theory itself is one example of this:

...economic theory explores the logic of assumptions and models that seem natural. These constructs are not invented anew with each article and monograph, but are partly conventional; they derive their plausibility from the past practices, or perceived practices, of the discipline (Mandler 1999 p.13).

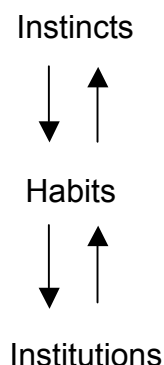
From a structure-agency perspective, habits are a two-way link between instincts and institutions. Causation in matters habitual clearly runs upward, in that habits can give expression to our instinctive dispositions. However, causation also runs downwards, in that habits can modify or attenuate our instinctive dispositions (Chavance 2009 p.12).

2.5.4 Institutions

As discussed, institutions are the formal and informal rules that exist in a particular society. How are they formed, and what is their relationship to habits and instincts? Habits exist at the level of the individual, not society. However, over time, through a process of emulation and selection, the habits of individuals can give rise to social and economic institutions. Veblen went so far as to argue that institutions are a *collective* habit of thought. Individuals observe and then repeat the habits of others for various reasons, including the pursuit of social acceptance and gain; the avoidance of social sanction; or because, in the absence of full information about the alternatives, following an established institution seems the safest thing to do.

From a structure-agency perspective, causation in matters institutional runs upwards, in that institutions emerge from individual habits. Causation also runs downwards, in that institutions influence habits and thus instincts and our cognitive processes. The relationships between instincts, habits and institutions is summarised in figure 2.5.1.

Figure 2.5.1 Relationship between instincts, habits and institutions



The various two-way causations offer a psychologically and socially plausible solution to the structure-agency problem that avoids the limitations of either

methodological individualism or methodological holism. It also avoids privileging either side of the 'nature versus nurture' debate (as the OIE framework spans the biological and the social world). Inherited dispositions are necessary for socialisation to occur, yet socialisation will exert a profound effect on whether, and in what way, our instinctual proclivities play out.

2.6 Circular and cumulative causation

Circular and cumulative causation (CCC) is another important concept in OIE, though it is not a specifically institutionalist concept.⁴ CCC stresses that it is instability, rather than equilibrium, that characterises many economic and social processes. In CCC, change, rather than bringing forth countervailing changes, usually produces *supporting* changes in the direction of the initial change, but in a way that is stronger and more accelerated than the initial change. Positive feedback is at work: a disturbance in A prompts a change in B, which then prompts an even larger disturbance to A, and so on (Schmid 1999). A microphone 'feeding back' through a public address system is a good example of CCC in action. CCC can be contrasted with the concept of equilibrium via metaphors:

The metaphor of equilibrium is often compared to a ball rolling round in a saucer that will tend towards coming to rest at the centre of the saucer. By contrast the metaphor for circular and cumulative causation would be like a snowball rolling down a hill, gathering in size and speed at an increasing rate (Stilwell 2011a p.223).

Unlike the equilibrium approach, CCC recognises the concept of historical time, and the cumulative and transformative nature of change.

CCC is usually understood as an agent of change, but it can also be used to explain inertia and stagnation (Argyrous 2011). Consider the idea that theoretical advance cannot, of itself, necessarily force the required institutional changes that

⁴The origins of CCC can be traced back as least as far as Adam Smith and while institutionalists such as Veblen and Myrdal are often associated with it, so too are figures such as Kaldor, Verdoorn and Young.

are necessary to remake the economics curriculum. Further, consider the idea that significant theoretical advances may be as much dependent on institutional reforms as institutional reform is dependent on theoretical advances. In such a situation the elements would be feeding upon themselves, but not in a way that brings change.

2.7 Power

Power can be defined in a number of different ways, and perhaps no single definition is entirely adequate (Rothschild 1971). However, in a broad sense one can opt simply to define power as the ability of person A to make person B do something they would not otherwise do (Robertson 1993). Power might be exercised through various methods, such as (a) coercion (b) enticement or (c) the ability to alter the person's underlying preferences or beliefs. The last option is concerned with changing what people believe and want, rather than just what they do (Bartlett 1993).

It is often said that 'knowledge is power', yet this elides something quite important: knowledge only becomes power when there is an asymmetry of knowledge between parties (Bartlett 1993). For example, the power and benefits that might accrue to Party A in telling a lie are most probably contingent on Party B not being in a position to really know if Party A is lying (or is deluded). Similarly, if the general public is not in a position to understand an explanation for a given phenomenon, or to have knowledge of a rival explanation, it has much less power than if it had a good working knowledge of the main ideas behind any given explanation. This point has obvious relevance to economics; indeed, Earl explicitly points out how the profession is utilising "the growing information asymmetry between itself and the wider public about what it does to put 'spin' on its contributions and deny it is failing"(Earl 2010 p.222).

In neoclassical economics, power is understood solely as market power (the ability of a firm to raise its price without losing all its sales). Every market exchange is seen as a solved political problem (Bowles 2005). People's behaviour is primarily changed via the changing of marginal benefits and costs. To change behaviour simply involves changing the combination of carrots and sticks to instantly elicit the desired behaviour. This is clearly a very limited and

reductionist concept of power. OIE subscribes to a much deeper, broader and more critical concept of power, whereby power relations are exercised through institutions and the exercise of power occurs not just in market exchange, but in all human interactions (Bartlett 1993). Power in the economy and in society is primarily channelled through institutions; indeed, one can conceive of the economy not primarily as a system of markets, but as a system of power (Samuels & Tool 1988).

2.8 Evolution

OIE has traditionally been accused of lacking a clear theoretical foundation, of being merely 'description economics'. Such criticisms are exaggerated and do not acknowledge the various conceptual and theoretical contributions made by OIE (Hodgson 1998). However, it is also true that OIE is a relatively under-theorised branch of economics (Hodgson 1998). Under-theorisation is a problem because analysis without theory, or 'pure empiricism' is not possible. Theory (or at least a prior mental framework of some type) precedes observation. Given that we 'see' with our mind as well as with our eyes, a coherent and defensible framework of inquiry is a basic and important requirement.

The response of Veblenian institutionalists to the problem of under-theorisation in OIE has been to explicitly base OIE on a Darwinian evolutionary foundation. Before examining whether economics can be an evolutionary science, it is necessary to specify exactly what evolution means, as it is subject to multiple interpretations (Vromen 2004). Darwin, drawing on an idea of Malthus, explained evolution as a three-step process of variety, replication and selection.

The generating of variety is the first step in the evolutionary process. Variety creates a range of choices from which the environment can select. The variation in the population can result from chance mutation (for example, to the DNA of a particular organism), though it should be stressed that it can also involve a degree of intentionality. For example, individuals may change their behaviour or thinking on the basis of their personal motivations, intentions or hunches based on induction (Beinhocker 2006). In summary, both the intentional and unintentional can be consistent with an evolutionary process (Nelson & Winter 1982).

Replication is the second step of the evolutionary process. It is necessary so that successful variations can pass on their characteristics through time. In the biological sphere, replication is achieved via the passing on of DNA during sexual reproduction. In the social sphere, institutions can reproduce themselves because they are relatively stable and can be replicated by the coming generation via a process of emulation that occurs through socialisation (Hodgson 2008).

Selection is the final stage of the evolutionary process. Selection becomes inevitable because of super-fecundity: more variations exist than the environment can support. This means that variations that are more environmentally fit persist, and the variations that are less so, die out (Hodgson & Knudsen 2010). Note that 'environmentally fit' simply means 'fit enough to survive for the moment', rather than the fittest (or most optimum) of all possible designs.

The Darwinian triple of variety, replication and selection is, in essence, straightforward. However, Darwinian evolution has been subject to much confusion and misuse. In particular, it has a very unfortunate history of being twisted to support racist and anti-egalitarian ends (Hodgson 2006a). Such confusion and misuse has given evolutionary theorising in the social sciences a bad name and contributed to its marginalisation (Hodgson 2004a). A key interpretative error is that evolutionary processes produce optimum outcomes. Such thinking can be seen in Spencer's ideas of social Darwinism, or more recently among some on the far-right to justify extreme laissez-faire public policy (Krugman 1997).

This teleological conception of evolution as optimisation is demonstrably erroneous. Evolutionary change can be idiosyncratic and perverse: something can be reproduced as long as it is not so dysfunctional as to prevent survival (Gould & Lewontin 1979; Hodgson 1993c, 1994). Further, what is environmentally fit is always something that can only be determined relative to a particular environment: something advantageous today may be disadvantageous tomorrow (Beinhocker 2006). It is also true that something that is favourable can become the victim of its own success, in that it can change the nature of the environment so that its favourable adaptation becomes a liability (Douma & Schreuder 2008).

Optimisation is also limited by the fact that evolution is also an inherently path-dependent process: the input for the next round of the process is the output of the previous round (Beinhocker 2006). What this means is that evolution is intrinsically historical, thus to understand any phenomena (for example the economics curriculum) in evolutionary terms needs to have a strong historical component. Evolution happens in historical time: the clock cannot be wound back so that something different can be trialled, or as Hardy (1999) puts it, natural selection can never start from scratch to produce the perfect solution. Evolution is best understood as the relentless grinding out of a three-step process of variety, retention and selection: it is a race going in an unspecified direction that has no finish line and many dead ends (Beinhocker 2006; Hodgson 1993c).

This Darwinian conception of reality has much to recommend it. It is compatible with many ideas that have long been important in political economy such as path dependency, lock-in effects, increasing returns, learning and adaptation. It can also span our biological and social selves. Furthermore, it is not trapped in either methodological individualism or methodological holism (Hodgson & Knudsen 2010). By contrast, neoclassical economics is narrowly mechanistic and struggles to capture many important processes that characterise economic and social reality.

For all its appeal, the Darwinian conception and approach has its own challenges. Evolutionary systems are not like the gearbox of a car (or like the general equilibrium of Walras). Evolution, despite being a simple three-step process, can generate complex outcomes that are difficult to predict. Temporal differences within the system are important in explaining why this is so. For example, in economic and social systems, instincts evolve biologically over a very long period of time, while habits evolve more slowly, and institutions more slowly still (Hodgson 1998). A further complication is that there can be co-evolution between levels (for example, the co-evolution of instincts and institutions discussed earlier in this chapter).

2.9 Emergence

Evolutionary systems are also usually characterised by emergence.⁵ Put most simply, the idea of emergence is that entities are more than the sum of their parts. An emergent entity is composed of its constituent parts, but also the *interaction* of its constituent parts (Beinhocker 2006). The novel properties that emerge from the interaction of the constituent parts (whether these are novel structures, novel properties or novel patterns) could not have been foreseen by simply examining the constituent parts. What results from an emergent process is not reducible to, or explicable in terms of, the underlying component parts (Goldstein 1999). Attempts at such reductionism run up against the fallacy of composition problem.

The idea of emergence initially sounds rather abstract, but can be easily grounded by looking at an example. Consider the human brain. While it is primarily composed of neurons, it cannot be sensibly understood as merely an accumulation of neurons. Rather, the essence of the brain is in the ever-changing networks of interaction between its neurons.

Emergence suggests a layered ontology. A layered ontology is where there are succeeding levels of reality: the physical, molecular, organic, mental, individual, human and the social. The interaction at the preceding level of reality is central in giving rise to the next level of reality (Hodgson 2004a). Within economics, the most crucial levels of reality are between microeconomic and macroeconomic phenomena. While microeconomic phenomena give rise to macroeconomic phenomena, macroeconomics is not reducible to microeconomic foundations. Macroeconomics is understood as a distinct entity in its own right that has its own properties and characteristics; indeed, there is clear scope for macroeconomics to exert downward influence on microeconomic phenomena.

Over the last two decades, the concept of emergence has become a fashionable topic in the philosophy of science. However, it is not a new idea, going back as far as Aristotle who argued in chapter six of his *Metaphysics* that “the whole is

⁵ This section on emergence was greatly improved by reading King (2012a) and the associated literature on emergence that it drew upon.

not, as it were, a mere heap, the totality is something besides the parts” (Aristotle in Ackrill 1986 p.320). Emergence has also been advocated (albeit, often in fragmented form) by economists such as List, Mill, Veblen, Hobson and Hayek, sociologists such as Talcott Parson and Emile Durkheim and philosophers of biology such as Lloyd Morgan (Hodgson 2000a, 2004a; King 2012a).

Emergence has very direct relevance to issues of structure and agency, as it is antithetical to the idea of methodological individualism. If methodological individualism’s central premise is “the doctrine that *all* social phenomena (their structure and their change) are in principle explicable *only* in terms of individuals – their properties, goals, and beliefs” (Elster 1982 p.453 emphasis added), then it is at loggerheads with emergence, which argues that the properties of group phenomena may be quite different to the properties of the individuals that make up a group.

Emergence also has clear implications for the structure-agency problem because it provides support for the idea of downward causation in social and economic explanation. Specifically, emergence allows for something new to emerge from the interaction of the constituent parts that can then potentially affect the constituent parts. The idea of downward causation becomes harder to countenance if nothing new has emerged from the interaction of the constituent parts.

Emergence, particularly in a strong form that allows for downward causation, would appear more easily applicable to the social sciences than the natural sciences. As Gordon (1991) has pointed out, when hydrogen and oxygen combine to form water, new properties do indeed emerge, yet the properties of hydrogen and water are not dependent on the existence of water (Gordon 1991; King 2012a). By contrast in the social world, the nature of individuals is very dependent on the society in which they are enculturated.

How does the concept of emergence sit within traditional notions of science? Within the philosophy of science emergence, particularly in its strong form, has been criticised as being mysterious, somewhat mystical or even magical and non-scientific (Gordon 1991; Kim 1999; King 2012a). However, the concept is something with which many philosophers of science and many natural scientists

are actively engaged. Many of the advances in areas such as complexity theory cannot help but engage and wrestle with emergence, even if there is not yet much consensus about how best to do this.

How does emergence sit with traditional views of what constitutes a scientific economics? The will to appreciate and internalise a concept like emergence would not appear very strong. To accept the concept of emergence challenges the mainstream's view of economic phenomena being mechanical and simple. This belief can be seen in the currently dominant dogma that macroeconomics must have rigorous microfoundations and the general orientation towards methodological individualism.

2.10 The challenge of an evolutionary economics

To move away from a simple mechanistic view of economic phenomena and to see the economy as an evolutionary system characterised by emergence is confronting. As Nelson explains, the evolutionary approach leads to a more modest, cautious and idiographic economic analysis:

There is no question that, in taking on board this complexity, one often ends up with a theory in which precise predictions are impossible or highly dependent on particular contingencies, as is the case if the theory implies multiple or rapidly shifting equilibria, or if under the theory the system is likely to be far away from any equilibrium, except under very special circumstances. Thus an evolutionary theory not only may be more complex than an equilibrium theory. It may be less decisive in its predictions and expectations. To such a complaint, the advocate of an evolutionary theory might reply that the apparent power of the simpler theory in fact is an illusion (Nelson 1995b p.85).

An evolutionary system characterised by emergence is one that is not amenable to easy prediction or explanation. There are temporal differences between the different levels in the system, non-linearities and co-evolution between the components. Evolutionary systems may be gradual and orderly for a time, yet they are also prone to periods of punctuated equilibrium: sudden great leaps which interrupt periods of slow change. The sudden leaps might be caused by external disturbances outside the system, or more probably, evolutionary

processes within the environment lead to a tipping point that then prompts radical change within the system⁶.

All these aspects of an evolutionary economics do not fit well with the neoclassical view of the world. As such, they are confronting to habits and institutions that exist within traditional centres of economics teaching. Given that Section 2.5 has just outlined how powerful habits and institutions can be in preventing new thinking and behaviour, it is hard to imagine that the economic mainstream will embrace an evolutionary economics any time soon.

Evolutionary theorising in the social sciences is still only at an early stage of development (Hodgson 2004a). While current evolutionary theorising is useful in prompting lines of inquiry and providing guidance to empirical analysis (Hodgson & Knudsen 2010), it is not a theory of everything (Hodgson 1998). Applied analysis in OIE actually requires the addition of more context specific (mid-range) theorising (Hodgson 2006c). This combination of general and specific theorising is used in other sciences such as evolutionary biology, where context-specific theories and concepts that relate to the particular environments and organisms under investigation are nested inside more general laws and principles (Hodgson 1998). Such an approach should not be seen as a weakness; by contrast, this combination of general versus specific theorising provides a useful reconciliation of the idiographic and nomothetic. On one hand, it recognises the idiographic via its acceptance of the importance of particular and unique circumstances. On the other hand, it recognises the nomothetic in that it asserts that there are some general relationships that we can look to in guiding our analysis of specific phenomena.

For the economist doing applied work, an evolutionary approach does not provide a treasure map that instructs us exactly where and how to dig for every truth we are seeking. Instead, it informs research with general guidance, prompting questions to ask, suggesting batteries of possibilities to look for and lines of

⁶ The cyclical growth models of Goodwin (1990) and Kalecki (1937) are good examples of attempts to come to terms with an economy characterised by these features.

inquiry that may be fruitful (Hodgson & Knudsen 2010). It does not indicate what *should* be happening, but offers tools to assist in finding out what *is* happening (Stretton 1999). This approach to inquiry recalls the introduction to Hare and Hare's 1838 work *Guesses at truth*:

If I am addressing one of that numerous class who read to be told what to think, let me advise you to meddle with this book no further. You wish to buy a house ready furnished, do not come to look for it in a stone quarry. But if you are building up your opinions for yourself, and only want to be provided with the materials, you may meet with many things in these pages to suit you (Hare and Hare cited in Grayling 2001 p.1)

What, then, is the context-specific (or mid-range) theory and concepts at our disposal if we want to do OIE applied analysis? Three sources are tapped for use in this thesis: Freeman and Hannan's work in organisational ecology (Hannan & Freeman 1989), Nelson and Winter's theory of the firm (Nelson & Winter 1982), and the tradition in the philosophy of science known as the sociology of scientific knowledge (SSK). It will be shown that all three bodies of theory and concepts are broadly compatible with OIE as they all emphasise (either explicitly or implicitly) the importance of habits, routines and institutions as being central in understanding social and economic processes. Furthermore, all identify patterns of circular and cumulative causation, path-dependence, variety, replication and selection that unite them as being broadly evolutionary in nature.

It is not argued that every aspect of each of the frameworks just mentioned integrates perfectly with the other. Nor is it argued that every aspect of each theory integrates perfectly back into an evolutionary ontology. There are three lines of reasoning to explain this lack of integration. First, no one has yet developed a mid-level theory that is fully evolutionary in every respect (Hodgson & Knudsen 2010). Second, whether any mid-level theory can ever be *completely* compatible with an evolutionary ontology is doubtful, given that any operational theory has to make simplifications, abstractions and partial closures. It is hard to imagine how such simplifications, abstractions and partial closures would not partially violate the evolutionary purity of the theory in question. Third, when drawing upon the understanding of pluralism presented in Chapter four, one can argue that it can be desirable to employ different theories if each can help in

informing and illuminating particular aspects of a complex situation. Such theories need not always be fully integratable.

2.11 Freeman and Hannan

Freeman and Hannan (1989) have developed a theory of the firm known as organisational ecology. Crucial to this theory is the double-edged nature of inertia. On one hand, firms require high levels of inertia to function effectively, but such a high level of inertia means that firms are unable to adapt to changing circumstances. Following Stinchcombe (1965), they argue that:

Cohorts or organizations are 'imprinted' with the social, cultural, and technical features that are common in the environment when the cohort is founded. Because imprinted characteristics are highly resistant to change, the current characteristics of populations of organizations reflect historical conditions at the time of founding rather than recent adaptations (Hannan & Freeman 1989 p.xiii).

The implication is that economic change will be driven more by the birth and death of firms rather than by the adaptation of individual firms. While firms have some scope to change, inertia is the dominant characteristic. Even when firms might recognise that rapid or radical change is required, they will have difficulty responding, so that attempts at change are often unsuccessful (Hannan & Freeman 1989). Such findings have obvious implications for the question of whether economics departments are capable of significantly changing their curriculum, or whether the curriculum needs to be rebuilt outside of where it has traditionally been taught.

Hannan and Freeman argue that firms take an organisational form; which can be likened to a membership of species (Hannan & Freeman 1977; Hannan & Freeman 1989). Firms that have a common organisational form are classed as organisational populations that exist in a particular time and space (like populations of particular species of an animal in particular regions). It is argued that firms are slow to respond to a changing environment in no small part because they need to be *reliable* and *accountable* (Douma & Schreuder 2008). Reliability and accountability require routines: established rules, practices and processes of work. Routines are the organisational equivalent of a habit.

Continuity and reproducibility of these routines are essential, otherwise the firm cannot function efficiently and it will essentially have to define and create itself anew every day. It will also have trouble generating internal cohesion and effective communication. Because high inertia provides the firm with the reliability, accountability and reproducibility that it needs, environmental selection pressures will favour organisations with structures that exhibit high inertia (Douma & Schreuder 2008). In other words, inertia enhances evolutionary fitness, or at least it enhances fitness when the environment is relatively constant. The key point is that firms are not just beset by inertia; they *require* some level of inertia to function effectively.

Inertia only becomes a net liability once there is significant change in the environment, as inertia makes it difficult for firms to adapt (Douma & Schreuder 2008). Beinhocker's findings that "the deck is stacked against organisational change" (Beinhocker 2006 p.333) and that market signals are "distorted like a fun house mirror within firms" (Beinhocker 2006 p.341) is consistent with Freeman and Hannan's arguments. These arguments are also in concert with Round and Shanahan's observations that, when faced with the need for real change, Australian economics departments have generally failed to notice or adapt and have instead committed "academic suicide" (Round & Shanahan 2010 pp.425-426).

2.12 Nelson and Winter's theory of the firm

The work of Nelson and Winter (1982) is recognised in institutional economics for its notable embrace of evolutionary thinking. They put forward a general theory of economic change focused at the level of the firm. The origins of their work can be found in Cyert and March's behavioural theory of the firm (1963) and the work of Schumpeter. Their work is also consistent with some key ideas of Veblen (Hodgson 1999). Like Freeman and Hannan, Nelson and Winter stress how firms are constrained by their past and that "changes in organizational innovation may be much more difficult than technological innovation" (Nelson 1993 p.246). While not specifically designed to analyse economics departments, it is broadly applicable and provides some useful insights.

In Nelson and Winter's theory, firms with differing capabilities and technologies primarily compete on processes and products, rather than price. These processes are contained within routines which are subject to evolutionary selection. Routines are best understood to be collective habits that exist within a firm, Nelson and Winter define a routine as follows:

Our general term for all regular and predictable behavioural patterns of firms is 'routine.' We use this term to include characteristics of firms that range from well-specified technical routines for producing things, through to procedures for hiring and firing, ordering new inventory, or stepping up production items in high demand, to policies regarding investment, research and development (R&D), or advertising, and business strategies about product diversification and overseas investment. In our evolutionary theory, these routines play the role that genes play in biological evolutionary theory (Nelson & Winter 1982 p.14).

It should also be noted that even innovation is done in a way that has its own routines that are specific to the individual firm. Routines are particularly important as carriers of tacit knowledge (Hodgson 1999). Tacit knowledge is knowledge that is difficult to codify and write down (for example information that cannot be easily written into an instruction manual). Tacit knowledge is often gained or transferred via 'learning by doing'; this is a significant dynamic in organisations. In such instances skill acquisition is slow at first, but eventually second nature and efficient (Hodgson 1999).

While in Nelson and Winter's theory there is recognition that there are rigidities that stifle desirable change, they are more open than Freeman and Hannan in conceding that firms can adapt via learning and imitation (Nelson 1993; Nelson & Winter 1982). Over time, the firm interacts with its customers, other firms and the general environment. It is this interaction that drives change and adaptation within the firm. However, change is still seen as being path-dependent, as existing routines constrain what is possible in the future.

Nelson and Winter argue that environmental selection will progressively favour successful routines. This suggests that a collection of reasonably well-integrated and successful routines will be able to give rise to monetary profits; which in turn

provide signals and incentives for the firm to persist with these routines (Douma & Schreuder 2008; Nelson & Winter 1982). A firm's profits may also provide signals and incentives for other firms to try to replicate the successful routines, though the initial firm may have a decisive head start in incorporating the routine amongst its other routines, and some of its routines may be difficult to replicate because of issues such as tacit knowledge (Douma & Schreuder 2008; Nelson & Winter 1982).

Firms are still quite constrained. Routines that have received prolonged selection from the environment can generate very high levels of inertia that make change within the firm very difficult (Douma & Schreuder 2008 p.297). In general, firms are "much better at the tasks of self-maintenance in a constant environment than they are at major change, and much better at changing in the direction of 'more of the same' than they are at any other kind of change" (Nelson & Winter 1982 pp.9-10). As Dosi explains:

A firm's previous investments and its repertoire of routines (its 'history') constrain its further behaviour. This follows because learning tends to be local. That is, opportunities for learning will be 'close in' to previous activities and will thus be transaction – and production – specific. This is because learning is a process of trial, feedback and evaluation. If too many parameters are changed simultaneously, the ability of firms to conduct meaningful quasi-natural experiments is attenuated. Thus, if many aspects of a firm's learning environment change simultaneously, the ability to ascertain cause-effect relationships is confounded because cognitive structures will not be formed and rates of learning diminish as a result (Dosi 1993 p.233).

Here we see an emphasis on the path-dependence of cognition itself; routines are dependent on a prior framework of understanding. Moving to an entirely new set of routines will likely involve *unlearning* the old framework and learning a new one (Douma & Schreuder 2008). It must be remembered that this unlearning and learning has a strong collective dimension to it (Hodgson 1999). This suggests that to completely and quickly change routines en-masse across an entire organisation may be a very difficult, if not impossible, thing to do (Douma & Schreuder 2008; Nelson 1993).

Another source of inertia comes from the idea that existing routines are, among other things, a source of 'organisational truce.' What is meant here is that routines stipulate the existing power balances and boundaries. Changing routines will upset these existing political balances, and thus "fear of breaking the truce is, in general, a powerful force tending to hold organisations on the path of relatively inflexible routine" (Nelson & Winter 1982 p.112). Furthermore, it is argued that it may be the case that "routines of the organisation as a whole are confined to extremely narrow channels by the dikes of vested interest. Adaptations that appear 'obvious' and 'easy' to an external observer may be foreclosed because they involve a perceived threat to internal political equilibrium"(Nelson & Winter 1982 p.111). In summary, change, if it occurs at all, will probably be constrained by the existing balances of power between self-interested parties within the organisation. The case studies, particularly that of La Trobe University's PPE degree, provide some good illustrations of institutional truce in action, as well as illustrating how innovation can be stifled when it occurs outside of established routines and habits of thought. Such findings help to explain why curricular reform from within traditional centres of economics teaching has been so difficult.

Given the type of problems Nelson and Winter identify, new firms have some clear advantages when genuine change is required. There is no past by which to be constrained, no organisational truce to break, and cognitively, "new entrants are, in essence, starting with a clean sheet and do not have the problem of having to climb up an unlearning curve before being able to run down a new learning curve" (Douma & Schreuder 2008 p.296). Douma and Schreuder go on to note that firms that recognize the need for real change have increasingly located new activities away from their current operations. They cite the example of when IBM sought to move from making mainframe computers to personal computers, it both geographically and managerially separated the fledgling personal computer division. Similarly, when General Motors needed innovative production techniques for its new Saturn model of car, it established a separate organisation (Douma & Schreuder 2008). Similarly, one might argue a genuinely pluralist economics requires its own institutional base.

2.13 The sociology of scientific knowledge

The final set of concepts and theory in this chapter comes from the Sociology of Science Knowledge (SSK). SSK seeks to explain the spread of intellectual ideas; it is therefore of obvious relevance to a thesis focused on curricular evolution. SSK is also a branch of knowledge that is quite compatible with the general institutionalist approach adopted in this thesis; indeed, it emphasises how social structures shape the development and spread of ideas:

Unlike traditional philosophy of science, where the focus is on the discovery of, and epistemic justification for, the rules that constitute the proper scientific method, SSK examines the behaviour of scientists sociologically, as an instance of a more general analysis of social behaviour. For SSK, the scientific community is in fact a community and as such the behaviour of its members is determined by the same factors that determine the behaviour of members of any other social or cultural community (Hands 1998 p.474).

SSK arose because of the failure of earlier philosophies of science, such as logical positivism and Popperian falsificationism, to provide a rule-based approach for classifying theory as being either scientific or unscientific (see Chapter four). SSK, along with rhetorical and postmodern approaches, can be seen as constituting a 'naturalistic turn' whereby we examine what scientists actually do, rather than prescribe what they should do (Hands 2001a). SSK views the old rule-based approach of the received view as being untenable, arguing that observation cannot be 'objective' and needs to be seen as being both theory-laden and social-context laden (Hands 2001b). SSK asserts that how scientists think and act is essentially no different from how anybody else thinks and acts: socialisation and institutions are crucial. Socialisation and the signals and incentives of particular social structures often lead scientists to unquestioningly believe certain things and look at things in a specific way. Science, for all its claims to be an objective pursuit of the truth, cannot totally transcend the social, even if scientists themselves, or the society they serve, would like to, or feel they need to, imagine otherwise.

SSK originates with the publication of *The structure of scientific revolutions* by Thomas Kuhn (1962). Kuhn's book was a landmark and has had a significant impact on both the philosophy of science and economic methodology. The literature on Kuhn's work is vast, but the essential ideas can be outlined reasonably succinctly. It is argued that most of the time science practice is in a state of 'normal science', where there is a single ruling paradigm. A paradigm is an overall framework or research programme that defines the thinking and behaviour of a particular community of researchers. Kuhn later refined his idea of paradigm by arguing that it is composed of a disciplinary matrix (Dow 2002). This disciplinary matrix stipulates the models and methods to be used, but also provides a general world view that includes things such as the values by which theories are to be judged (Dow 2002). Exemplars form an important part of the disciplinary matrix, demonstrating an (apparently) impressive solution to a particular problem (Pheby 1987).

Kuhn argued that paradigms are incommensurate with one another. Such an assertion conflicts with the traditional conception that science builds on the knowledge contained in older theories and that later theories will be getting closer and closer to the truth (Boumans et al. 2010). Incommensurability provides some of the explanation as to why scientists from different paradigms have enormous problems trying to communicate with each other and to respect each other's positions. Boumans et.al (2010) show that it was Kuhn's reading of Aristotle's *Physica* that provided the genesis for his main ideas:

Aristotle had been an acute and naturalistic observer. In such fields as biology or political behaviour, his interpretations of phenomena had often been, in addition, both penetrating and deep. How could his characteristic talents have failed him so when applied to motion? How could he have said so many apparently absurd things? And, above all, why had his views been taken so seriously for so long a time by so many successors? The more I read, the more puzzled I became (Kuhn 1977 p.xi).

Kuhn eventually resolved his puzzlement by concluding that Aristotle's analysis was written within an older paradigm. A work written in this older paradigm was seen as preposterous because Kuhn was viewing it through the lens of a later paradigm.

Paradigms are resistant to change and have many processes that are conservative in nature. However, they are not permanent and can be overthrown from time to time; notably, this is said to occur via a *revolutionary* rather than an incremental process (Kuhn 1962; Pheby 1987). The starting point for a revolution is the building up of anomalies and problems that are so serious that they can neither be ignored nor accommodated via minor adjustments to the currently dominant paradigm. This situation is seen as a state of 'crisis', which is resolved by scientists abandoning the established paradigm and taking refuge in a new paradigm (Pheby 1987).

Kuhn developed his ideas by looking at the history of the natural sciences rather than the social sciences. It is generally accepted that Kuhn's ideas do not transfer quite as well to the social sciences as the natural sciences. Backhouse (1998) has outlined some problems in regard to how Kuhn's ideas apply to the history of economics. First, it is difficult to clearly establish the start and end of particular paradigms: has there been a single paradigm since Adam Smith? Or are there various paradigms, such as the classical, neoclassical and Keynesian? The second problem is that it is difficult to argue that particular paradigms have enjoyed monopoly status, as asserted by Kuhn. While there is a dominant orthodox economics, there are also dissident schools that coexist with this dominant paradigm. In the social sciences paradigms seem to accumulate, rather than replace each other (Hettne 1995).

While Kuhn's thinking does not map seamlessly on to the history of economics, his concept of a paradigm has broad applicability to economics; in particular that "prior acceptance of a paradigm defines what one will look for and what he/she will see" and that "adherents to different paradigms literally live in different worlds and find it virtually impossible to communicate with one another across that perceptual barrier" (Bartlett 1995 p.1259). The concept of a paradigm is also particularly valuable in prompting questions and lines of inquiry. The problem of *sharply* defining where a paradigm starts and ends is usually difficult, but this does not negate its usefulness.

2.14 Developments in SSK since Kuhn

Since the publication of *The structure of scientific revolutions*, SSK has been extended in various directions. One of the most important of these extensions has been the 'strong programme' of the Edinburgh School, which strongly asserts that all scientific knowledge, including SSK itself, should be seen as a social construction (Bloor 1991; Dow 2002). Boumans et al. (2010) argue that the four cornerstones of the strong programme are as follows:

Causality: identify the causal conditions that bring about the beliefs of scientists;

Impartiality: be impartial between true and false, or rational and irrational, beliefs;

Symmetry: the same type of cause should be used to explain both true and false beliefs;

Reflexivity: the explanations offered should also be applicable to the sociology of science

The strong programme's position on the issues of symmetry, causality and reflexivity has had some influence in the three case studies I have undertaken. While I have my own views and make them clear enough, I have also sought to try and understand how different protagonists appear to understand their situations.

Another key branch of SSK is the anthropological approach of the social constructivists (this variant is sometimes referred to as the 'Bath School' - reflecting its origins at the University of Bath). The emphasis of the social constructivists is on micro-studies of what actually occurs in particular settings where science is undertaken, such as a laboratory (for an example of this work see Knorr-Cetina 1981). Indeed, this branch of SSK is sometimes known as the 'laboratory studies approach' (Boumans et al. 2010). The social constructivist approach is anthropological, as it requires "the social scientist to spend a substantial amount of time doing fieldwork at the site of the scientific activity and to understand the particular details of the knowledge production process...to

follow scientists around” (Hands 1998 p.476). This thesis can be seen as having some affinity with the social constructivist approach, mainly through the use of participant-observation (as was mentioned in Section 2.2).

I will finish this chapter by emphasising two ideas from SSK that are particularly important. First is the proposition that new ideas get accepted on the basis of how desirable they are in terms of the current preferences, predilections and interests of particular groups of scientists. Second is the proposition that larger social debates and struggles, particularly those concerned with social and political order, are decisive in shaping what is accepted as science.

SSK argues that scientists, particularly social scientists, have no recourse to some privileged and objective process whereby they can uncover the unambiguous truth. They are prone to persist with ideas and concepts that they are attached to and feel fond of and which are advantageous to them: “the acceptance of a scientific theory is dependent upon its compatibility with the social interests of the scientific community rather than its success in terms of explaining the state of the world” (Boumans et al. 2010 p.122). There are certainly clear sunk costs of investing in a particular paradigm: abandoning it may lead to the loss of status and income and may also require people to acquire radically different knowledge and techniques. This could plausibly result in significant psychological stress as scientists might well have to come to terms with having committed much of their professional lives to a failed project. This might create a strong conscious, or at least unconscious, incentive to remain committed to the status quo. Certainly, a number of heterodox economists have looked to arguments of sunk costs (Freedman 2000) and psychological distress to help explain the resistance to pluralism (Nelson 2001).

While a focus on how economists think and respond to their self-interest is important, it is also necessary to acknowledge the role that larger political and social forces play in the spread of scientific ideas and also on contested knowledge-claims. A classic case study in the SSK tradition that focuses on these is Shapin and Schaffer’s *Leviathan and the air-pump* (1985).

Shapin and Schaffer, working within the tradition of the strong programme, undertook an innovative analysis of a well-known scientific dispute that occurred

between Thomas Hobbes and Robert Boyle in the 1660s and early 1670s. At the surface level, the dispute was about the scientific legitimacy of Boyle's air-pump experiments. These experiments involved a suction pump being attached to a replaceable glass bulb. The pump would evacuate the air, and thus create what in today's terms would be called a vacuum. However, back then, what exactly was created by the evacuation of the air was a matter of intense disagreement between Hobbes and Boyle, with Hobbes strongly attacking the significance and legitimacy of Boyle's work.

Initially, Shapin and Schaffer make a familiar point from SSK, namely that *internal* social pressures from within a scientific community are important:

...the member who poses awkward questions about 'what everybody knows' in the shared culture runs a real risk of being dealt with as a troublemaker or an idiot. Indeed, there are few more reliable ways of being expelled from a culture than continuing seriously to question its taken-for-granted intellectual framework (Shapin & Schaffer 1985 p.6).

Many heterodox economists would agree with such an assertion, however their analysis goes deeper than to simply make such canonical points; they also stress how political philosophy and a given social order can exert a powerful influence over science.

The dispute between Hobbes and Boyle was centred on matters of method and methodology. Hobbes argued that the path to absolute certainty was via a deductive epistemology that utilised logic and geometry and recognised no boundaries between the natural, human and the social. It was an approach that left no scope for dissent. Shapin and Schaffer argue that Hobbes's adoption of such a methodological position cannot be separated from his controversial views on social order, specifically his arguments concerning the desirability and legitimacy of a strong state (i.e. a Leviathan) to determine what is true and correct and what must be obeyed. Hobbes's particular method of knowledge production, and the supposed degree of certainty it could deliver, was seen as having profound implications for societal order. Shapin and Schaffer argue that for Hobbes, it was a case of "show men what knowledge is and you will show them the grounds of assent and social order" (Shapin & Schaffer 1985 p.100). It

was on this basis that Hobbes viewed Boyle's air-pump experiments, not as interesting scientific experiments that utilised empirical, inductive and probabilistic methods, but as misguided attempts at knowledge creation that provided a basis for civil-war:

The vacuism Hobbes attacked was not merely absurd and wrong, as it was in his physical texts; it was dangerous. Speech of a vacuum was associated with cultural resources that had been illegitimately used to subvert proper authority in the state (Shapin & Schaffer 1985 p.91).

Shapin and Shafer point out that "for Hobbes, the rejection of vacuum was the elimination of a space within which dissension could take place." (Shapin & Schaffer 1985 p.109).

Boyle was also aware of the larger significance of his experimental methods. He realised that defending the air-pump experiments was about defending the legitimacy of an inductive and experimental approach to knowledge that relied on probabilistic reasoning. If this approach to knowledge creation could be defended, a political philosophy that recognised a pluralism of views could also be defended; for if our knowledge is only partial, a pluralism of views is valid. In other words, his "adversary's civic philosophy and theology could be invalidated if it were shown that his physics was unsound" (Shapin & Schaffer 1985 p.207). Hobbes's claim that there could be a leader who could determine what is correct and what must be obeyed would thus be robbed of its supposed intellectual basis and would become a failed project:

The quest for necessary and universal assent to physical propositions was seen as inappropriate and illegitimate. It belonged to a 'dogmatic' enterprise, and dogmatism was seen not only as a failure, but as dangerous to genuine knowledge (Shapin & Schaffer 1985 p.24).

Shapin and Schaffer argue that the dispute between Boyle and Hobbes was afflicted with Kuhnian incommensurability: there was no common ground on which to settle the dispute (Jennings 1988). Shapin and Schaffer also argue that Boyle's views prevailed because they were in keeping with the political tides of the time. For Shapin and Schaffer this scientific debate was a case of "he who has the most, and the most powerful, allies wins" (Shapin & Schaffer 1985

p.342). Ultimately, what Shapin and Schaffer conclude for their analysis of the dispute is that solutions to the problem of knowledge are totally enmeshed with finding solutions to the problem of social order so that “the form of life in which we make our scientific knowledge will stand or fall with the way we order our affairs of the state” (Shapin & Schaffer 1985 p.344) and that “the problem of generating and protecting knowledge is a problem in politics, and, conversely, that the problem of political order always involves solutions to the problem of knowledge” (Shapin & Schaffer 1985 p.21).

Shapin and Schaffer’s finding of an interrelationship between knowledge and social order helps to underpin one of the major findings of this thesis: that the nature of economics and the economics curriculum is heavily influenced by the functions it is required to perform (Section 1.3.5). The evidence in this thesis to support this particular claim about knowledge and social order, comes not from air-pump experiments, but from observing and analysing the economics profession. Certainly, later chapters in this thesis, particularly Chapter 11 ‘reform from without,’ provide strong support for the idea that solutions to the problem of knowledge cannot be separated from solutions to the problem of social order (Shapin & Schaffer 1985).

2.15 Conclusion

This chapter has set out the concepts and theories that guide the analysis of subsequent chapters. A pluralist approach has been adopted: first, via adopting frameworks and concepts from institutionalism (itself a broad and somewhat interdisciplinary approach), second via drawing on the sociology of scientific knowledge. Later chapters also draw upon other disciplines and other literatures where appropriate.

3 The changing face of economics?

3.1 Introduction

This chapter provides an exposition of a set of arguments about the direction of contemporary economics and the economics curriculum, including arguments about what forces drive change and what strategies for desirable change do and do not work. It will become increasingly apparent to the reader that all these arguments are almost entirely antithetical to my own arguments. For this reason, they are an ideal prelude to much of the analysis contained in subsequent chapters. Certainly, later chapters offer strong rebuttals to many of the arguments made in this chapter. These arguments also provide an opportunity to review some of the literature that pertains to this thesis.

I have dubbed the set of arguments the ‘dissenting optimist’ position. The core of the dissenting optimist position is the belief that the mainstream research frontier is currently bringing about a fundamental and desirable change in economics, including in the economics curriculum. It is also argued that heterodox economists are neither recognising nor capitalising on this new reality and are instead clinging to old and less scientific ways of thinking and counter-productive strategies. Among other things, heterodox economists have failed to grasp the genuine desire of orthodox economists to seek change and thus they are simply irrelevant or counter-productive figures in contemporary economics.

3.2 Traditionalists, dissenters and dissenting optimists

It is useful, for the purposes of this chapter, to set up a simple three-category taxonomy of traditionalists (orthodox economists), dissenters (people such as myself) and dissenting optimists to classify contemporary economics and economics teaching. There are, of course, other taxonomies, but these are best held over to Chapter five ‘Orthodoxy, heterodoxy and political economy’, which is entirely dedicated to matters of categorisation. I will now discuss each of three categories in turn.

3.2.1 *Traditionalists*

Traditionalists constitute the majority of economists in academia, the public service and the private sector. Traditionalists are committed to, and largely satisfied with, standard neoclassical economics for the purposes of research,

teaching and policy. Traditionalists have no real appetite for change, demand no change, and do not appear to see any real change coming. The degree of self-confidence in the traditional approach can be quite striking. For example, a graduate student in economics, when asked whether economists have a relevant role to play in society, replied, “yes, they are the only careful, structured, empirical thinkers on most economic, political, and social issues” (cited in Colander 2005b p.193). Many similar examples of this sense of superiority and strong self-confidence abound (see for example Lazear 2000; Levitt & Dubner 2009; Mankiw, Gans & King 2009). Traditionalists are, in Kuhnian terms, the practitioners of normal science. In a Lakatosian sense, they are the protectors of the hard core. Traditionalists are highly prominent in the literature on economics education, where they focus almost entirely on innovative pedagogical practices to teach a curriculum that is taken as given and largely immutable (for a good example see Mixon & Cebula 2009).

3.2.2 Dissenters

The next category for examination is that of the dissenters. These are people such as myself, who are critical of much mainstream economics and economics teaching. Dissenters seek significant reform, though they usually have little confidence that positive change will be automatic, inexorable or imminent. The following excerpts are typical of the dissenting economist’s mindset. They are unusually lengthy quotes, but this is warranted, as it is the most effective way to communicate their view of contemporary economics:

...the centrifugal forces occasioned by dissatisfaction with the original formalist neoclassical position, after initially pushing the mainstream away from the neoclassical nucleus, eventually subside, turning centripetal. Thus, they return the offered analysis either to the original neoclassical position or, even worse, to a position at a higher plane of neoclassical abstraction on which the original ‘problem’ not only remains unsolved but is, indeed, amplified (Varoufakis & Arnsperger 2009 p.6)

Suggestions that mainstream economics has been a failure and that the discipline is in a state of crisis have been repeatedly made over the past 40 years...Critics of the mainstream are much better organized in

institutional terms (with societies, websites and their own journals, and much easier communication via email) than they were four decades ago, but there is little sign that they are having any significant impact on the economics establishment. If anything, mainstream economics is in a stronger position to resist internal pressures for change than it ever was, and it can use the growing information asymmetry between itself and the wider public about what it does to put 'spin' on its contributions and deny it is failing (Earl 2010 p.222).

Dissenters do not assume that some bright new dawn is imminent or that cold logic or hard evidence will necessarily be sufficient to achieve reform:

Economists ... consistently choose textbooks that teach material that they know is false and/or completely out of date...there's still this incredible tension in what we teach. I am so displeased at the way undergraduate and even graduate economics is taught...If this were physics or astronomy, when they get new ideas at the forefront they immediately teach them, but in economics they teach the stuff that even thirty years ago people did not believe...So I think there is a real tension and that there will be one for a long time (Gintis 2004 pp.92-93).

This 'straw man' criticism is one I have received from other economists...If this is a straw man, why teach it—especially since provably erroneous propositions make up a substantial part of this instruction? This is bad pedagogy, and yet there has been no sign of undergraduate (or graduate) education reforming itself from within (Keen 2001c p.1).

Given the difficulties, dissenters have proposed various strategies to bring about the required reform. The strategies are quite diverse, spanning polite dialogue, open conflict and operation by stealth. However, there is a common thread: they assume that change will not come automatically and that it will have to be induced by one strategy or another.

3.3 Dissenting optimism

The two positions just described are very straightforward: traditionalists are happy with the status quo and thus advocate no action for change, dissenters seek substantial change, via deliberate action of some sort. The third category (what I have dubbed the dissenting optimist position) is less obvious. A dissenting optimist, like a dissenter, wants change of some sort within economics and economics teaching. However, they eschew activist strategies as unnecessary, as they believe there is already a process of inexorable change currently underway that will achieve the desired change.

A good example of a dissenting optimist is Diane Coyle's book *The Soulful Science: What Economists Really Do and Why It Matters* (Coyle 2007).⁷ Coyle argues that economics is now in a new and exciting phase. She sees the early to mid 1980's as the high watermark for neoclassical economics. According to Coyle it was at this point that the neoclassical research programme came to be recognised as having become excessive, indulgent and faintly ridiculous. Since this time it is seen as having been in a process of steady retreat from absurdity. She accuses critics of economics of not having recognised these changes in the discipline.

John B Davis is also a dissenting optimist, though only in part. Davis argues that while neoclassical economics continues to dominate the curriculum, the mainstream research frontier is quite different from neoclassical economics and has as much in common with established heterodox schools as it does with neoclassical economics. For this reason, he refers to the mainstream research frontier as being mainstream heterodox. Davis argues that there is a new generation of PhD students coming through that are working in the mainstream research frontier and that these younger scholars will slowly start to steer the curriculum away from neoclassical economics and towards the approaches at the research frontier (Davis 2006, 2007, 2008).

⁷ It should be noted that Coyle's very recently released work *What's the point of economics: teaching the dismal science after the crisis* (2012) appears to be somewhat of a departure from this earlier work, though there are still clear continuities.

3.4 David Colander

The person who most clearly and most stridently represents the dissenting optimist position, as I have described it here, is David Colander. It is therefore helpful to consider his arguments in some detail. Colander has been an energetic proponent of the dissenting optimist position, gaining wide coverage for his arguments (Colander 2000a, 2000b, 2003a, 2003b, 2005a, 2005b, 2008a, 2009c).

Colander is Professor of Economics at Middlebury College, a liberal arts college in the United States (US). He currently serves on a number editorial boards and committees, including the *Journal of Economic Perspectives* and the *Journal of Economic Methodology* (Colander 2008b). He is also past president of the History of Economics Society. Colander has a range of research interests, but is most well known from his work on economics education. He is currently on the editorial board for the *Journal of Economic Education*. His work on US graduate education (Colander & Brenner 1992; Colander & Klamer 1989) can reasonably be assumed to have contributed significantly to the establishment of the American Economic Association's *Commission on Graduate Education in Economics* (Krueger 1991). More recently, he co-authored the *Teagle Report*, which evaluated the US undergraduate economics major (Colander & McGoldrick 2009). He has written three separate monographs on the education of graduate economists (Colander 2009b; Colander & Klamer 1989, 2007). He has also written numerous textbooks in areas such as microeconomics, macroeconomics, social science and the history of economic thought. In summary, Colander is no fringe player, and thus his views warrant detailed attention.

Colander considers himself as playing a mediating role between orthodoxy and heterodoxy. This is best illustrated in his admission that he is often invited to meetings as a token orthodox economist by heterodox economists, but also invited as a token heterodox economist to meetings of orthodox economists (Colander 2009c). Colander "seeks to convey to heterodox economists the exciting work that is being done in the mainstream, as well as to let the mainstream know that many heterodox economists are concerned about the same issues" (Colander, Rosser & Holt 2004 p.vii). While it will later be argued that Colander is ultimately too constrained by his own largely conservative

methodological and ideological orientation, the fact that he has tried to promote dialogue and understanding between orthodoxy and heterodox economics is commendable. It also seems appropriate to say that whilst I disagree with much of what he says, I have found his analysis interesting and thought provoking.

While Colander is not your average orthodox economist, he explicitly rejects the label of heterodox economist, and instead defines himself as being mainstream (Colander, Rosser & Holt 2004) or 'inside-the-mainstream-heterodox' (Colander 2009c). This self-identification is ultimately consistent with the way orthodoxy and heterodoxy are described in this thesis (see Chapter five 'Orthodoxy and heterodoxy and political economy'). However, his affiliation and his views are not always easy to pin down. It is reasonable to wonder if there are not in fact multiple David Colanders. This is partly because some of his views seemed to have become considerably more orthodox over time. I have tried to cope with what I see as a lack of consistency by focusing on his more recent analysis, and in particular, making extensive use of direct quotes. Adopting such an approach means the reader is in a better position to ascertain what is being said.

In terms of external perception, Colander states that he is often seen as a critic of mainstream economics and mainstream economics teaching by much of the profession (Colander 2005a). Indeed, his work on graduate education attracted the ire of some in the profession for allegedly damaging graduate enrolments in the United States (Colander 2009b). Furthermore, his early work was in keeping with many established heterodox positions: criticism of the excessive pursuit of technique over substance (Colander & Coats 1993); asserting that economic policy is an art not a science (Colander, Amato & Laudati 2001); and being critical of the way economists are educated (Colander & Klammer 1989). Furthermore, his earlier works, such as *Why aren't economists as important as garbagemen?* (Colander 1991) are notable for their irreverent tone, and sometimes, entertaining nature.

Colander's recent work is less in sympathy with the heterodox world view. For example, he asserts that economics is a science, as opposed to other 'ambiguous' disciplines such as political economy. It is a science because it builds formal models and then empirically tests those models. Economics should have "no ideological bent at all" and should seek to be "a philosophically neutral

method of looking at a complex world” (Colander in Arnsperger 2008 p.xx). For many heterodox economists (and economic methodologists) this way of looking at the discipline is deeply neoclassical and also deeply problematic.

Colander’s criticism of economics education has also evolved. While the first edition of *The making of an economist* (Colander & Klammer 1989) helped trigger the review into US Graduate Education (Krueger 1991), subsequent analysis, while retaining some continuities in its criticisms, emphasises that economics has changed significantly since the 1980s and that consequently graduate students are happier with their education:

I am known as a critic of graduate education in economics, but my critique in this study is quite different from my critique of 20 years ago. Then, my critique was not only of graduate education in economics, but also of economics itself - its rigidity of assumptions, its lack of empirical grounding and its failure to bring the models to the data in a serious way. However, I believe that economics has changed, and it is now attempting to bring the models to the data in a much more meaningful way than it used to. Theory for the sake of theory has been reduced (Colander 2005b p.197).

...economics has changed significantly since the 1980s, and graduate students today are happier with their training than they were. One reason why these changes have occurred is that the way economics is done has changed, as have economists’ view of themselves (Colander 2009b p.192).

In regard to undergraduate education, he considers that economics is now ‘just right’, for a liberal arts major; indeed, it serves as an instructive example for other social sciences to follow:

As an economist I like to think that economics has become so popular because of its intellectual rigor, broad appeal, and importance to understanding the world. And those are clearly part of the answer, especially given the recent financial crisis. Modern economics is an exciting and dynamic field of study that has changed considerably in recent years; specifically, it has become more quantitative and scientific.

Today's economists bring technical expertise to interesting and novel questions (Colander 2009a p.72).

The key to understanding the dissenting optimist position of Colander is to understand his belief that neoclassical economics is dying or dead (Colander 2000b) and his belief that it is being replaced by the mainstream research frontier (this is understood to include areas such as behavioural economics, experimental economics, evolutionary game theory and complexity economics). This research frontier is said to be bringing about a desirable revolution in economics (Colander 2000a, 2000b, 2003b, 2005a, 2005b; Colander & Klammer 2007; Colander, Rosser & Holt 2004), bringing change to economic policy (Salzano & Colander 2007); economic teaching (Colander 2000a, 2003b); and even the history of economic thought (Colander 2000c):

Economists today are not neoclassical according to any reasonable definition of the term. They are far more eclectic, and concerned with different issues than were the economists of the early 1900s, whom the term was originally designed to describe (Colander 2000b p.130).

There is a revolution going on in the trenches of computational economics, complex systems theory, behavioural economics, experimental economics, evolutionary game theory, and 'general to specific' econometrics (Colander 2005a pp.341-342).

...economics is currently at a turning point: it is moving away from a strict adherence to the holy trinity – rationality, greed, and equilibrium – to a more eclectic trinity of purposeful behavior, enlightened-self interest and sustainability...changes are recognizable to individuals outside the profession. Thus, we are seeing more and more articles in the popular press on aspects of the new economics – behavioural economics, agent-based modelling, evolutionary game theory, and experimental economics (Colander, Rosser & Holt 2004 p.1)

This revolutionary force will be necessarily attenuated by institutional inertia, but it will only delay, rather than stop, the rising tide of change. What starts at the research frontier will inevitably reach the curriculum.

What are the causal relationships that will effect these profound changes? The central trigger is the changing research interests of postgraduate students and younger staff members at elite universities in the US:

Most of the change in economics has come about from the inside, from young professors at top schools who start doing economics in a different way than was previously done... the key to understanding change is the choices new graduate students are making about dissertation topics (Colander 2003b p.1).

In Colander's view, graduate students will choose research topics that are part of the mainstream research frontier, and some of these students will then go on to become academics. It is then assumed that such academics will incorporate cutting-edge developments into the curriculum. The students who are the recipients of this renovated curriculum will then go further in expanding the research frontier when they choose their dissertation topics. Some of this second generation of students will then become academics and renovate the curriculum still further. The pattern continues to replicate itself, driving desirable change to an ever-greater degree. Over time there is an exit of the old guard and a repopulating of the profession by the new. Colander is adamant that it is these replicator effects that are key; other factors are, at best, of minor significance:

Individuals are not born as economists; they are moulded through formal and informal training... The economics profession changes as cohorts with older-style training are replaced with cohorts with newer style training. In many ways, the replicator dynamics of graduate school play a larger role in determining economists' methodology and approach than all the myriad papers written about methodology (Colander 2005b p.175).

Colander provides two explanations for why graduate students and younger staff members will strike out into cutting-edge research. The first explanation is that the neoclassical research paradigm is becoming "exhausted" (Colander 2003b p.1). This exhaustion appears to have less to do with running out of interesting puzzles to solve than it does with mainstream economists wanting to transcend the accumulated problems of the neoclassical programme (Colander 2000a):

...mainstream economists know the standard problems with economics, and they are working to change them. Who does not want economics to be empirically grounded? Who does not want economics to be relevant? Who does not recognize that formalism sometimes runs amok? The debate is how to change economics, not whether it has problems. Economists working in the eclectic mainstream tradition are working to solve those problems, especially in cutting edge research (Colander 2005a p.338).

A key assertion to note (aside from the rather contestable rhetorical questions) is the belief that mainstream economists recognise real problems in their approach and are working to remedy these problems.

The second reason given for younger staff members and graduate students to embrace the mainstream research frontier is the arrival of low-cost and high-power computing. This allows economics to continue to be a model-building and model-testing discipline. For Colander, this is what makes economics scientific and thus superior to political economy, an area that he sees as having a more ambiguous scientific status (Colander 2008a). What exactly are these new methods that have been opened up by advances in computing? The key method is numerical simulation. Previously, in the absence of modern computing, numerical simulation was largely impractical. Model building had to be constructed out of algebraic solutions. Most dynamic equations cannot be solved analytically (algebraically); thus the scope for formal model building was previously quite limited. Table 3.4.1 shows that, at best, only five types of dynamical equations can be solved analytically. The majority of dynamical equations can only be addressed via numerical simulation.

Table 3.4.1 Scope for using analytical methods to solve mathematical problems

	Linear			Non-Linear		
Equations	One equation	Several equations	Many equations	One equation	Several equations	Many equations
Algebraic	Trivial	Easy	Essentially Impossible	Very difficult	Very difficult	Impossible
Ordinary Differential	Easy	Difficult	Essentially Impossible	Very difficult	Impossible	Impossible
Partial Differential	Difficult	Essentially Impossible	Impossible	Impossible	Impossible	Impossible

Source: (Keen 1997 p.7)

The increase in mathematical methods at our disposal is seen as offering a type of salvation, or redemption, for heterodox economists. Colander thinks that heterodox economists increasingly can, and should, discard their former predilections for analysis via informal methods, and utilise advances in computing to pursue their analysis via formal (mathematical) methods. This will make for a more scientific economics. It is worth directly quoting Colander at some length so the reader can get a clear idea of exactly how Colander makes sense of the future of economics:

Prior to recent technological developments in nonlinear dynamics, chaos theory, complexity theory, and in computing power that allows researchers to gain insight into systems without analytics, anyone (such as Ronald Coase, Douglass North, or Oliver Williamson) who felt the economy was complex, was forced to take a heuristic approach. That heuristic approach was not consistent with the scientific vision that economics had of itself. The formal alternative to that approach was the general equilibrium theory such as seen in the work of Gerard Debreu. At the time this formal approach was developed, using heuristics to explore the complexity vision was reasonable because in the complexity vision even the most technical approach at the time was far too simple to achieve much insight if the economy was truly complex (Colander 2003b p.6)

The difficulty for heuristic analysis in the profession is that it tends to be nonreproducible. It is dependent on the researcher having original insights and the personality to make others take those insights seriously. Few graduate students, even top ones, have those abilities. Most take an existing technique and apply it. Technical work is far more reproducible; it exhibits significant increasing returns to scale. For that reason I believe that the non-technical work of North, Williamson, or Coase is not the future of economics. Instead the future of economics is increasingly technical work that is founded on the vision that the economy is a complex system (Colander 2003b p.6).

Note here the assertion that acceptance of complex system leads to a more 'technical', computer-driven economics that is seen as being more scientific.

3.5 Complexity economics

Colander places considerable hope and importance on a particular variant of the mainstream research frontier: complexity economics. His sense of cheerleading excitement at what complexity economics might offer is quite clear:

Dateline 2050. Researchers today announced the development of a unified theory of the social sciences. The new theory, which had its early foundations in the work of Ludwig von Bertalanffy, is the equivalent in social science of the unified field theory in physics, which tied together the various forces of nature into a general theory. The formulation of the unified field theory in 2020 solved the problem that stymied earlier physicists such as Albert Einstein. It intensified the efforts of social scientists to develop their own unified field theory. The theory, which is also called a unified social systems theory, ties together the various social sciences that in the nineteenth and twentieth centuries diverged into anthropology, sociology, history, geography, economics, political science, and psychology. The theory combines the work on complex systems begun by John von Neumann in the late 1940s and early 1950s with game theory, also begun by von Neumann, to form a coherent whole, and captures many of the interrelationships that were previously lost in the fragmentation or divisions of the social sciences. The work was extended into the complexity revolution in science that came into its own in the early 2000s. By combining these theories with recent advances in the separate social sciences, the resulting new unified social science theory provides new insights into how society works. (Hunt & Colander 2011 p.5)

*To model a complex economy requires new methods, and one of those important new methods is agent-based modelling. In agent-based modelling one essentially studies the economy by creating a virtual economy, which is then used to simulate policies. These simulations are used to guide policy-makers. No equilibrium needs to be imposed on the system; **all one needs to do** is specify the characteristics of the agents and the environment they operate in (Colander 2008a p. xiv emphasis added).*

Complexity economics is a branch of the science of complexity. Complexity science itself is somewhat of an umbrella term and its exact boundaries are not clear as it incorporates other areas of science such as chaos theory and network theory. At the core of complexity is a conception of a system that is characterised by evolutionary processes of change and that is (to some extent) adaptive and self-organising. Such systems are characterised by emergence, increasing returns and path dependence. They exist in historical time. They are also characterised by non-linearities and are very dependent on initial conditions (Beinhocker 2006; Kauffman 1995).

Much of the early work in complexity economics originated at the Santa Fe Institute, where financial backing from Citibank has been rather central. However, explicit evolutionary theorising within economics goes back as far as Veblen and modern evolutionary economics, which embraces much of what is understood as complexity, has arisen earlier and independently from the Santa Fe Institute.

Because complexity economics usually rejects many of the tenets of neoclassical economics (such as equilibrium and perfect rationality) and because it also embraces non-neoclassical concepts (such as emergence and evolution) then one might assume that complexity economics is something that is (or should be) best understood as in keeping with heterodox traditions in economics. This is not how Colander views complexity, arguing that the commitment to formal methods aligns complexity as being part of orthodox economics:

... complexity vision raises deep questions about some of the fundamental assumptions of economics, and thus it has been associated with heterodox economists who have emphasized those questions in many of their critiques. I, for one, do not see that association fitting the reality. As I stated above, all good economists have raised these questions; standard economists have simply felt that the alternative approaches used by heterodox economists, which have usually involved heuristic analysis rather than formal analysis, were unacceptable. Complexity economics differs from heterodox economics in that it is highly formal; it is a science that involves simplification and the search for efficient means of data compression. Thus, complexity economics will be more acceptable to standard economists because it shares the same focus on maintaining a

formal scientific framework, and less acceptable to many heterodox economists who otherwise share its general vision (Colander 2000a p.5).

It is worth stressing Colander's argument that good orthodox economists have always raised the same questions and identified the same issues that heterodox economists have (though what proportion of orthodox economists are 'good' is always rather vague). The issue is simply one whereby orthodoxy has not been able to accept the insufficiently scientific way heterodoxy has responded to these questions and issues.

3.6 Colander's critique of heterodox economists

Colander clearly has a high estimation of the appetite of orthodox economists to seek change, viewing the profession as having a real appetite for more empirical grounding, more real-world relevance, more careful deployment of formalism (Colander 2009c). He views heterodox economists as having had little role in changing economics (Colander 2005a, 2009c). In other words, attempts by radical critics, for radical change, via sometimes confrontational methods and orientations, are seen as irrelevant, or even counter-productive (Colander 2005a, 2009c):

Heterodox economists, often implicitly, see that process of change as occurring through an outside revolution, as mainstream economists see their mistaken ways and change their views to a new reality. In this view change comes from the outside—ideally from heterodox economists' views being accepted. I don't see it that way. Most of the change in economics has come about from the inside (Colander 2003b p.1).

What explains the marginalisation of heterodoxy? Colander's emphasis is *not* on problems of discrimination, intolerance and suppression that are perpetrated by orthodoxy against heterodoxy — an explanation favoured by many heterodox economists (Jones & Stilwell 1986; Lee 2009, 2012; Stilwell 2006b, 2011a). By contrast, the emphasis is instead on the purported poor conduct, misconceptions and bad attitudes of heterodox economists.

For Colander, the key failure of many heterodox economists is their inability to recognise, or capitalise on, the fact that mainstream economics is changing;

indeed that neoclassical economics is in many important respects dead (Colander 2000b). Heterodox economists are seen as increasingly attacking a straw man (Colander 2005a). Another failing is a lack of diplomatic skills and judgement with which to advance their interests. They adopt the wrong 'attitude' and 'tone' towards their mainstream colleagues, alienating potential allies and collaborators within the eclectic mainstream:

...it is not beliefs that separate mainstream from heterodoxy; it is attitude and a willingness to compete within a given set of rules and institutional structures. Mainstream economists are willing to compete within those rules; heterodox economists aren't (Colander 2009c p.37)

In our view... inside-the-mainstream critics, want to separate themselves from that heterodox tone and attitude, not necessarily from heterodox ideas. It is because of the tone and attitude between the lines in heterodox writing that...inside-the-mainstream critics, go to great lengths to disassociate themselves from heterodoxy (Colander, Rosser & Holt 2010 p.404)

Heterodox economists, with their outdated ideas and their bad attitude and tone, are self-marginalising. What advice is offered to heterodox economists to allow them to redeem themselves? First, they should stop describing themselves to others as heterodox. Second, they need to work on the assumption that mainstream economists are actively working to change and improve economics (Colander 2005a) — this is described as 'giving the mainstream its due.' Third, and most significantly, they have to fundamentally change how they go about their *own* work as economists. This involves worrying less about methodology than about forming alliances with mainstream economists who can help repackage heterodox ideas into a more formal (thus more respectable) guise.

3.7 Conclusion

The chapter commenced by outlining a taxonomy consisting of traditionalists, dissenters and dissenting optimists. Traditionalists are economists who are comfortable with the dominance of the neoclassical approach and are seen as constituting the majority of the profession. Dissenters are people such as myself who are dissatisfied with the current state of economics and economics teaching

and who feel that active measures need to be undertaken to bring about the necessary reform. Dissenting optimists argue that the mainstream research frontier is changing economics as a whole: research, teaching and policy. The change is apparently being driven by younger staff members and graduate students in elite universities in the United States who have embraced the new frontier out of dissatisfaction with the old neoclassical research programme because of new research methods opened up by advances in technology. For the most strident of the dissenting optimists such as Colander, heterodox economists are seen as exerting little role in changing the discipline for the better. This failure is seen as being primarily due to heterodox economists' inability to recognise that neoclassical economics is dead, their lack of diplomatic savvy and their inability (or unwillingness) to abandon their more heuristic and thus less scientific approach to economic analysis.

4 Economic pluralism and economics as a science

“We live perforce by half-truths and get along fairly well as long as we do not mistake them for whole-truths, when we do so mistake them, they raise the devil with us.” (Whitehead in Price 2001 p.298)

“It is often said that one theory can be driven out only by another; the neoclassicals have a complete theory (though I maintain that it is nothing but a circular argument) and we need a better theory to supplant them. I do not agree. I think any other “complete theory” would be only another box of tricks. What we need is a different habit of mind — to eschew fudging, to respect facts and to admit ignorance of what we do not know.” (Robinson 1980 p.119).

“The only true voyage of discovery, the only fountain of eternal youth, would be not to visit strange lands but to possess other eyes, to behold the universe through the eyes of another, of a hundred others, to behold the hundred universes that each of them beholds, that each of them is.” (Proust 2006 p.657).

4.1 Introduction

The following chapter is entirely focused on pluralism. The first part of the chapter provides an intellectual case for pluralism in economics that is primarily based on two arguments: theory arises out of simplification, and economic and social reality exists as an open (rather than closed) system. Having provided an intellectual justification for pluralism, the latter half of the chapter branches off to consider how pluralism relates to differing conceptions of what is scientific and what is good scientific practice. The key argument in this section of the chapter is that pluralism in economics is currently held back by some outdated notions of science that exist inside economics departments, and also in the wider community. This is something that those who seek reform of the curriculum need to anticipate, understand and respond to.

Why an entire chapter on pluralism? The simple answer is that one can hardly dedicate a thesis to understanding how the curriculum might be made more plural without first establishing why this objective is desirable. This is particularly the case because the concept of economic pluralism is both recent and contentious: it is yet to register meaningfully on the mainstream radar. Even among economic methodologists and heterodox economists it has only started to gain traction since the 1990s, and even where it has, its meaning, boundaries and merit are often debated.

4.2 What is economic pluralism?

Economic pluralism asserts that multiple approaches to economics are valid and useful in building up our understanding of economic and social reality. No single approach is seen as having a monopoly of the truth (Dow 2007). Provided analysis meets standards of logic and reasoning seen as acceptable by a particular scientific community, multiple approaches should not be seen as anomalous or embarrassing. Pluralism contrasts with monism, which asserts that a single and complete understanding exists and is obtainable.

As already mentioned, pluralism is a concept that started to gain traction in economics in the 1990s. For example, in May 1992, 44 leading economists, mainly heterodox, but also some orthodox economists (Samuelson, Modigliani and Tinbergen), published a one-page statement in the *American Economic*

Review that called for greater pluralism. The statement criticised the dominance of particular methods and core simplifying assumptions, calling for greater pluralism in scientific debate, in the range of contributions that were published in the leading journals and also in the training and hiring of economists. This, they argued, would promote, not erode, the rigour of scientific argument within economics (Hodgson, Maki & McCloskey 1992).

A plural curriculum is both practical and desirable. Exposing students to a range of views about the economy does not necessarily cause confusion; the evidence shows that, if handled skilfully, it can promote depth of intellectual understanding (Barone 1991; Dawson 2007). As John Stuart Mill long ago asserted, one cannot fully understand any argument until one also understands the counterarguments. There is simply no good reason to shield students from controversy or debate (Becker 2007). There is also good research to show that exposure to a diversity of views, combined with an ever-present critical perspective, develops the general skills that are required in graduates (O'Donnell 2010).

4.3 Why embrace economic pluralism?

The simplest way to explain why pluralism is both necessary and desirable is to see it as an inescapable byproduct of theory construction. In making this argument I am adapting and extending a line of argument from Stilwell (2011a), who in turn draws on Boulding (1970) and Duesenbury (1958). Theory construction always involves the loss of knowledge. While theory is a necessary prerequisite to understanding the world, it is also a deliberate simplification of the world. No matter how complicated a theory is, it cannot ever be as complicated as the world it seeks to explain. Theorists are always forced to make difficult and uncertain decisions about exactly how to safely simplify the world around them. This simplification can give rise to a tunnel vision (of one sort or another), which Leff argues as being the price we must pay for avoiding total blindness (Leff 1974). The difficult decisions include making judgements on what is central and what is peripheral to the matter under examination, what can be simplified or stylised and what cannot, and what is exogenous and what is endogenous. It is important to note that theory is not only inescapably simplistic, but the process of simplification is always contestable. Previously it was thought that approaches such as logical positivism or Popperian falsificationism could provide some

reliable and mechanical adjudication on whether one attempt at simplification was superior to another, but this hope is now seen as misguided (Hands 2001b; Pheby 1987). In summary, the very process of theory construction, with its necessary simplifications and abstractions, provides a strong *prima facie* case for pluralism.

Understanding theory construction as deliberate simplification suggests that the architects of a new theory will likely have been aware that they have engaged in what amounts to a sleight of hand. However, it is less probable that those who subsequently simply apply the theory will be as aware of the sleight of hand involved and will be more prone to see it as truth from above or some type of magical looking-glass. A good example of this is how the architects of modern general equilibrium theory such as Arrow and Debreu have always stressed how little their work has to say about the real world, yet this has not stopped their theoretical contributions being adapted to be a cornerstone of policy advice (Ackerman 1999). This tendency to claim a level of theoretical relevance that is at odds with the real world has been a general problem in orthodox economics: as Blaug notes, analytical and expository convenience can be a very good excuse for various lines of theoretical simplification but “the temptation to read more significance into the analysis than is inherent in the procedure is irresistible and most neoclassical writers have succumbed to it” (Blaug 1997a p.692). The deeper roots of this temptation will be explored in Chapter 13 ‘The three purposes of economics.’

Another rationale for pluralism is that theories or approaches differ in what they seek to explain and predict; in other words, theories differ as a result of having a differing explanatory focus. For example, orthodox economists, following the Austrian-influenced Robbins (1932), usually consider economics as studying the allocation of scarce means towards given ends. By contrast, institutionalists consider that the origin and evolution of the ends themselves is the central problem that cries out for explanation.

Pluralism is also a corollary of the issue of historical specificity. Theories tend to be developed in, and for, particular historical terrains. As the world and the economy changes, so might we have to change our theories (Dasgupta 1986). The economy is a human construction and not an entity that predates us like the

natural world, which is subject to physical laws like gravity or thermodynamics. The issue of historical specificity is underpinned by the concepts of the idiographic and the nomothetic discussed in Chapter two (Section 2.4); indeed, if economic and social reality is inherently idiographic in nature then economics needs to be inherently pluralist. By contrast, if economic and social reality is nomothetic in nature then the concept of economic pluralism is far more difficult to justify. Thus, Lawrence Summers' earlier quoted claim that the same laws of economics work everywhere would be more plausible.

One final rationale for pluralism is the need for comparison. Even if a single theory can be seen as satisfactorily explaining a particular phenomenon better than any other theory, there is a practical requirement to establish that this is the case by comparison with competing theories. As Hodgson explains:

...even correct theories have to be visibly tested by counter-arguments and alternatives. Even the medieval Catholic Church recognized this, with its institution of the 'Devil's Advocate'. A priest was employed to make the strongest possible arguments against Catholic doctrine, in order to test and demonstrate its strength. Even today, if a single theory were correct, it would become stronger through its demonstration of superiority against its rivals. If it contained flaws or blemishes, such dialogue could assist in its clarification and refinement (Hodgson 2004b p.21)

This 'devil's advocate' rationale is consistent with John Stuart Mill's already mentioned argument that one does not fully understand one's own argument unless one understands the arguments of those who criticise it.

4.3.1 Different levels of pluralism

Pluralism exists at a number of levels: method, theory, methodology, epistemology and ontology. Pluralism of method occurs when there are multiple ways of doing economics. Questions of method are about *how* economists provide explanations and descriptions (Boumans et al. 2010), that is, they pertain to the choice of techniques. Such techniques include differential calculus, interviews, econometrics, case studies, etc.

Theoretical pluralism exists when multiple theories exist to explain particular phenomena. The implication of this is that there is a plurality of description, explanation, prediction and prescription available to economists on the phenomena in question (Dow 2007). Multiple theories can exist within an overall school or approach; one example of this is how, within orthodox economics, real business cycle theory and the neoclassical synthesis provide rival explanations and prescriptions for macroeconomic instability.

Epistemological pluralism argues that there are multiple types of knowledge. Such a plurality exists most obviously in the long-standing debates concerning rationalism versus empiricism as a source of knowledge. Within economics the most famous manifestation of this dispute was in the *Methodenstreit* of the late 19th Century that was initiated by Menger and Schmoller.

The most confronting level of pluralism is that of methodological pluralism, for it asserts that there is no single criterion, or set of criteria, by which economists can rule on which is the best theory (Dow 2007). The concept of methodological pluralism can be seen as a corollary of the breakdown of the 'received view' in the philosophy of science and economic methodology. The 'naturalistic turn' and the rise of rhetorical and sociological approaches, has led to the abandonment of a strict rule-based approach to methodology (Boumans et al. 2010; Hands 2001b).

Is the acceptance of methodological pluralism a bridge too far? Does it promote nihilism and a rejection of the idea of scientific progress? No, or at least, not quite. In practice, the proliferation of rival methodologies is limited by social forces, in that each methodology needs to be validated, accepted and practised by a particular scientific community to have any standing, influence or institutional support (Dow 2004). This does not mean the knotty issue of relativism is entirely resolved, but it does provide some counter to the claim that methodological pluralism can be directly equated with saying that 'anything goes' (Feyerabend 1988).

The final level of pluralism is at the level of ontology. Ontology is concerned with questions as to nature of reality. Economic ontology is concerned with questions as to the essential nature of the economy and of society. One's ontological

commitments, what Schumpeter would call the 'pre-analytic vision,' are of great importance to any analysis one undertakes. Ontology is particularly important to the issue of pluralism, as one's ontological commitments can heavily influence one's stance towards pluralism at the levels of epistemology, methodology, theory and method; as Dow has argued, "the crucial point is to recognise the origins of theoretical approaches in methodological approaches and ultimately in conceptions of reality" (Dow 2007 p.33).

4.3.2 Open versus closed systems

The most central ontological commitment is whether one presupposes that economic and social reality is an open or a closed system. An open system is one where:

...not all the relevant variables can be identified, and where the external boundaries of the system are therefore not knowable. The system is subject to outside influences which cannot be accounted for in advance (where 'account for' includes knowledge that an outside influence, or relationship, is random). Further, within the system, there is scope for change in the relationships between variables which cannot be identified in advance, and indeed for change in the nature of the constituent variables themselves. Since the system in reality cannot be understood in terms of constituent parts of a fixed nature, it is pluralist (Dow 2007 p.28).

By contrast, a closed system is one where:

all the relevant variables can be identified, where the boundaries of the system are knowable, so that variables can be classified as endogenous or exogenous, and where the relationships between variables are knowable and unchanging (so that all change in the system can be accounted for). The constituent parts of the system are of a common, fixed nature, with an independent existence (as in atoms or rational individuals). (Dow 2007 pp.27-28).

In a closed system, the theorist can expect to find what Lawson (1997) would call 'event regularities' – if event 'A', then event 'B.' This creates the alluring prospect of finding the 'laws of economics' – a distinctly nomothetic ambition. A closed-

system reality is certainly inconsistent with epistemological and methodological pluralism and is also very limiting, if not totally limiting, on questions of method.

Different ontological presuppositions provide an important part of the explanation as to why disagreement between economists can often be so intractable. It is less to do with them 'having no ears', as some have asserted (Keen 2001b p.1), and more to do with the fact that they are literally operating on the basis of alternative conceptions of reality. On this basis, it would be futile to convince an economist of the merits of pluralism of method, theory, methodology and epistemology, if they are knowingly, or more likely, unknowingly, committed to closed-system ontology. Whether one engages in standard rules of economic debate or the 'street-fighting approach' advocated by Keen (2001b) the results are still likely to be mutual incomprehension. A mutual understanding of differing ontological presuppositions is a necessary, though probably not sufficient, basis for productive communication.

The open-system versus closed-system conception of reality is important, yet it also needs to be conceded that in practice all theory, to be operationally useful, requires closure. The key distinction then becomes whether theorists accept that they are overlaying a closed framework over an open system reality, or whether they are overlaying closed theory on top of what they presume is a closed-system reality. In the former case, they would probably understand that they are engaging in a temporary and provisional closure (Lawson 2003). The theorist should therefore be quite aware that something of some importance might be missed, distorted, over-emphasised or under-emphasised. This means that researchers should be naturally modest, tentative and open to persuasion about their conclusions as there is recognition by the theorist of the difference between the closed system ontology of the theory and the open system nature of reality. By contrast, if a theorist is overlaying a closed system theory on what they assumed is a closed-system reality, the theorist is in pursuit of (or feels they have obtained) a singular and immutable truth; in such an instance, intellectual discussion can tend to be quite limited.

4.3.3 *Anything goes?*

As mentioned previously, the most challenging level of pluralism is that of methodological pluralism. It is a byproduct of a breakdown of the received view of science and the absence of criteria that can convincingly function as judge, jury and executioner against a particular theory. In the absence of a simple rule-based methodology, a scientific community needs to exercise judgement. The term judgement is understood to be the use of practical reason and ordinary logic practised under the weight of uncertainty and drawing on a range of methods to arrive at a conclusion which is necessarily uncertain (Dow 2007). To exercise judgement sounds somewhat vague, yet it is something that can be approached in a structured way and there are concrete things we can do to improve the quality of our judgement.

A key aspect of judgement is to be informed about the range of analysis and analytical frameworks in front of us. This not only involves understanding the strengths and weakness of the contending theories and methods (be they quantitative or qualitative), but also involves developing our knowledge of economic methodology, economic history, history of economic thought and political philosophy. A knowledge of other social sciences and also biophysical sciences, particularly psychology, is also beneficial. Such a menu of requirements recalls Keynes's daunting list of attributes required of the master economist:

... the master-economist must possess a rare combination of gifts. He must be mathematician, historian, statesman, philosopher - in some degree. He must understand symbols and speak in words. He must contemplate the particular in terms of the general, and touch abstract and concrete in the same flight of thought. He must study the present in the light of the past for the purposes of the future. No part of man's nature or his institutions must lie entirely outside his regard. He must be purposeful and disinterested in a simultaneous mood; as aloof and incorruptible as an artist, yet sometimes as near the earth as a politician (Keynes 1933 [1963] p.56).

We can also try to make our judgements in a structured way, by which it is meant that there are lines of questioning which, while falling short of a rule based methodology, are still demanding and worth pursuing. Table 4.3.1 from Coates (2005) provides us with a good example of the structured lines of questioning and evaluation that are open to us:

Table 4.3.1 Criteria for the evaluation of theory

Explanatory coherence

The number and quality of linkages in the explanatory chain

The number of unlinked elements in the explanation

The degree to which linkages stretch back to an organising concept

The elegance and clarity of the explanation

Explanatory power

Capacity to handle evidence

Degree of vulnerability to facts

Clarity on counter-factual tests

Number of special exceptions being canvassed

Explanatory reach

Range of issues covered

Scale and importance of matters ignored/unexplained

Degree of depth – status of unexplained independent variable

Degree to which as range expands, coherence diminishes

Explanatory openness

Capacity to absorb new circumstances/new lines of research

Openness to articulation with additional lines of explanation

Degree to which that openness is compatible with original coherence

Openness to criticism and to self-reflection

Explanatory impact

The social consequences of applying its prescriptions

The pattern of winners and losers associated with its prescriptions

The interests privileged

The values structuring the approach

(Table from Coates 2005 p.267)

The first grouping, 'explanatory coherence', demands that theory be internally consistent at the level of logic. It can be argued, rather strongly, that a theory has no claim of offering knowledge about the world when it does not even make sense as a set of ideas. The specific failures of explanatory coherence in economics are problems of circularity (assuming what one seeks to explain) and logical inconsistency. A noted example of such a problem is the neoclassical conception of capital and the aggregate production function (Harcourt 1972). It is not uncommon that a requirement for explanatory coherence is seen as a minimum requirement for theory to be seen as legitimate, even amongst those who accept the concept of pluralism (Chick & Dow 2001; Hodgson 2001; King 2011). The general position on pluralism amongst such economists is that we should expect and accept contradictory ideas existing within the community of economists, but we should not accept contradictory ideas within particular theories or concepts (Hodgson 2001).

The next grouping, 'explanatory power', pertains to how a theory fits with evidence. A theory may be internally (logically) elegant, but externally irrelevant in that it cannot explain or predict real-world phenomena. Despite facts being theory-laden and the difficulties of empirically testing theory (Boumans et al. 2010; Dow 2007), it is beneficial to our interests to care about empirical evidence that might be of assistance in corroborating or contradicting our theoretical assertions (Blaug 2010; Lavoie 2009a). Theories that shy away from empirical evidence like Dracula from a stake should generally invoke concern.

The third batch of criteria, 'explanatory reach', examines the scope or boundaries of explanation. A key consideration here is what is left as exogenous and unexplained. One might initially think that the more that a theory explains the better, but greater explanatory scope is not always a good thing. There are some good examples that demonstrate this. The economics imperialism of Becker is one example of the dangers of over-reach (Harcourt 1979; Harcourt & Kerr 1982). Becker extends the rational choice framework to matters of marriage, crime, sleep and other social phenomena. Yet the flawed and sometimes ludicrous nature of some of this work (Nelson 1995a; Varoufakis 1998) reveals that it has little claim to be a general theory of human behaviour (Nelson 1995a). Furthermore, Hodgson (2001) argues that the pursuit of excessive generality can result in the elimination of important features that are common to a particular

subset of economic and social reality; in other words, the price of generality can be vacuousness (Bowles 2005). Different theory, resting on different methodological foundations, is often required to understand different phenomena.

The category 'explanatory openness' examines how brittle and inflexible a particular approach is. Can an approach interact meaningfully with other approaches, or is it a self-enclosed package deal which cannot articulate with other approaches? Again, economics imperialism provides a relevant illustration of this problem of insularity: assumptions of full rationality and endogenous preferences badly limit orthodoxy's ability to interact and benefit from other approaches in the social sciences. That its practitioners often see themselves as offering scientific salvation for their fellow social scientists compounds the problem further (for an unwitting example of this problem see Lazear 2000).

The grouping 'explanatory impact' prompts us to consider how analysis can be closely intertwined with the interests of particular groups in society. Certain groups will benefit or suffer on the basis of how we choose to understand the working of the economy. Indeed, beliefs about the economy are themselves working parts of the economy (Stretton 1999). Economics is, among other things, a conduit for the expression of social, economic and political interests (Halevi 2002). The popular currency of an idea or approach may have less to do with its explanatory merit than with its ability to serve the interests of particular groups. This line of argument has long been used by Marxian and radical political economists to explain the continuing persistence of neoclassical economics. It is also a key argument in this thesis where it is argued that social control is one of the three purposes of economics (see Chapter 13).

4.4 Economics as a science

This chapter has put forward a case for pluralism in economics on intellectual grounds. One could describe this as having mounted a *scientific* case for pluralism. However, this begs the question of what is science and scientific explanation? It is worth thinking carefully about the answer. First, because it is indeed relevant to my intellectual case for pluralism. Second, and more importantly in this instance, because different groups of people have quite different understandings of what it is to be a science, and their acceptance or

rejection of pluralism is heavily contingent on their conception of science. Understanding what these differing conceptions of science are is of practical use for those who seek a plural curriculum.

One way to answer the question of what is science is via recourse to professional philosophers of science: go and ask the experts. This is certainly a good place to start, but such specialists cannot really give us a simple answer to the question, at least not one upon which that they would all agree (Boumans et al. 2010; Dow 2002). The history and philosophy of science shows marked shifts on what is, and what is not considered scientific, and things have become less, rather than more, straightforward over recent times.

Initially, it was hoped that we could develop a rules-based approach that could distinguish the scientific from the non-scientific. For example, Whewell in the nineteenth century, argued that “the philosophy of science... would imply nothing less than a complete insight into the essence and conditions of all real knowledge, and an exposition of the best methods for the discovery of new truths” (Whewell 1840) This is a very attractive vision of science: a looking glass with which we shall be able to see the singular truth. This vision of science is well summarised by Hands:

...the Enlightenment view of scientific knowledge that has been handed down from Bacon, Descartes, and other philosophers. The view that knowledge of the causal structure of the world could be obtained with certainty if the proper method were followed, and even though philosophers have differed radically about what the proper method actually is, the idea that it – the scientific method – is the secret of epistemic success is common to all the various philosophical approaches (Hands 2001b p.4).

The logical positivists of the Vienna Circle, Popper’s Falsificationism, and Friedman’s Instrumentalism are all good examples of this rule-based approach to scientific analysis. One can group this rule-based approach to science as being the received view of science (Hands 1998). This received view of science fits awkwardly (if it all) with the concept of pluralism: if there is a reliable rule-based methodology then we should be able to find the best theory.

While the received view of science still has some currency, the philosophy of science has moved on somewhat. It is argued that the received view has now broken down and that the issues of under-determination, theory-ladenness, the social nature of science, relativism, anti-foundationalism and naturalism expose the old rules-based approach as untenable (Boumans et al. 2010; Hands 2001b). From such a perspective, the history of science looks less like a steady cumulative progression towards finding the rules and processes by which we can find the truth, than it is a history that is “full of examples of prophets spurned, old truths forgotten or neglected, even older heresies enthusiastically embraced, and egregious errors pursued at great speed to the end of the of the appropriate cul-de-sac” (King 2002 pp.241-242). Furthermore, examining the history of science as practised (rather than as professed) shows that our understanding of scientific advance is closely connected with institutional success and social acceptance (King 2002). This post-received view of science meshes well with the concept of pluralism: in the absence of a decisive rule-based methodology to decide between theories we should be open to consideration of multiple theories and to a degree of eclecticism and synthesis.

Looking at the views of professional philosophers of science and economic methodologists is rich and illuminating but, as was earlier stated, there is not a single and agreed upon answer as to what is proper science and scientific analysis. In reality, an examination of the specialists' views of the question is more an opening up of further debate about the question rather than a provision of a final answer that closes off all debate (Dow 2002). That this is so is partly a reflection of the fact that the philosophy of science draws on basic epistemological and ontological debates that go back to the birth of philosophy. What then is to be done? It would not be hard to fill the rest of this chapter (and thesis) with a discussion of how philosophers of science and economic methodologists understand the idea of science, and how this then relates to pluralism. However, there are four reasons against doing this. First, I am not in a position to add anything new or masterful to such a discussion. Second, the intellectual justifications for pluralism have already been made as ‘scientifically’ as I can manage in the first part of this chapter. Third, the case for pluralism that has been put forward would be uncontroversial to most economic methodologists. Fourth, and most significantly, the specialist understanding of the

nature of science and scientific explanation is not anywhere near as decisive in shaping economics or the economics curriculum as is the non-specialist understanding of science (by non-specialist I not only mean the average economist, but also the average person). For these reasons, it serves my purposes to focus on this non-specialist understanding of science.

4.4.1 Economics as a science within mainstream economics

Within economics there is a schism. Heterodox economists are usually quite aware, and often much concerned with, debates in economic methodology and philosophy of science; indeed, some heterodox economists argue, sometimes too much so. By contrast, orthodox economists rarely have an active interest in, or any real awareness of, debates in economic methodology and the philosophy of science (Fullbrook 2009; Lawson 1997, 2001). For example, Samuelson famously asserted that “those who can, do science; those who can’t prattle about its methodology” (Samuelson 1992 p.240). This aversion to focus on methodological issues or debates is reflected in its near-absence in the economics curriculum (see Chapter six for details).

Having no interest in methodology does not mean an absence of methodological position: it just means that one does not care to examine, defend or compare the position one holds to. In the main, orthodox economists hold to some version of the received view of the philosophy of science and economic methodology. Some (probably incoherent and very superficial) blend of Popperian falsificationism and Friedmanesque instrumentalism would be the most methodological stance. It is not usually recognised that economists do not (and to an extent, cannot) practice the rules they espouse to follow (Canterbury & Burkhardt 1983; Hutchison 1960). What matters is not the existence of methodological weaknesses within orthodox economists, but that such weaknesses are unrecognised and ignored by orthodox economists. Mainstream economists are usually comfortable with, if not proud of, their methodological stance. It is certainly a practical stance for getting articles published in highly ranked journals, finding employment and in helping to impress audiences of other economists and policymakers. The simple fact is that mainstream economists currently hold the institutional power and can largely ignore the critique of economic methodologists and philosophers of science. What all this means is that mainstream economics will most probably remain

anchored in the received view of science. In turn, this adds some weight to the finding that traditional centres of economics might not be capable of creating a plural curriculum (finding 1.3.3).

The dominance of the received view helps to explain some of the intolerance and persecution to which heterodox economists have often been subjected (Lee 2012). If there is a valid rule based methodology to determine science, and orthodox economists believe they follow such rules, then heterodox economists could very easily be seen as dissenting from science itself. This would make them akin to a creation scientist who has somehow found employment in a department of biology: they are a threat to the reputation of that department, someone who will confuse and mislead in their teaching. Such a person is a threat to everyone's hard work, hopes for the future and material interests. They are someone who should not have been employed in the first place, and someone who has to be removed if at all possible. While it is not reasonable to assume that not all orthodox economists would view all heterodox economists in this light, this philosophy of science can, and sometimes does, drive such thinking (see Chapter 11 'reform from without' for some particularly clear evidence of this).

Pluralism in economics is currently unduly constrained by traditional notions of science (Negru 2009) and by a paucity of understanding that real science is pluralist (Fullbrook 2001). Certainly, economists are often very keen to indicate a level of consensus about their discipline. For example Samuelson argued "there is a scientific consensus about what comprises good economics – a core of foundational concepts, methods and propositions that is "accepted by all but a few extreme left-wing and right-wing writers" (Samuelson 1967 pp.197-98).

Davis (2008) argues that the entire history of economic thought has been heavily shaped by a fear that pluralism endangers a scientific economics. He views the history of economics as an ongoing alternation between periods of pluralism and the dominance of a single approach. Orthodoxy is understood to emerge out of heterodoxy in a core-periphery relationship that regularly reconstitutes itself. An economist may have licence to be plural and eclectic in approach during a phase of high pluralism, but will come to grief as the tide of pluralism recedes to leave nothing but a rigid orthodoxy. The implication of this is that if the mainstream

research frontier is to progress, some part of it will have to actively destroy the standing of neoclassicism (Davis 2008 p.350). Furthermore, the mainstream research frontier, or perhaps established heterodoxy, will need to coalesce into something approaching a unified whole so that it can seize the crown of dominance. These are interesting claims, but I would suggest that one should also consider (and organise one's activities around) an alternative scenario: that current orthodoxy might just continue to dominate.

4.4.2 *Popular conceptions of science*

There is a third constituency whose perception of science influences economics and the economics curriculum. This constituency is the wider society and thus includes politicians, public servants, the media and students deciding on particular degrees and subjects within those degrees. There are a couple of limitations in trying to analyse the perceptions of this constituency. First, it is broad and ideally one would disaggregate it. Second, there do not appear to be wide-scale surveys of the perception and understanding of science within the Australian community. However, there is survey work from the US and Europe that gives some indication on society-wide perceptions of science, and this survey work will now be discussed.

The US and European survey work is interesting, and on occasion, surprising. The understanding of science and the scientific process is, in general, very low: two-thirds of Americans could not provide even a very modest explanation of the scientific process, where a satisfactory answer was to describe science as either theory testing, experimentation, or rigorous, systematic comparison (National Science Board 2002). Significantly, despite this poor level of level of knowledge about what science is, there was a very high level of respect for scientists and their work: 96 per cent of Americans surveyed agreed that "scientists are helping to solve challenging problems," (National Science Board 2002 p.2) and 86 per cent agreed that "scientific researchers are dedicated people who work for the good of humanity"(National Science Board 2002 p.2). Science is understood as being somewhat above the fray of the self-interested claim and counterclaim that is part of everyday general opinion and analysis. It is seen as trustworthy, methodical, incorruptible, and something that is the result of objective scrutiny and testing. In summary, science is something that people cannot understand to

any real degree, but is still held in very high regard: something both mysterious and highly revered.

How could the general public have such a high opinion of something they know so little about? There are surely many factors at work, though those conducting this research have put an emphasis on the positive portrayal of scientists in television and movies. This has some basis given that television and media are the primary source of information for many adults about science (National Science Board 2002). Media portrayals are doubtless important, though I would argue that the general public's perception of science also reflects a general human desire for prediction and control (see Chapter 13 'The three purposes of economics').

Given that science and scientists are perceived in such terms, it is unsurprising that politicians wanting to persuade people of something will latch on to any claim that it is the result of scientific analysis. Advertising often portrays individuals regaled in white laboratory coats to endorse a product, or claim that something is 'scientifically proven' in order to make their product more believable and legitimate. That economists would wish to make their own analysis seem as scientific as possible is therefore unsurprising. None of this is to say that such groups should instead go to superstition or tradition to support their claims – it is simply being stressed that given this public perception of science, there is an obvious attraction in linking any claim to science in order to make that claim more persuasive.

That economists would very much *want* to utilise the cachet of science is understandable, though this does not mean they have been entirely successful in their objective. Survey data conducted by the European Commission about perceptions of the scientific credentials of different disciplines shows that economics is ranked very low as a scientific endeavour. Europeans were more likely to say that astrology is scientific (53 per cent agreement) than to say that economics is scientific (42 per cent agreement). Disciplines most likely to be considered scientific by Europeans were medicine (93 per cent), physics (90 per cent), biology (88 per cent), astronomy (78 per cent), mathematics (72 per cent), and psychology (65 per cent) (European Commission 2001 p.18). Notably the social sciences did not fare well, and most significantly of all, history (33 per cent)

ranked at the bottom (European Commission 2001 p.18). On this basis, the move for economics to try to emulate highly-ranked physics and mathematics and move away from the lowly ranked social sciences such as history is very much in keeping with popular prejudices concerning what science is.

A key point about community attitudes towards science is that it is a vision of science in which it is expected that we uncover, or track towards, a singular truth. Failing this, it is expected that there should at least be a reasonable, or even high, level of agreement between scientists. In other words, true science in society's view is not yet understood as a pluralist undertaking. This can be most clearly seen in debates about climate change, where very small levels of dissent about the extent and nature of global warming are seen by a significant amount of the population as being problematic; particularly when corporate interests who benefit by continued policy inaction skillfully exploit such disagreement.

It can also be seen in regard to economics, where there is community frustration as to "why can't economists be like '*proper*' scientists and agree amongst themselves?" (Dow 2002 p.15 ; emphasis added). In summary, it is not only orthodox economists who have little appetite for pluralism; society in general also may struggle to see that rigorous science is pluralist (Fullbrook 2001).

4.5 Conclusion

This chapter introduced the concept of economic pluralism. It then provided an intellectual rationale for pluralism that was based on the idea of theory as simplification and of economic and social reality existing as an open system. The latter half of the chapter applied the concept of pluralism to differing conceptions of what is scientific and what is good scientific practice. It was argued that within orthodox economics and the wider community the progress of pluralism is held back by outdated, limited, or confused notions of science. Therefore, reforming economics and the economics curriculum will have to involve raising the level of knowledge of the philosophy of science in general. This might be achieved by working with other disciplines and with better cooperation and coordination between university academics and the secondary school system. At the minimum, it supports Stretton's view that an introduction to the modern literature on the philosophy of science needs to be part of any introduction to economics (Stretton 1996, 1999).

5 Orthodoxy, heterodoxy and political economy

5.1 Introduction

For a thesis such as this, concerned as it is with explaining changes in the economics curriculum and assessing strategies for its improvement, careful consideration of how best to categorise the various strands of economics is an elemental concern. This is because categorisations structure the way we describe and make sense of economics and the economics curriculum; indeed, we cannot even analyse curricular change (the focus of next chapter) without clear and defensible categories. Categories such as heterodoxy and orthodoxy also effectively create an 'us' and 'them', so it pays to think carefully about who falls into which camp and also whether it is possible for particular individuals or schools to span both camps. Another important issue is that if the categories created can be shown to reflect a substantial intellectual difference (for example, if orthodox economics has utterly different foundations to heterodox economics) then this provides an intellectual, rather than just practical justification, for greater institutional independence and differentiation. In other words, it offers another line of support for finding 1.3.4, which argues that a pluralist economics is a more natural fit, and has better prospects of success, if it is located outside of traditional centres of economics teaching in faculties of social science.

Another issue that needs to be examined carefully is that of the names we give to the categories we create. For example, a pluralist economics needs to be named in such a way that it is intelligible and coherent. It also needs to be acceptable to the various groups of economists that supposedly fall under its banner. It should also be a title that facilitates things such as student enrolments, links with other disciplines and influence in the wider world.

Given all of the above requirements, this chapter examines how best to categorise economics, giving particular focus to dualisms such as orthodox economics versus heterodox economics and political economy versus neoclassical economics. After some discussion, it is argued that such dualisms, while inherently reductionist, are intellectually and practically useful and thus defensible. However, it is also emphasised that economics is not a simple object and that it cannot be captured cleanly by any simple dualism. Following this discussion of categorisation in economics, a particular dualism is put forward that is then deployed for the remainder of the thesis. The dualism is intellectual, rather

than social in nature and is derived from the work of Potts (2000), who argues that there is an ontological schism in economics based on whether one presupposes a 'complicated' or 'complex' economic system. It is argued that neoclassical economics is compatible with a complicated system ontology and a pluralist social science orientated economics is compatible with a complex system ontology. Another important argument made in this chapter is that a pluralist economics is best described by the name 'political economy', with intellectual and practical lines of argument put forward to support this view.

5.2 Orthodoxy and heterodoxy in economics

The examination of categorisation in economics is best started by looking at 'orthodox economics' versus 'heterodox economics', as this is currently the most dominant dualism in contemporary economics. An appropriate place to commence this examination is to look at established understandings of the words 'orthodoxy' and 'heterodoxy'. The *Australian Concise Oxford Dictionary* describes orthodoxy as follows:

Holding correct or currently accepted opinions especially on religious doctrine, not heretical or independent-minded or original; generally accepted as right or true especially in theology, in harmony with what is authoritatively established, approved, conventional; (with Judaism) with strict retention of traditional observances (Turner 1987 p.767)

By contrast, heterodoxy is described as follows:

(of person or opinion) not orthodox (Turner 1987 p.500)

Clearly, this is a dualistic relationship, and a very tidy one at that: heterodoxy is simply what orthodoxy is not. There is a strong suggestion that this is an exhaustive classification: all possible cases divide into being either orthodox or heterodox.

Little appears to change when we move from simply examining orthodoxy versus heterodoxy as general terms to examining 'orthodox economics' versus 'heterodox economics'. In particular, there is nearly always an implicit or explicit

suggestion of exhaustiveness (Mearman 2010).⁸ I will return to assess whether or not this assertion of exhaustiveness is justifiable.

Another useful step in the process of developing good definitions is to look at general understandings of how different groups of economists view economics and themselves in relation to it. The general view, clearly evidenced in entities such as *Heterodox Economics Newsletter* and the *Real-World Economics Review*, is that orthodoxy is neoclassical economics and heterodoxy is an umbrella grouping that includes Austrian economists, feminist economists, institutional-evolutionary economists, Marxian-radical economists, post-Keynesian and Sraffian economists, social economists, and perhaps also ecological economists (Fullbrook 2003, 2004).

At first blush such a taxonomy seems reasonable: most economists working under these approaches would see themselves as being in a minority approach that is different from a dominant orthodox approach and many (though probably not all) would not chafe against being labelled as heterodox economists⁹. Similarly, most orthodox economists would also view these economists as being non-mainstream, though they may not use the term 'heterodox economics' to describe them; indeed, this may be because they have never even heard of the term 'heterodox economics' (see survey work to come).

A common rationale for identifying oneself as heterodox is that one is opposed to key parts of orthodox theory. For example, in macroeconomics one may reject the quantity theory of money, rational expectations theory, IS-LM, Say's law or the efficient markets hypothesis. Another common rationale is methodological: perhaps some ontological or epistemological commitment that is at clear variance from the mainstream view. A third rationale is ideological, perhaps an opposition

⁸ One exception to this is Lee (2009), who argues heterodoxy is not part of an exhaustive dualism and is instead just a name to describe a certain body of unified intellectual content. In effect this is arguing that heterodoxy is *not* a broad category, just a particular school of economics.

⁹ However, it should be noted that so-called 'heterodox economists' might sometimes also see themselves as traditionalists: economists focused on developing the ideas of the major historical figures such as Marshall, Keynes, Kalecki, Robinson, Marx etc.

to 'neoliberalism' or 'globalisation,' though it would be rare for most economists to base their opposition solely on ideological grounds.

Is heterodoxy united in anything other than opposition to orthodoxy? There is a social point of commonality in that heterodox schools are all minority approaches, but whether there is intellectual commonality is a matter on which opinions vary. Many concede that heterodox schools have substantive theoretical and methodological differences from each other. However, some, particularly Lee, argue that there is a broad and emerging intellectual unity (Lee 2009, 2012). Whether there is an emerging unity or ongoing diversity is perhaps now less of an issue than it once was, given the increasing currency of pluralism among many, though not all, heterodox economists.

How is orthodoxy usually understood? The standard way to define orthodoxy is as neoclassical economics, particularly the textbook neoclassical economics of Samuelson, or its progeny such as Varian and Mankiw. The unity of neoclassical economics is not only in its subject matter, but also in its approach: an economics that, at its core, assumes fully informed, rational, utility-maximising individuals engaged in constrained optimisation, with methodological individualism and a closed system ontology facilitating the heavy, and often uncritical, use of mathematics. Fundamental uncertainty, in a Keynesian or Knightian sense, is usually reduced to quantifiable risk and the full implications of a monetary economy are usually not acknowledged. The focus is not on production, but on allocation under scarcity.¹⁰ Such a definition of neoclassical economics can include much of game theory and, to a large extent, the new institutional economics of Williamson. It can also incorporate neoclassical-synthesis Keynesianism. The standard conceptions of orthodoxy and heterodoxy are illustrated in table 5.2.1

¹⁰ The assumption of scarcity is, as Pagano and Perlman (2000) note, selective in that while scarcity is supposedly pervasive, rationality and institutions are strangely abundant and costless.

Table 5.2.1 The conventional view of the orthodox heterodox divide

Category	Orthodox	Heterodox Economics
Schools	Neoclassical economics	Austrian economics Feminist economics Institutional economics Evolutionary economics Marxian-radical economics post-Keynesian Sraffian economists Social economists Ecological economists
Key feature	Common methodological core: equilibrium, self-interest, rationality.	Diverse, only unified in opposition to neoclassical economics
Status	Dominant	Marginalised

5.3 What is wrong with the conventional categorisation?

The conventional view of the orthodox-heterodox divide initially seems satisfactory, perhaps even elegant. However, on closer examination a number of problems emerge. The most basic of these is that making orthodoxy synonymous with neoclassical economics has become more difficult. Since about 1980, neoclassical economics coexists with a mainstream research frontier that, while largely acceptable to neoclassical economists, has some differences from neoclassical economics. This research frontier consists of areas such as complexity economics, behavioural economics, experimental economics and evolutionary game theory. While I reject the level of significance and meaning given to this research frontier by people such as Colander, its actual existence is not in doubt, nor is it disputed that it is in some ways different from both neoclassical economics and heterodox economics. This suggests a trichotomous, not a dichotomous structure (see table 5.3.1).

Table 5.3.1 A tripartite classification of contemporary economics

Category	Orthodox	Mainstream Research Frontier	Heterodox Economics (Political Economy)
Constituent Schools	Neoclassical economics	Complex systems theory, behavioural economics, experimental economics and evolutionary game theory.	Austrian economics Feminist economics Institutional-evolutionary economics Marxian-radical economics post-Keynesian Sraffian economists Social economists Ecological economists
Key features	Common methodological core: equilibrium, self-interest, rationality.	Elements of both orthodoxy and heterodoxy	Diverse, unified in opposition to neoclassical economics, more complex and nuanced position towards mainstream research frontier
Status	Dominant	Not dominant, but some branches of it are acceptable to mainstream economists	Marginalised

Clearly, there is a mainstream research frontier that is different from neoclassical economics. But how different is it? In contrast to Colander's perception of the mainstream research frontier as being 'revolutionary,' Earl (2010) primarily views it as a defensive move to prop up the degenerating research programme of neoclassical economics. Similarly, Beinhocker (2006) points out that while some of the more unrealistic tenets of neoclassical economics are relaxed, it is usually only one tenet at a time (for example the tenet of perfect rationality), while the other core tenets remain. As Beinhocker puts it, it is an air and variations, rather than an entirely new symphony (Beinhocker 2006). To put it in more technical terms, it is simply a process of axiomatic variation (Dobusch & Kapeller 2012).

Significantly, Earl (2010), in part drawing on the work of Sent (2004), makes the point that what now passes for behavioural economics — what he terms the 'new' behavioural economics — is in key ways a betrayal of the 'old' behavioural economics founded by Simon (1957). The existence of a 'new' and 'old' behavioural economics is actually part of an established pattern, where we have a 'new' and 'old' institutionalism (Rutherford 1994) and Keynesian and post-Keynesian economics (King 2002). The paradigmatic strictures of orthodoxy prevent a proper engagement with, and understanding of, the original ideas (Earl 2013). This means that new ideas are only absorbed into the mainstream on the mainstream's own terms, leaving most of the original and more challenging ideas to exist only within marginalised and largely ignored schools of economics.

The conservative nature of much of the 'new' behavioural economics is evident enough in the assertions of its key contributors and textbooks. Behavioural economics is seen 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 p.4). The prominent new behavioural economist Matthew Rabin is "adamant that he wants to create a sense of continuity that allows people to see the changes that are happening as incremental changes to a fundamentally unchanged science" (Bateman 2007 p.6). In summary, while the mainstream research frontier is different enough to confound conventional notions of the orthodox-heterodox dualism, but is not a revolutionary force that is changing the face of economics, thus David Colander's analysis (described in Chapter three) is misconceived.

Another problem with the conventional understanding of the orthodox-heterodox divide is its explicit or implicit assumption of exhaustiveness; in other words, its inability to fully acknowledge that there is a level of common ground between what is conventionally seen as either heterodox or orthodox. For example, Lee (2009) asserts that heterodoxy is a complete and 'blasphemous' rejection of orthodoxy. In fact, things are not quite so simple. This is clearly demonstrated by King (2012b), who provides various examples whereby rejecting the validity of core neoclassical concepts such as the law of demand, externalities and elasticity would be damaging to one's personal credibility and could also lead to detrimental public policy. It is also relevant to note that Earl and Peng found that their attempts to categorise research programmes had overlaps between programmes and that from their perspective "no single existing brand of economics has a fully heterodox profile" (Earl & Peng 2012 p.461).

One solution to this problem of commonalities is to treat the less problematic components of neoclassical economics as useful contributions to the economic toolbox, with the ever-present caveat that any tradesman would endorse: each tool needs to be fully understood, carefully used with regard to its limitations, and employed in conjunction with other tools where appropriate. Such an approach is consistent with what many heterodox economists actually do in practice (Mearman 2010, 2011). The other alternative is that concepts such as elasticities and externalities are not necessarily just the intellectual property of neoclassical economics. This, however, only reinforces the point that there are clearly some concepts and theories in common between orthodoxy and heterodox economists.

Illustrations of commonality are easily made. For example, Kirzner (1987) documents that the neoclassical and Austrian economics share a commitment to methodological individualism, methodological subjectivism, marginalism and opportunity cost. One may counter that we should therefore classify Austrian economics as orthodox. This is not an option, since later developments in Austrian economics, such as viewing markets and competition as a process of learning and discovery, choice under uncertainty and a rejection of mathematical methods all make Austrian economics incompatible with neoclassical economics. Furthermore, if one looks at the later work of Hayek, it is profoundly evolutionary, rather than static, in nature. Some parallels can be drawn with an annual Christmas family function, where there is a relative whose company and

conversation you find not to your liking. Fair enough. It may be better for all if you minimise your contact. But nothing can change the fact that you are closely related. Perhaps it is this fact that, in part, explains why you might find each other so irritating.

Commonalities can also be seen in the 'special case' game that sometimes gets played between different schools of economics. For example, the prominent post-Keynesian Paul Davidson argues that post-Keynesian economics absorbs neoclassical economics as a special case (Davidson 2004). Similarly, the leading 'old institutionalist' economist Geoffrey Hodgson argues that institutionalism absorbs neoclassical economics as a special case (Hodgson 2004a). Admittedly, both authors stress just what a special case the incorporation of neoclassical economics is. However, the fact that this game of incorporation can be played at all is a further illustration of commonality.

A clear and simple categorisation of the orthodox-heterodox divide seems elusive. There seems little ground for thinking this will change. Mearman (2010) examines over twenty attempts to define heterodoxy versus orthodoxy and finds them all wanting in one way or another. To help us understand why each of these dualisms runs into problems he makes some important points about the nature of categorisation itself. These allow us to see that the orthodox-heterodox distinction needs to be a 'modern' rather than 'classical' form of categorisation.

A classical approach to categorisation is characterised by fixed, mutually-exclusive categories which should have no effect on the objects we classify. This classical approach is abundantly evident in many versions of the orthodox-heterodox divide (Mearman 2010). However, economics appears to be a complex object and classical categorisation of a complex object is usually intellectually problematic (Mearman 2010). In particular, classical categorisation cannot cope with the type of commonalities between orthodoxy and heterodoxy that have just been identified, because classical categorisation relies on mutually exclusive and exhaustive categories.

The alternative to classical categorisation is to opt for a 'modern' approach where categories can be fuzzy, non-exhaustive, evolving, constructed for purposes beyond classification and are also able to exert an influence over the target

object itself. While this is not as tidy and precise as classical categorisation, it is much more flexible and much more appropriate for a rigorous economics. For example, by utilising a 'fuzzy' set, an entity can simultaneously hold *fractional* membership of both sides of a dualism. This is an appropriate framework, given that many self-identified heterodox economists say that they are not fully heterodox and hold views that they see as being orthodox (Mearman 2010, 2011).¹¹

5.4 The dualism utilised in this thesis

While the classical approach to categorisation is problematic for economics, a broad dualism can still be identified, albeit one of a modern, fuzzy kind. The basis for this dualism is ontological. As explained in chapters two and four, ontological differences are differences of view about the underlying nature of reality. Within economics, this comes down to questions such as what does theory X presuppose about the nature of reality? Ontology is of decisive importance in understanding differences in economic analysis (Dow 2007; Lawson 1997, 2003). Schumpeter has explained the importance of ontology as well as anyone ever has (albeit using the terminology of 'pre-analytic vision' rather than ontology):

Analytic effort is of necessity preceded by a pre analytic cognitive act that supplies the raw material for the analytic efforts...This pre-analytic cognitive act will be called Vision. It is interesting to note that vision of this kind not only must precede historically the emergence of analytic effort in any field but also must re-enter the history of every established science each time somebody teaches us to see things in a light of which the source is not to be found in the facts, methods, and results of the pre-existing state of the science (Schumpeter 1954 p.41).

What is the exact nature of this ontological divide within economics? As already suggested, it is not the pre-supposition of an open system in heterodoxy and a closed system within orthodoxy: all theory requires at least some provisional

¹¹ The (very) corny song by Donny and Marie Osmond about being 'a little bit country, and a little bit rock and roll' seems illustrative here.

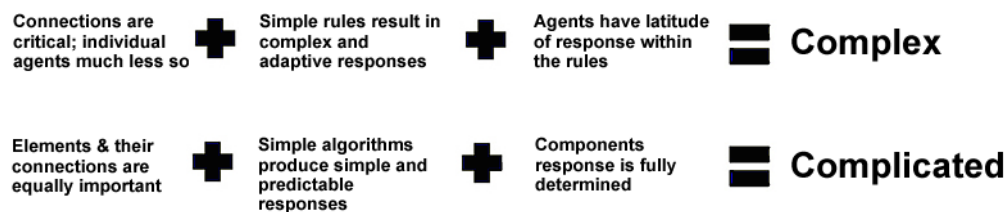
closure. The ontological dualism is that of pre-supposing a complex versus a complicated system (Potts 2000).

The ontological difference exists in the geometry of economic space (Potts 2000). In orthodox economics, the economic system exists as an integral field (the concept of a field is taken from graph theory). The components of the system are all connected to each other in a manner that means responses to change are fully determined and predictable. In such a system it is the agents themselves (rather than the connections between them) that hold centre stage. Such a system can be quite *complicated* (the many pages of equations that comprise general equilibrium theory are a good example of this). However, beyond this surface complexity the consistent nature of the connections between agents means that, in essence, the system is *simple*; indeed some have even described such systems as *simple*, rather than complicated (see for example Foster 2005). Certainly, for all its superficial complication, it is a fully determined system and exhibits the type of event regularities that make it well suited for the deployment of formal methods to gain knowledge of its workings and to generate precise predictions. Furthermore, economic change is also rather simple: it is about substitution that is driven by changes in relative prices, with such prices being driven by changes in supply and demand (Earl 2006).

The alternative ontology for economics is to see economic reality nested inside a *complex* (rather than complicated) system. In this system it is the connections between the agents, rather than just the agents themselves, that define much of the economic system. It is changes in the connective structure of the system that actually create the dynamics of the system. For example, technology is understood as being a set of connections between materials and institutions. Organisations are understood as connections between people. Furthermore, learning and knowledge are understood as emergent properties of new connections (Schmid 2003). An important characteristic of a complex system is that not all agents are connected with each other (as is the case in a complicated system). Full connectivity is prevented by fundamental uncertainty and bounded rationality, but also by organizational, spatial, temporal, market and social structures (Schmid 2003). The connections that do exist are the product of path-dependent historical time. The system is not entirely deterministic, as agents are rule followers and have a degree of latitude in their responses. Structure and

agency co-evolve and there is both change within the system and change in the nature of the overall system. While formalism and computer simulations may be useful to analyse such a system, they are not necessarily the only method, or even the dominant method. The differences between a complicated and complex system are summarised in figure 5.5.1

Figure 5.4.1 Complex versus complicated systems



Reproduced from (Potts 2007b)

The ontology described by Potts is generally compatible with established heterodox approaches such as the Austrian, post-Keynesian, institutionalist and Marxian schools. It is a very useful way to make sense of economics and it is not surprising that Potts was awarded that Schumpeter Prize in 2000 or that the leading institutionalist Geoffrey Hodgson described Potts's book (2000) as "one of the most important books on the theory of evolutionary economics in the last half century and perhaps the most consequential work in the area since Richard Nelson and Sidney Winter's famous volume of 1982" (Hodgson 2000b p.1). It does seem to provide an underlying view of economy and society that is compatible with so many important heterodox ideas. For example, a long-standing feature of much heterodox work is the assumption that the economy is an evolving and historical entity. It is also generally recognised that we do not have full information about our choices before we choose, nor do we have the cognitive powers to optimise our choices with the information we do have. We are rule followers (and rule creators) rather than rational calculators. In this view of reality the human agent is not the mindless and isolated prisoner of an exogenously given preference function: human beings are social beings who carry knowledge and create new knowledge via their interaction with others (Potts & Nightingale 2001).

The complex versus complicated system ontology also helps us make better sense of the mainstream research frontier. As mentioned earlier in this chapter,

much of the mainstream research frontier is acceptable to orthodox economists, yet it is different from the neoclassical economics that is usually understood as defining the orthodoxy. An important clue to understanding this puzzle is provided by Earl (2010), who points out that the 'new' behavioural economics that is acceptable to orthodoxy (and which many orthodox economists view as an extension of orthodox economics) is in many ways a betrayal of the initial vision of those who developed the 'old' behavioural economics in the 1950's and 1960's:

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 p.218).

The 'old' or 'original' behavioural economics, with its focus on satisficing (rather than optimising) and on rule following, was much closer to heterodox economics and its complex ontology. By contrast, the 'new' behavioural economics is much closer to orthodoxy and its complicated ontology. For this reason, it is argued that the mainstream research frontier is best described as 'modern hybrid economics': modern, to indicate its recent emergence, hybrid, to indicate its bifurcated ontological foundations.

For all this, it must also be conceded that what is generally understood as heterodox economics does not always and everywhere sit inside a complex ontology. For example, some of the work of the Sraffian school would appear to have more affiliation with a complicated ontology. Furthermore, individual economists might also oscillate between their choice of ontology depending on the task at hand, hence illustrating that the dualism must be a modern, rather than a classical, one.

Up to this point, the focus has been mainly on heterodoxy versus orthodoxy, but it is argued that the Potts dualism can be expanded to one where there is a 'mainstream economics' or 'orthodox economics' on one hand, and 'economics as a social science' on the other, with the latter category covering the areas of

development economics, comparative economic systems, history of economic thought, economic history and heterodox economics. While each of these five sub-categories of economics as a social science still have some distinct strands that still share the complicated ontology of mainstream economics (history of economic thought being the most obvious), all five categories share the tendency towards a complex systems ontology that is at the heart of the social sciences.¹² The categorisation used from this point onwards is summarised in table 5.4.1

¹² It is conceded that economic history, history of economic thought, comparative economics and development economics can, and sometimes are, practised in a neoclassical way. However, it is argued that these sub disciplines, with their focus on history, institutions, and politics are essentially within the social science wing of the discipline.

Table 5.4.1 A categorisation of contemporary economics

Category	Incorporates
Mainstream economics (orthodox economics).	Neoclassical economics Most econometrics Most mathematical methods, Most of the mainstream research frontier (for example 'new' behavioural economics)
Economics as a social science (political economy)	Economic history History of economic thought Development economics Comparative economic systems Heterodox economics (Institutionalism, Marxian economics, post Keynesian economics, Austrian economics, feminist economics, ecological economics) Some of the mainstream research frontier (for example, some aspects of complexity economics)

5.5 Use of the term ‘political economy’ to describe a pluralist economics

Having established the categorisation of economics outlined in table 5.4.1, it is now appropriate to turn the focus onto how these categories should be named. It is not before time that this issue is addressed: the reader will notice that the fourth major finding of this thesis (1.3.4) is that a pluralist economics should be taught under the banner of *political economy*, yet this choice of terminology clearly needs to be justified, particularly as there are other terms such as heterodox economics that are sometimes used to represent the pluralist, social science orientated wing of economics. It is useful to compare the merits of these two terms.

5.6 Heterodox economics versus political economy

As already discussed, heterodox economics is often used as a term to describe various schools of economics that dissent from neoclassical economics: old institutionalism, Marxian economics, feminist economics, post-Keynesian economics, ecological economics and Austrian economics. However, it is not usually understood to refer to the other four areas of the social science wing of economics: economic history, history of economic thought, comparative economic systems and development economics. Clearly, if one is looking for a term to describe all five strands of the social science wing, then this is an obvious limitation. This limitation is unfortunate as some of the heterodox schools have obvious and strong linkages with these other social science strands (for example, institutional economics and development economics), just as each social science strand has strong linkages with the other strands (for example, economic history and history of economic thought).

Political economy is also a more strategic term to use if one is considering increasingly basing the teaching of economics in faculties of social science, rather than in faculties of business (a strategy recommended in this thesis, see 1.2.4). Political economy, with its lead term ‘political’, is suggestive of a subject that is deeply relevant to humanities students. It suggests, and thus promotes, inter-disciplinarity with other social sciences. It also emphasises that all economics is political rather than value-neutral and that the answer to most economic questions raises a political problem (Robinson 1981). Recognised

heterodox schools such as post-Keynesian economics, institutional economics, Marxian economics, feminist economics and radical political economy *are* deeply political in character. For them to be united under a term that clearly signals this reality to social science students and other social science academics can only be beneficial in attracting both student enrolments and the support of other social scientists.

Some have spoken of the ruthless proprietorial instincts of economics departments (Keen 2011). Given this, it seems reasonable to assert that a subject taught under the label of political economy is also less likely to invoke the proprietorial instincts of economics departments than a subject taught under the label of heterodox economics. The latter is much more likely to be seen by both orthodox economists (and the senior administrators to whom they would probably complain) as an invasion of an economics department's turf. Furthermore, there is not currently any existing department that is titled 'Department of Heterodox Economics', and there is no reason to suppose that we will ever see one. By contrast, a department of political economy is a demonstrably viable concept (see Chapter 11), as is a political economy programme based in a social science department: for example the political economy major that ran at the University of New South Wales between 2005 and 2011. Using a terminology that seems best equipped to facilitate success and growth seems the most prudent strategy; on this point it is relevant to note 'heterodox economics' is brand name that "would cease to make sense if it succeeded in usurping the current mainstream" (Earl & Peng 2012 p.466).

A further issue is the relative intelligibility of the terms, Table 5.6.1 presents the results of a small survey on how the terms heterodox economics and political economy are understood amongst students and also amongst general members of the public. Political economy appears to be the far more easily understood term. By contrast, nine out of ten people simply did not know what heterodox economics was. The inability to accurately comprehend the term could well be damaging to our ability to attract students to the social science wing of the discipline and to build up the pluralist credentials of the discipline in general.

Table 5.6.1 Understanding of the terms heterodox economics and political economy

Heterodox Economics is:	Total	Percentage
Anti-economics	0	0
A particular subsection of economics	1	2
A particular subsection of politics	0	0
An independent academic discipline	1	2
Non-orthodox economics	3	6
Don't know	45	90
Other	0	0
Political economy is:		
Anti-economics	0	0
A particular subsection of economics	15	30
A particular subsection of politics	15	30
An independent academic discipline	1	2
Non-orthodox economics	0	0
Don't know	14	28
Other	5	10
Category of Respondent		
Business student	13	26
Humanities Student	16	32
Other Student	10	20
Non Student	11	22

Source: (Thornton 2011l)

There are some objections to using the term political economy in place of heterodox economics. It has been argued that the term political economy is either too closely associated with the left (particularly Marxian economics or radical political economy) or too closely associated with right (particularly public choice theory). Neither of these (contradictory) arguments is persuasive. Groenewegen (1987), in his examination of the history of the terms political economy and economics, clearly demonstrates that both the terms 'economics' and 'political economy' have a rich, intermingled history. It is also clear that both terms have experienced changes in meaning over time, being colonised or abandoned depending on how well they served particular agendas at particular times. Both terms appear to have a 'use it or lose it' quality, in that the more a group of economists uses the title of political economy to describes its activities, the more the title of political economy is associated with those economists. The term political economy is simply big enough and worthwhile enough to be more comprehensively embraced by reformers, and thus more clearly owned by reformers.

Political economy is also a superior term because it better allows reformers to frame their work and ideas within a long and rich tradition that goes all the way back to the classical economists – who described their work as political economists. Reformers can then be seen (and can see themselves) less as dissenters, and more as representing the 'mainline tradition' within economics (Tabb 1999). Describing oneself, and understanding oneself, in such terms is superior and more strategically savvy. In summary, the term political economy has various advantages over the term heterodox economics; in particular it is more comprehensible to the world at large and has an obvious edge in facilitating linkages and enrolments from within the social sciences, particularly departments of politics.

While much has been invested in promoting the term heterodox economics, given all these arguments, a case can be made that each strand of what is known as heterodoxy might often be better off in the first case self-identifying by their particular school (a post Keynesian, an institutionalist, etc) and in the second case as being a political economist. However, perhaps 'within the trade' so to speak, the term heterodox economics can continue to have some use. Certainly, many dissenting economists find it agreeable and useful, and much hard work

has been put into building an alternative economics under this banner. Given this, it may not be fair or useful to advocate the term be purged. However, it does seem reasonable to assert that in our external dealings with students, other disciplines and the world at large, political economy would appear to be a much better term.

5.7 Conclusion

This chapter has made clear that categorisation and the naming of categories is of elemental importance in matters of analysis and strategy. We cannot analyse curricular change without categories; indeed, it is hard to make sense of contemporary economics without them. Furthermore, arguing for greater institutional independence and differentiation for the social science wing becomes harder if one cannot adequately explain what this is as **an** entity, including its basis for internal cohesion and its differentiation from the mainstream wing. While classical categorisation of the complex object of economics is something that can only be done imperfectly, it can also be justifiable and useful. It has been argued here that there is an important dualism within economics that is based on the issue of connections and the ontological presupposition of the economy as an open complex system. It is a conception of reality that is much more compatible with other social sciences than the mainstream's ontological position. It is also more compatible with the concept of pluralism. For these reasons it provides support for the finding that the prospects for a plural economics are much greater outside traditional centres of economics teaching, and that social science faculties provide an inherently more compatible intellectual environment.

The chapter also argued the case for the superiority of the term 'political economy' to describe a pluralist social science orientated economics. It was argued it was well suited to covering the full span of the social science wing; was more comprehensible to the wider world; drew usefully on the rich tradition of classical political economy; and is geared to facilitating linkages with other social sciences. While the term 'heterodox economics' may still be useful for internal purposes within the discipline, it seems somewhat problematic for our dealings with students, other academics and the wider world.

6 The economics curriculum in Australian universities

“The 1960s and 1970s were the glory days for the study of tertiary economics in Australia. However, demands for universities to teach relevant, useful, and vocationally orientated degrees increased in the 1970s, and in response universities developed business programs that taught newer fields such as finance, accounting, and marketing. Many of the new degrees contained few compulsory economics subjects and required still fewer economics electives. Economics programs then faced real competition for students by substitutes whose focus was on applications and real-world relevance and whose job market prospects were alluring. Academic economists responded poorly. After denying the shift in demand, they responded by making minimal changes and by promoting the discipline’s rigor. Enrolments declined. Economics, in effect, committed academic suicide. Rather than reacting to the new competition, economists remained inert. Instead of responding by producing a better teaching and learning product and marketing the degree as vocationally useful, they blamed students’ poor choices. As a case study on how not to respond to the market, economists became their own best example” (Round & Shanahan 2010 pp.425-426).

6.1 Introduction

This chapter outlines the recent evolution of the economics curriculum in Australian universities between 1980 and 2011. It reveals that the Australian university economics curriculum is not plural and the trend is away from pluralism. As such, it provides the empirical support for the second key finding of this thesis: that the trend in the economics curriculum is steering away from pluralism towards narrowness (1.3.2). The chapter initially focuses on the decline in the number of economics departments and economics degrees within Australian universities, with an analysis of some of the reasons why this has occurred. The focus then turns to examining the content of the economics curriculum. While the survey evidence clearly shows that the Australian economics curriculum is narrow, and that it has become narrower since 1980, it is also demonstrated that a pluralist political economy, denied a place in traditional centres of economics teaching, has increasingly found a home for itself in faculties of arts and social sciences. Such evidence provides clear support for the fourth key finding of this thesis: that the prospects for a pluralist economics rely on greater integration with faculties of social science (1.3.4)

6.2 Creating the datasets

I initially undertook some brief survey work about the recent evolution of the curriculum when developing the proposal for this thesis. This preliminary work was undertaken to ensure that I had a viable thesis topic. The early survey work was useful to me, but is not part of the final thesis because it was not sufficiently systematic or comprehensive. The survey work to be discussed was undertaken from January to November 2011. This long time period was due to the time-consuming nature of finding and analysing thousands of subjects. As there was a need to ascertain the historical trend in regard to pluralism, I surveyed the curriculum for the years 2011 and 1980. The year of 1980 was chosen as the historical reference point because the 1980s are usually nominated as the time when mainstream research purportedly started to exert its influence over the discipline (Colander, Rosser & Holt 2004; Coyle 2007; Davis 2007, 2008; Davis & Dolfsma 2008).

The survey methods for each dataset were slightly different. The 2011 data was mainly acquired via inspecting the websites of each of Australia's 39 universities (The universities are listed in Table 6.2.1) and accessing online versions of student handbooks and then collating subject listings and descriptions. In instances where this approach was not fruitful or reliable, I contacted individual departments. The 1980 dataset was procured through surveying the online library catalogue of the 19 Australian universities that existed in 1980 (these universities are listed in Table 6.2.2) to locate digitised versions of university handbooks, calendars and student guides. In three instances, the handbooks had been digitised and were available for immediate download. In all other cases, I logged a request with La Trobe University's library to arrange for the relevant documents to be scanned. In each case the request that I logged was for a list of economics subjects and subject descriptions for all undergraduate and postgraduate subjects in economics. Getting all the universities to respond to this request took some time and effort, and I again thank Jonelle Bradley at La Trobe University Library for her help and persistence.

Table 6.2.1 Universities in Australia 2011

University Name	Code	Location	Year
Australian Catholic University	ACU	NSW	2011
University of Adelaide	ADL	SA	2010
Australian National University	ANU	ACT	2011
Bond University	BND	QLD	2010
University of Ballarat	BRT	VIC	2011
Charles Darwin University	CDU	NT	2011
Central Queensland University	CQU	QLD	2011
Charles Sturt University	CSU	NSW	2010
Curtin University	CTN	WA	2011
Deakin University	DKN	VIC	2011
Edith Cowan University	ECU	WA	2011
Flinders University	FLS	SA	2011
Griffith University	GRH	QLD	2011
James Cook University	JCU	QLD	2011
La Trobe University	LTU	VIC	2011
University of Melbourne	MELB	VIC	2011
Monash University	MON	VIC	2010
Macquarie University	MQU	NSW	2010
Murdoch University	MRD	WA	2010
University of Newcastle	NEW	NSW	2011
Queensland University of Technology	QUT	QLD	2010
RMIT University	RMIT	VIC	2011
Southern Cross University	SCU	NSW	2011
Swinburne University of Technology	SWIN	VIC	2011
University of Sydney	USYD	NSW	2011
University of Tasmania	TAS	TAS	2010
University of Canberra	UCA	ACT	2011
University of Notre Dame Australia	UND	WA	2011
University of New England	UNE	NSW	2011
University of New South Wales	UNSW	NSW	2010
University of Wollongong	UOW	NSW	2011
University of Queensland	UQ	QLD	2011
University of South Australia	USA	SA	2011
University of the Sunshine Coast	USC	QLD	2010
University of Southern Queensland	USQ	QLD	2011
University of Technology Sydney	UTS	NSW	2011
University of Western Australia	UWA	WA	2011
University of Western Sydney	UWS	NSW	2011
Victoria University	VU	VIC	2011

Table 6.2.2 Australian universities in 1980

University	Code	Location
University of Adelaide	ADL	SA
Australian National University	ANU	ACT
Deakin University ¹³	DKN	VIC
Flinders University	FLS	SA
Griffith University	GRH	QLD
James Cook University	JCU	QLD
La Trobe University	LTU	VIC
University of Melbourne	MELB	VIC
Monash University	MON	VIC
Macquarie University	MQU	NSW
Murdoch University	MRD	WA
University of Newcastle	NEW	NSW
University of Sydney	SYD	NSW
University of Tasmania	TAS	TAS
University of New England	UNE	NSW
University of New South Wales	UNSW	NSW
University of Wollongong	UOW	NSW
University of Queensland	UQ	QLD
University of Western Australia	UWA	WA

¹³ Deakin University was the only university in 1980 that did not offer at least one subject in economics in that year.

6.3 Possible limitations of the data

In undertaking this primary research I attempted, as much as was practical, to compile an accurate and fair summation of the curriculum in both 1980 and 2011. However, no dataset of this nature can be perfect, and it is important to identify where the possible limitations might lie.

It is possible that some subjects contained more heterodox content than was apparent from the subject title and subject description. Such a situation may have been triggered by a heterodox economist not wanting to court trouble by openly teaching a political economy subject. Such a staff member would be, to use Earl and Peng's term (2012), adopting a strategy of operating under the radar. While this may have occurred, it is unlikely that this problem would be so widespread as to badly distort the survey's aggregate findings.

Another possible limitation of the data that is specific to the 1980 dataset arises from the risk that library staff in some universities did not comprehensively meet my request for a full list of economics subjects and economics subject descriptions. However, the material that was sent did seem comprehensive. If there were gaps, the most probable instances would be in missed postgraduate subjects, or of economics subjects in non-business faculties not being identified. Again, it seems improbable that this could have occurred on a widespread basis: economics subjects taught outside business faculties were few in 2011, and in the 1980 the greater breadth and pluralism of economics departments would probably make it less probable that broader content would be established outside economics departments. The low number of post-graduate subjects in the 1980 data is less likely to reflect a gap in the data than to reflect the simple fact that there were much fewer postgraduate subjects being offered: Masters and PhD studies in economics, if they were offered at all in 1980, were usually by 100 per cent research.

6.4 Location of economics teaching

It is useful to start the analysis by looking at the location of economics teaching and the actual status of economics within Australian universities. It is quite clear that economics is now much less autonomous and significant than in 1980. Tables 6.4.1 and 6.4.2 clearly reveal that faculties of economics and departments of economics are now rarities, largely replaced by entities such as faculties of business and schools of business.

Table 6.4.1 Location of economics teaching in Australian universities in 2011

Code	Faculty	Department
ANU	College of Business & Economics	None
UCA	Faculty of Business & Government	School of Economics
UNE	Faculty of the Professions	School Business Economics & Public Policy
CSU	Faculty of Business	None
MQU	Faculty of Business & Economics	Department of Economics
UNSW	Australian School of Business	Department of Economics
UOW	Faculty of Commerce	School of Economics
ACU	Faculty of Business	None
SCU	Business & Law	Southern Cross University Business School
NEW	Faculty of Business & Law	Newcastle Business School
SYD	Faculty of Arts	Dept Economics & Dept Political Economy
UWS	College of Business	School of Economics & Finance
UTS	Faculty of Business	School of Finance & Economics
CDU	Faculty of Law, Business & the Arts	School of Law & Business
BND	Faculty of Business, Economics & Sustainable Dev	School of Business
QUT	Faculty of Business	School of Economics & Finance
USC	Faculty of Business	None
UQ	Faculty of Business Economics & Law	School of Economics
CQU	Faculty of Arts, Business, Informatics & Education	School of Commerce & Law
GRH	Business & Commerce	Dept of Accounting, Finance & Economics
JCU	Faculty of Law, Business & the Creative Arts	School of Business
USQ	Faculty of Business	Accounting Economics & Finance
ADL	Faculty of the Professions	School of Economics
FLS	Faculty of Behavioural & Social Sciences	Flinders Business School
USA	Division of Business	School of Commerce
TAS	Faculty of Business	School of Economics & Finance
MON	Faculty of Business & Economics	School of Economics
RMIT	Faculty of Business	School of Economics, Finance & Marketing
LTU	Business, Economics & Law	School of Economics
SWIN	Faculty of Business & Enterprise	Accounting, Economics, Finance & Law
DKN	Faculty of Business & Law	Accounting Economics & Finance
BRT	School of Business	None
MELB	Faculty of Business & Economics	Economics
VU	Faculty of Business & Law	School of Economics & Finance
MRD	Murdoch Business School	None
ECU	Faculty of Business & Law	School of Accounting, Finance & Economics
UND	School of Business	None
UWA	School of Business	None
CTN	Curtin Business School	None

Table 6.4.2 Location of economics teaching in Australian universities in 1980

University	Faculty	Department
Australian National University	Faculty of Economics	Department of Economics*
University of Newcastle	Faculty of Economics & Commerce	Department of Economics
University of Sydney	Faculty of Economics	Economics
University of Wollongong	Unclear ¹⁴	Unclear
University of New England	Faculty of Economic Studies	Department of Economics*
Macquarie University	Unclear	Unclear
University of New South Wales	School of Economics	Department of Economics*
Griffith University	Faculty of Arts	Department of Asian Studies
James Cook University	Unclear	Department of Economics
University of Queensland	Faculty of Commerce & Economics	Department of Economics
Flinders University	Unclear	Unclear
University of Adelaide	Faculty of Economics	Department of Economics
University of Tasmania	Unclear	Department of Economics
University of Melbourne	Faculty of Economics & Commerce	Department of Economics*
Deakin University	Economics not taught in 1980	Economics not taught in 1980
La Trobe University	School of Economics	not applicable
Monash University	Faculty of Economics	Department of Economics*
Murdoch University	Unclear	Unclear

¹⁴ In this table the use of the term 'unclear' denotes that I was unable to be fully certain of the faculty and departmental structure.

Economics is now only a minor discipline in Australian Universities. This is evident from the fact that there are no longer any faculties of economics. Furthermore, only ten of thirty-nine universities can claim to have a department or school that is entirely dedicated to the teaching of economics (see Table 6.4.1). Of the universities that do have departments of economics, six are from the Group of Eight (Go8), where size, wealth and prestige can better allow for the existence of specialised departments. The most common configuration is for economics to be spliced together with other disciplines such as finance and accounting, or, alternatively, to be absorbed into a school of business.

The current lack of disciplinary autonomy, prestige and power is in marked contrast to the situation in 1980. Table 6.4.2 shows that at least ten out of the 18 universities that existed in 1980 had economics departments. Five of these (which are marked with an asterisk in the table directly above) also had dedicated departments of economic history. Furthermore, the table 6.4.2 reveals that in at least six instances, entire faculties were described as a 'Faculty of Economics'.

6.5 Universities offering an undergraduate degree in economics

The flagship degree in an economics department is usually understood as being the bachelor of economics. This undergraduate degree has not fared well over recent decades. Table 6.5.1 reveals that fewer than half of Australia's universities (16 out of 39) consider it financially viable, or intellectually warranted, to offer a Bachelor of Economics.

Table 6.5.1 Universities offering a bachelor of economics degree in 2011

University Name	Faculty	Department
Australian National University	College of Business & Economics	None
University of Canberra	Faculty of Business & Government	School of Economics
University of New England	Faculty of the Professions	School of Business Economics & Public Policy
Macquarie University	Faculty of Business & Economics	Department of Economics
University of New South Wales	Australian School of Business	Department of Economics
University of Sydney	Faculty of Arts	Department of Economics
University of Western Sydney	College of Business	School of Economics & Finance
University of Queensland	Faculty of Business Economics & Law	School of Economics
University of Adelaide	Faculty of the Professions	School of Economics
University of Tasmania	Faculty of Business	School of Economics & Finance
Monash University	Faculty of Business & Economics	School of Economics
La Trobe University	Law & Management	School of Economics & Finance
University of Melbourne	Faculty of Business & Economics	Department of Economics
Victoria University	Faculty of Business & Law	School of Economics & Finance
Murdoch University	Murdoch Business School	None
University of Western Australia	School of Business	None

Table 6.5.2 reveals that seven Australian universities do not even offer a major in economics in their business degrees. The current situation is in contrast to the situation in 1980. Table 6.5.3 shows that an economics degree was offered at least 14 of the 18 universities that existed at that time.

Table 6.5.2 Universities without a major in economics in a business degree

University Name	Faculty	Department
Charles Sturt University	Faculty of Business	None
Australian Catholic University	Faculty of Business	None
Bond University	Faculty of Business, Economics & Sustainable Development	School of Business
University of the Sunshine Coast	Faculty of Business	None
Central Queensland University	Faculty of Arts, Business, Informatics and Education	School of Commerce & Law
Flinders University	Faculty of Behavioural and Social Sciences	Flinders Business School
University of South Australia	Division of Business	School of Commerce

Table 6.5.3 Universities offering a bachelor of economics degree in 1980

University	Faculty	Department	Economics Degree
Australian National University	Faculty of Economics	Department of Economics*	Yes
University of Newcastle	Faculty of Economics & Commerce	Department of Economics	Yes
University of Sydney	Pending	Pending	Yes
University of Wollongong	Unclear	Unclear	Yes
University of New England	Faculty of Economic Studies	Department of Economics*	Yes
Macquarie University	Unclear	Unclear	Yes
University of New South Wales	School of Economics	Department of Economics*	Yes
Griffith University	Faculty of Arts	Department of Asian Studies	No
James Cook University	Unclear	Department of Economics	Yes
University of Queensland	Faculty of Commerce & Economics	Department of Economics	Yes
Flinders University	Unclear	Unclear	Unclear
University of Adelaide	Faculty of Economics	Department of Economics	Yes
University of Tasmania	Unclear	Department of Economics	Yes
University of Melbourne	Faculty of Economics & Commerce	Department of Economics*	Yes (commerce)
Deakin University	Economics not taught in 1980	Economics not taught in 1980	No
La Trobe University	School of Economics	not applicable	Yes
Monash University	Faculty of Economics	Department of Economics*	Yes
Murdoch University	Unclear	Unclear	Unclear

6.6 The quiet death of Australian economics

Given the collapse in disciplinary status and autonomy, it is small wonder that some have written of the 'quiet death' of Australian¹⁵ economics (Millmow 2000, 2002, 2004, 2009). While economics was much stronger in Australia in 1980 than today, 1980 does not represent any particular high water-mark for the discipline. Ward (2001) asserts that the high point of strength, power and prestige for Australian economics departments was actually in the 1960s. He describes the 1960s as a 'golden age', characterised by abundant strong enrolments in economics degrees and a curriculum that was diverse not just in the amount of choice of electives, but in the mandatory core of an economics degree (Ward 2001). This situation was, in part, a reflection of the high standing that economists had at this time, a standing that came in part from the long boom in the world economy that economists were perceived as having helped to engineer. Garnett (2005) goes so far as to say economists were 'covered in glory' at this time.

The decline of economics in universities is in one sense surprising. Economics is (or at least should be) an area of knowledge that seeks to explain how goods and services are produced and provided (or not provided) to a society. Such a focus is hardly a boutique or esoteric concern: poverty, inequality, unemployment, inflation and many other phenomena have a very strong economic dimension to them. The quality of economic analysis, via its influence on economic policy, directly affects the welfare of all individuals in a society. A discipline that focuses on understanding concerns that are so central to society should not have become so marginalised. Why did this occur?

Superficially, the most obvious and basic cause for the decline of economics departments is a failure in sustaining enrolments into economics degrees and in maintaining an adequate representation of economics subjects in other degrees in the business and humanities areas. There can be no doubt that such declines have occurred. Matchett (2009) cites Department of Education, Employment and

¹⁵ I should emphasise at this point that what has occurred is not a peculiarly Australian phenomena, as universities in countries such as the United Kingdom and the United States have reported similar declines (Brasfield et al. 1996; Lewis & Norris 1997).

Workplace Relations statistics that show that only 3,500 students graduated with an economics major each year during the previous ten years. This is all the more dramatic when it is contrasted with the 288,000 undergraduates who instead focused on management and other commerce subjects in 2007.

It is unsurprising that a loss of enrolments has damaged economics departments and economics degrees. The real question is: what explains the drop in enrolments? Answering this question is much more involved and there is not universal agreement on the answer. It is useful at this point to put the explanatory weight on three inter-related factors: student dissatisfaction with the curriculum, increasing choice available to students, and an increasing desire from students for very narrow vocational studies. Each of these factors is now discussed in turn.

6.7 Poor perception of the curriculum

To blame the curriculum for the decline in enrolments comes quite easily to people such as myself who are critical of the current curriculum on intellectual grounds. However, there is good evidence to support the proposition that many students do not think highly of the economics curriculum. Guest and Duhs (2002) point out that economics is a subject that is rated very poorly by students. Ward et al., drawing on survey evidence, argue that:

Economics is poorly perceived by potential students. It is viewed as: abstract and theoretical, difficult to study, rigorous and dull, thus reducing interest, unexciting, boring and lacking intrinsic interest, not relevant to "real world" or "real life" issues, lacking an ethical dimension, not being associated with a high profile profession or group of professions and reducing career prospects (Ward, Crosling & Marangos 2000 p.76).

Stilwell (2006b) points to the dramatic attrition rate in economics. Many hundreds of students undertake first-year economics (usually on the basis that doing first-year economics is compulsory for business based degrees), yet this huge catchment of students results in only a handful students undertaking honours degrees in economics. Furthermore, Stilwell (2011b) draws on student survey responses undertaken within the Faculty of Economics and Business at the University of Sydney in 2003-7. Student evaluations for political economy produced the highest average scores for 'overall course satisfaction' in the

faculty. By contrast, orthodox economics subjects produced the lowest average scores in the faculty. Subjects taught by other departments in the faculty such as accounting, finance, government, industrial relations, marketing and econometrics received scores between the two extremes of political economy and economics. The differences in ranking between economics and political economy were most extreme at the first-year level. That the polarisation of responses peaked at the first-year level probably indicates that subsequent self-selection occurs (the students with the most negative reaction to first-year orthodox subjects simply do not continue with the study of economics). The positive student feedback for political economy indicates that many students are not uninterested in economics per se, just with neoclassical economics.

While Stilwell clearly puts the blame on the curriculum, he makes an interesting claim about how enrolments are further damaged by the orthodox curriculum requiring a teaching style, based on authority and coercion, that he feels is out of step with any defensible philosophy of teaching (Stilwell 2006b). Such a teaching style is a further disincentive to undertake further study in economics. Stilwell's view is based upon the insight that neoclassical analysis is tightly deterministic and relies on unreal assumptions, and so can all too easily induce bad approaches to teaching. However, there is no iron law linking teaching content and teaching style. For example, the better introductory orthodox textbooks such as Goodwin et al. (2004) show that orthodox content is not necessarily so wedded to authority and coercion.

Enrolments in upper-level courses are profoundly influenced by what is taught in first-year. It not only sets up problems of intellectual path-dependence whereby students are less open or less able to grasp alternative approaches, but it strongly determines how many students, and what type of students, go on to study economics:

What is taught in the introductory course strongly influences student self-selection into (or out of) continued work in economics, and is the first step in socialization of the next generation of economists. Who will you inspire to go on in economics—the student who is concerned about real world economic issues and committed to trying to make the world a better place, or the student who is primarily attracted by the elegance of models and

feels a special affinity to equation solving and curve shifting? (Nelson 2009)

The first-year subjects appeal to the small number of students who actively enjoy utilising neoclassical methods. It selects *against* the larger group of students who would have an appetite and a capacity for political economy, particularly if they are more left-leaning in ideological orientation. As Stanford (2003 p.3) has noted, “most progressive-thinking students flee in panic from economics after their first mind-numbing encounter.” The project of reforming the economics curriculum may be largely won or lost on the issue of the content of the first-year curriculum. Basic principles of marketing suggest that the most profitable way to cope with the heterogeneous interests and abilities of the student body is to start by showcasing the heterogeneous nature of their economics. This suggests a potential win-win for both sides of the discipline (not to mention students) that could occur if the first-year subjects were genuinely ‘introductory economics’, rather than ‘introductory neoclassical economics’. Unfortunately, the seemingly compelling logic of such arguments do not usually resonate with orthodox economists, according to Round and Shanahan. Their point about economics departments committing “academic suicide”, quoted at the beginning of this chapter, seems applicable in this respect (Round & Shanahan 2010 pp.425-426).

Part of the problem of getting orthodox economists to compromise on first-year courses, or core courses in general, is that committed neoclassical economists see their work as marking the boundaries of economics itself:

What is regarded as the legitimate core ‘economics’ curriculum, certainly for the first two undergraduate years (and analogously for the postgraduate core curriculum), is strikingly homogeneous, much more so than for any of the other social sciences. To ‘do’ economics is to teach that (though one of course may do so in a more or less critical manner). But one may regard parts or much of it as rubbish. If so, heterodoxy has to be taught in addition to the conventional curriculum, not as a substitute. The consensus does not legitimise the conventional curriculum; it just means you can’t be in ‘Economics’ if you’re not acknowledging the mainstream curriculum; you’re doing something else (Aspromourgos in Thornton 2011k p.1)

From this perspective, it is like saying, 'student enrolments in German are falling, we should respond by teaching them French'. For the lecturers in German, such a suggestion is probably going to be seen as a non-solution, particularly if they can't speak French. Orthodox economists tend to assume that content is largely constant, particularly at the undergraduate level. If innovation is to be pursued at all, the emphasis is usually on developing new teaching methods and utilising new technologies to sell the established curriculum (Becker, Watts & Becker 2006; Jain 2006).

Could the application of better teaching methods to the orthodox curriculum arrest the steep decline in enrolments? Probably not, but it has to be conceded that neoclassical economics is not a product that is entirely incapable of being sold to students: good salesmanship can sell most products. Departments can, and sometimes do, roster their most dynamic lecturers, who utilise the best teaching approaches, to teach introductory economics. John B. Taylor of Stanford University, the author of an established and orthodox introductory micro and macro textbook, claims that every year he teaches the introductory economics courses about which students are "wildly enthusiastic" (Taylor & Frost 2009 p.iii). While I would not use the words 'wildly enthusiastic', I have found in my own experience at both Monash and La Trobe Universities that orthodox lecturers can on occasion receive very positive student feedback if they are particularly dedicated, dynamic or charismatic. However, it is important not to ascribe too much to this. That enrolments in economics are dwarfed by other business subjects, and that so few students go on to honours in economics, suggests that even the most charismatic and gifted orthodox lecturers cannot usually make any dramatic impact on enrolments.

6.8 Increasing competition and choice from other disciplines

Ironically, the golden age for economics departments was largely sustained via a lack of competition and choice. Economics departments have generally proclaimed to students (and to the world) the merits of consumer sovereignty, the desirability of competition and the evils of monopoly, yet economics departments prospered when student degree choices were very limited and when their own administrative command was greatest. In 1980, degrees such as a Bachelor of Management or Bachelor of Business did not usually exist, or were yet to gain

any real currency with employers. Furthermore, economics departments usually had the institutional power within faculties, and often other business disciplines did not have their own institutional base. It was sometimes the case (for example at the University of Newcastle in 1980), that economics departments taught subjects in accountancy, finance, industrial relations and management. This was akin to holding the property rights for these other disciplines; thus popular subjects in accountancy or management could even be used to cross-subsidise economics teaching and economics research and thus strengthen economics departments.

The scope for monopoly, rent capturing and cross-subsidisation meant that economics departments had the capacity to run a wide roster of electives, as well as to stipulate the study of a large number of subjects. Ward (in Thornton and Millmow 2008) emphasises that the curriculum was previously *prescriptively* broad, with many compulsory economics subjects, including history of economic thought and economic history. Interdisciplinarity was also common; indeed it too was often imposed.¹⁶ For example, at Monash, students undertaking a degree in economics not only had to take a broad range of subjects from within economics, but also had to undertake first-year politics and first-year history in the Arts faculty (Ward 2001). This requirement was subsequently removed due to pressure from other business disciplines. Ward recalls:

What happened is that the economics faculty, which by then was then called economics, commerce and management, decided to make management compulsory. This led to politics and economic history becoming optional for first-year and then over time the business side of things increased. It was all based on coalitions and deal-making. Management became a compulsory subject which then damaged the enrolments for economic history and politics in particular (Ward in Thornton & Millmow 2008 p.7).

¹⁶ This mandatory pluralism and interdisciplinarity was not unique to economics. It also occurred in other disciplines and other countries, such as the US and UK.

The ability of economics departments to set the rules of the game is not as strong as it once was, yet administrative command is still important. While the compulsion to make business students do economics is nearly always limited to first-year micro and perhaps first-year macro, the sheer number of business students undertaking mandatory introductory economics provides a critical income stream that allows for the survival of many specialist economic subjects; it is the consolation prize that has come from losing out to the business degree. First-year micro and macro are usually required in any business degree, though at some universities other business disciplines have insisted on a single semester subject that combines the study of both micro and macroeconomics. Although economics departments can try to resist these types of combined subjects, they increasingly lack the necessary power and influence to be successful in this resistance.

Another issue is that other business disciplines are reluctant to relinquish much of the course grid of business-based degrees for the study of economics. Part of the problem is that business disciplines such as management, marketing and accounting are seldom intellectually well-disposed towards orthodox economics. For example, management academics seldom assume that people are fully rational, self-interested utility maximisers with stable and exogenous preferences interacting under conditions of complete contracting to reach an equilibrium outcome. Nor are they likely to warm to seeing the essence of a firm's operations as being about equating known marginal revenue with known marginal costs and then looking to a given and known market demand. Similarly, marketing academics are not prone to assume that people have stable and exogenous preferences and are fully informed — indeed, they would be unlikely to warm to such an assumption, as it means that advertising and marketing would not be required.

There is also a more basic issue that departments compete against each other for resources such as office space, internal research funds and senior staff positions. Departments are prone to see the gains of other departments in zero-sum terms, and distrust and jealousy can be easily invoked. Faculties themselves can be characterised by these same issues of competition and distrust. All of these factors help to explain why economics subjects have only a minor presence in the modern business degree.

6.9 Vocationalism

Another factor that has affected the curriculum, particularly the breadth of the curriculum, is a growing concern among students that they enrol in degrees that have a very sharp vocational focus. A vocationally focused degree is not a problem in itself: society clearly needs to provide its citizens with technical and vocationally specific knowledge. Economics, to some extent, is one example of this. The challenge is to maintain a balance and plurality between different types of knowledge. Too much emphasis on narrowly vocational knowledge becomes self-defeating, even in terms of meeting workplace needs, let alone as a way of meeting larger social objectives (see Chapter 12 for a more detailed discussion of what employers require). Students, wisely or unwisely, are often attracted to very specialised degrees, such as a degree in tourism, or a degree in sport and recreation management. It is not hard to see why this is so: if you want to work in a particular industry, having a degree that ostensibly equips you to work in exactly that industry sounds astute. However, it is only astute if there is evidence that such a degree is recognised by employers in that industry as being more vocationally useful than other more general degrees. Whether most students seek such evidence before enrolling is less than certain.

As is explained in Chapter twelve, there is some evidence that indicates that employers are not so much interested in highly focused degrees, as much as they want graduates to have developed generic skills, such as the ability to communicate clearly and think critically, though the evidence on this point is somewhat mixed (see Chapter 12). In any event, such generic skills are at least as likely to be developed in more generalist degrees as more vocational degrees. However, this message does not appear to have gotten through to undergraduates in cases where the excessive vocational focus is not just limited to degree choice, but extends to the choice of individual subjects and can cause students to shun subjects they are otherwise interested in. Ward recalls:

One of my best students in introductory micro (which was taught in a broadening way) came to see me after the semester and said he loved the subject, but could not do my other subject, Comparative Economic Systems, because 'it would look embarrassing on my CV.' I said, 'well that's your choice' (Ward in Thornton & Millmow 2008 p.16).

Ward responded to declining enrolments in comparative economic systems by changing the name of the subject from 'Comparative economic systems' to 'Economics systems and globalisation.' The inclusion of the rather amorphous buzz-word of 'globalisation' gave the subject a contemporary, vocational and business aura. Enrolments immediately rose significantly, even though course content remained almost the same.

The problem of excessive vocationalism needs to be also understood as a larger university-wide problem. Australian universities have never been particularly adept or committed to balancing vocational and broader knowledge. Macintyre (2010) points out that when Australia's first universities were established in the 1850s, they sought to provide a liberal education, but when the initial response was disappointing they quickly changed to a vocational focus, providing training in law, medicine and engineering. Universities need to be more committed and become better skilled at making a case for the value of studying the arts and social sciences, explaining why broader knowledge actually has a synergistic relationship with more vocational and technical knowledge (Armstrong 2011). Such a broader sectoral push from the social sciences would support a broader economics curriculum, as students would not feel the tyranny of having to make every single subject they undertake appeal to misplaced concepts of what will bring them career security and success in life.

The narrow vocational obsession that can dominate student choice raises important questions about how much choice students should be given and how much universities should cater to students' initial preferences and prejudices (as opposed to seeking to alter those prejudices and preferences). In matters of educational choice, it seems foolish, passive and lazy to assume that customers are always well informed about the options in front of them. Varoufakis goes so far as to say that, not only is the customer not always well informed, but is wrong by definition:

Good education is expensive. The trouble is that those who do not have it cannot possibly value it. 'Its customers are', by definition, 'always wrong'. It is like wisdom: its value cannot even be approximated by the foolish. In this sense, a good education may be the ultimate good, but, alas one that cannot possibly be a viable commodity (Varoufakis 2009 p.48)

While this may overstate the problem, it is true that universities, and society itself, run obvious dangers in relying on the “collective wisdom of seventeen year-olds” to determine their subject offerings (Johnson cited in Cervini 2011a p.3). The transformational nature of learning means that student preferences and beliefs can evolve rapidly. When properly conceived, restricting choice and mandating subjects can be a good thing. McCalman *et al.* in their assessment of a new breath subject at Melbourne University, assert that:

Education is a domain where customer preferences, while important, cannot be permitted to rule. Discipline experts, in professional and general education, are expected by society to be able to decide what it matters to know. That does not mean that the customers’ responses are not essential to the task of improving teaching and learning. However, at some point, despite student hostility, we have to say that ‘this is something that you need to know if you are to function in a complex, difficult world’ (McCalman, Muir & Soeterboek 2008).

Similarly, when I interviewed Ward (Thornton and Millmow 2008) about his own undergraduate education at Melbourne University in the 1950s, graduate education at Berkeley University in the 1950s and 1960s, and his forty years of teaching economics at Monash, he stated that:

The point is you have to have some restriction on people’s choice. Educators do know more than the students and their parents. There are quite often subjects that you would never have chosen, I mean I was compelled to do virtually everything when I was at Melbourne, there was very little choice. Even when I was a post-graduate student at Berkeley I had to study economic history. If you never get exposed to it before university how do you know what it is? You are thus likely come to university and study something like management, which lacks analytical rigour, or marketing. The economics that is covered is narrow and technocratic. They will do all right in life, but I don’t think they are going to be visionaries. I do think we do need a bit of restriction on choice for an 18 year old as they just can’t make informed choices (Ward in Thornton & Millmow 2008 p.14).

Of course, the case for imposing a curriculum regardless of its popularity becomes much weaker if the curriculum is also intellectually incoherent, narrow and oppressive.

Universities need to get better at making the case for more general and less narrowly vocational courses. Universities currently have extensive marketing departments that spend big budgets taking out block ads that usually say nothing beyond meaningless catch-phrases. Some of this money and effort could be allocated to conveying meaningful ideas and persuading students of the professional and personal enrichment that results from studying broader subjects.

6.10 Anti-intellectualism

Another factor that accentuates the current excessive vocationalist focus of students is that of a general cultural attitude of anti-intellectualism. If students see little intrinsic worth in education then it is unsurprising that when they choose degrees and choose subjects they will gravitate towards those that (1) are easy to pass and (2) raise their chances of securing a well paid job. Anti-intellectualism appears to be an increasing problem in Australian society. Simon Marginson, Professor of Education at the University of Melbourne, argues that the hollowing out of all levels of education funding, coupled with students working part-time jobs and having little time to put into their studies, plus universities being less focused on maintaining teaching quality and wanting to maximise their size and income, have lead to a situation where:

Over the past couple of decades, there has been growing cynicism over whether education is meaningful – particularly in working-class cultures. It is dismissed as 'just a piece of paper', and 'knowledge is obsolete', and that sort of stuff...Not all people think it is smart to learn; some feel it's not going to help them much and they think people who do well at school are wankers. It is a view pretty commonly felt and this is not terribly conducive to having a highly educated population (Marginson cited in Strong 2010p.11).

Individuals who *completely* embrace such anti-intellectual thinking and attitudes are unlikely to end up in university (though in my own experience it is not uncommon to see such attitudes at the first year level). The more common

problem within universities is that these attitudes are partially embraced by many students. This presents particular problems to subjects that require a lot of reading, reflection and discussion – subjects like economic history, history of economic thought and political economy.

6.11 The Economics curriculum

The focus now moves from the location of economics teaching and the level of economics enrolments to the curriculum itself. In terms of basics facts and figures, a total of 2,565 subjects were identified and categorised as subjects in economics (936 subjects for 1980 and 1,629 subjects¹⁷ for 2011). The subjects were classified in accordance with positions developed in Chapter five. Three broad categories and twelve subcategories were created. To avoid the problem of double counting, each subject was categorised on the basis of what its main emphasis was. For example, if a subject was primarily an economic history subject it was classified as economic history, even if it contained some minor component of, say, development economics. The categories are presented in table 6.11.1 with additional explanations about each category to follow. The findings for each category and subcategory are presented in tables 6.11.2 and 6.11.3.

¹⁷ Earlier research put the number of economics subjects offered in Australian universities at 1,566 (Thornton 2012a). However, subsequently another 63 subjects were discovered taking the total to 1,637. These extra subjects have had virtually no impact on aggregate findings but are included now for the sake of completeness.

Table 6.11.1 Subject categories

Category	Sub Category
Mainstream (orthodox) economics	Neoclassical economics
	Econometrics
	Mathematical methods
Political economy (economics as a social science)	Economic history
	History of economic thought
	Heterodox economics
	Development economics
	Comparative economic systems
Other	Modern hybrid economics
	Eclectic ¹⁸
	Open ¹⁹

¹⁸ Eclectic (ECL). This category was reserved for a tiny group of subjects (21 out of a total of 2,573) that were at risk of otherwise becoming unfairly pigeonholed. These subjects were in areas such as Islamic banking and ethical practice, or were obviously interdisciplinary.

¹⁹ A subject was classified as open (OPEN) if it was a directed reading subject, or similar type of subject. Such subjects (19 instances in 1980 and 68 instances in 2011) could conceivably focus on any area of economics that the student and the lecturer wished to pursue.

Table 6.11.2 Economics curriculum 1980 to 2011 by category

Category	1980	1980%	2011	2011%	% change
Mainstream Economics	621	66.3	1307	80.2	+13.9%
Political Economy	288	30.8	229	14.1	-16.7%
Other	27	2.9	93	5.7	+2.8
Total	936		1629		

Table 6.11.3 Economics curriculum in 1980 and in 2011 via subcategory

Subcategory	1980	%	2011	%	Change
Comparative Economic Systems (CES)	22	2.4%	3	0.2%	-2.2%
Development Economics (DE)	39	4.2%	32	2.0%	-2.2%
Economic History (EH)	181	19.3%	84	5.2%	-14.2%
Heterodox Economics (HE)	24	2.6%	94	5.8%	3.2%
History of Economic Thought (EH)	22	2.4%	16	1.0%	-1.4%
Sub Total Political Economy	288	30.8%	229	14.1%	-16.7%
OPEN	19	2.0%	68	4.2%	2.1%
Eclectic	8	0.9%	13	0.8%	-0.1%
Modern Hybrid Economics	0	0.0%	12	0.7%	0.7%
Sub Total Other	27	2.9%	93	5.7%	2.8%
Neoclassical Economics	404	43.2%	1015	62.3%	19.1%
Econometrics	163	17.4%	216	13.3%	-4.2%
Mathematical Methods	54	5.8%	76	4.7%	-1.1%
Sub Total Mainstream Economics	621	66.3%	1307	80.2%	13.9%
Grand Total	936		1629		0.0%

The central finding that emerges from the table 6.11.2 is that mainstream economics, already dominant in 1980 (66.3 per cent of the curriculum), has increased its dominance since this time (currently it constitutes 80.2 per cent of the curriculum). By contrast, the social science wing has declined from 30.8 per cent to 14.1 per cent. This provides very clear support for a key finding of this thesis: that the curriculum is not plural and is becoming less plural (1.3.2).

6.12 Neoclassical economics

Neoclassical economics is defined as it was in Chapter five. To briefly recap, it can be seen as synonymous with the label of orthodox economics, mainstream economics or business economics. It is a category that has a level of internal diversity and its boundaries are somewhat hazy. However, it has a very distinct core: fully rational and informed individuals with exogenous preferences who engage in constrained optimisation to reach equilibrium outcomes. It can be considered as being ontologically distinct from other approaches to economics (Potts 2000).

Table 6.11.3 shows that neoclassical economics, already dominant in 1980 (404 subjects, 43.2 per cent), increased its dominance (1015 subjects, 62.3 per cent). It is extremely rare for core subjects such as microeconomics and macroeconomics to be taught from anything other than a neoclassical perspective. This empirical finding conflicts rather starkly with Colander's assertion that neoclassical economics is dead (Colander 2000b).

The exposition of neoclassical economics has also become more simplistic. The textbooks are, in general, less qualified and nuanced in how ideas are presented. For example, the Australian edition of Mankiw (the world's best selling introductory text) makes a proud virtue of 'teaching the rule, rather than the exception' and avoiding the 'ifs' and the 'buts' (Mankiw, Gans & King 2009 p.xvii). The text is built around Mankiw's 'ten lessons of economics.' Some of these ten commandments are quite dramatic in their overstatement and degree of simplification. These texts are well set out and come with various online resources, but whether they are an intellectual improvement on the texts offered in 1980 is a much more open question (see the next chapter for a detailed discussion of economic textbooks).

The degree to which a neoclassical subject might be informed, even to a small extent, by other perspectives has also decreased. In 1980 there were more instances of an essentially neoclassical subject being broadened by at least some content from the history of economic thought, political economy or economic history. For example, *Economics 1* at Flinders University was the compulsory introductory subject in economics, yet only half of it was neoclassical; the other half was history of economic thought and political economy. Its full subject description captures the fact that it was introductory economics, rather than just introductory neoclassical economics:

This topic is designed for students taking Economics as a basic discipline in either the Arts or Economics degree, or taking Economic History as a basic discipline in their Arts degree. It is designed also to be suitable as a cognate topic for other disciplines and as an elective topic. One section of the topic is a study of the contemporary capitalist economy through an analysis of modern theories of price and income determination. In a second section, Capitalism is considered in a broader historical context through an examination of contemporary perceptions of the economy since the late eighteenth century in the light of economic history. The classical political economists' model of the economy is considered against the background of the Industrial Revolution and later shifts in emphasis in economic thought are placed in a context of economic change (Flinders University 1980 pp.202-203).

Economics 1 was a full-year (two-semester) subject. It is possible that the general move in universities to eliminate full-year subjects and replace them with half-year (one-semester) subjects has also contributed to the narrowing of the curriculum. When a subject like *Economics 1* is converted into a one-semester subject, the neoclassical component is not the content that is discarded. It is the non-neoclassical component that gives way, either being moved into a different subject or, more likely, dropped from the curriculum entirely. It is worth noting that the first-year subjects at Flinders University today are nothing like *Economics 1*. They are orthodox subjects: *Economics for Business*, *Foundation for Quantitative Methods*, *Quantitative Methods* and *Introductory Macroeconomics*.

There are many other examples similar to that of Flinders University. In 1980 at La Trobe University, both first-year microeconomics and macroeconomics had as textbooks Lipsey's *Introduction to Positive Economics* and Samuelson's *Economics*, yet this was balanced by also utilising Hunt and Sherman's *Economics: An introduction to traditional and radical views* as a textbook. In 2011, there was a single text for both micro and macro, the Australian edition of Mankiw's *Economics*. Another example is that second-year microeconomics had both Samuelson and Lipsey as textbooks, but this was counter-balanced by Stilwell's *Normative economics: an introduction to microeconomic theory and radical critiques*. In 2011, the set textbook is Varian. A further example is that second-year macroeconomics utilised Kregel's *The reconstruction of political economy*, Kalecki's *Selected essays on the dynamics of the capitalist economy 1933-1970* and Keynes's, *General Theory*. Today these have been simply replaced a single stock standard neoclassical text: Blanchard and Sheen's *Macroeconomics*.

6.13 Econometrics and mathematical methods

Econometrics and mathematical methods could arguably be subsumed under the category of neoclassical economics. However, mathematical and statistical methods can be utilised in the social science wing of the discipline (Keen 2009). Econometrics increased in absolute terms (163 to 216) but decreased in percentage terms (17.4 per cent to 13.3 per cent). Mathematical methods increased in absolute terms 54 to 76, but decreased in percentage terms (5.8 per cent to 4.7 per cent). It is hard to draw any firm conclusions about these small changes. These slight relative declines may well be counterbalanced by an increasing amount of mathematical content in neoclassical economics, particularly at the post graduate level, but some finely detailed survey work would be needed to test this hypothesis properly.

6.14 Political economy

The next five sub-categories (development economics, comparative economic systems, history of economic thought, economic history and political economy) are grouped, as per Chapter five, under the category of political economy. Chapter five explained that while each of the five categories has some distinct

strands that still share the complicated ontology of neoclassical economics (history of economic thought being the most obvious), all five categories share the tendency towards a complex systems ontology that is at the heart of the social sciences. It has also already been pointed out that political economy is now only 14.1 per cent of the curriculum, a 16.7 per cent decline since 1980; clearly, it is not prospering in its current institutional setting. The status of each of the five strands of political economy will now be discussed.

6.15 Economic history

Economic history (EH) looks at change, including institutional change, in specific economies. It usually has a strong qualitative dimension to it, though descriptive statistics and some quantitative analysis can also occur. The survey results indicate that economic history has experienced the largest single decline of any sub-discipline in the economics curriculum since 1980. In 1980 there were 181 subjects (19.3 per cent); by 2011 this had fallen to 84 subjects (5.2 per cent) – a 14.1 per cent decline.

EH is not a sub-discipline to which most orthodox economists are actively hostile, though it is not usually seen as an essential subject to have on the curriculum, nor is it seen as essential to have economic historians on staff. It is a respectable, rather than prestigious area of economics. On this point, it is relevant to note Samuelson's argument that for economics to become a true science it had to break with history and embrace the ergodic axiom (Samuelson 1970); the increasing dominance of such an avowedly ahistorical economics has not helped the status of economic history. While economic historians are not as marginalised as other groups such as heterodox economists, they usually hold little institutional power within the discipline.

Economic history subjects are now rarely offered as a cumulative sequence. Some insight into why this is so can be gained by a brief example. At La Trobe University we managed (for a few years when the head of department was an economic historian) to offer subjects in economic history from first-year to third-year (this is a much better situation than at most universities). However, this ended in 2012 when the third-year/fourth-year economic history subject was suspended, ostensibly under university-wide policy to reduce subject offerings.

The fact that the subject had healthy enrolments of between 49 and 52 students in the previous two years, and also had very positive student feedback seemed to count for little. The suspension of this subject came off the back of first-year economic history being removed from the compulsory core of the Bachelor of Economics in 2012. The fact that this first-year subject had healthy enrolments was part of the justification for removing it from the core: it was argued the subject could easily survive as a purely elective subject. However, in November 2012 this subject was suspended for 2013, despite having 78 enrolments in 2012. Second-year economic history was also removed from the compulsory core some years earlier, but survives as an elective for the moment. Bit-by-bit the presence of economic history has been eroded, even though unit enrolment numbers were viable and well above the specified minimum of 20 students per subject.²⁰ It is important to note that enrolments in the economic history subjects were higher than some orthodox subjects that continued to be taught. The most recent cuts need to be seen in a context where the school was under pressure to reduce unit offerings, at times had difficulty in appointing new staff, and was also under pressure to limit casual staff expenditure. However, the fact that it was these particular subjects that were removed from being offered suggests the subjects were not seen as being at the core of the curriculum; indeed, it does not seem unreasonable to assume the subjects were sacrificed in an attempt to protect and support the subjects within the neoclassical core.

Another issue is that, even when there is more than one economic history subject on offer, it is very rare that subjects will require another as a pre-requisite. Indeed, it is more common for such subjects to have no pre-requisites at all. While it would be desirable to have a sequence, it is usually too damaging to

²⁰It is relevant to note that the fee enrolments for each undergraduate subject in economics at La Trobe University in 2012 was \$1,224.00 for commonwealth supported places (CSP) and \$2,276.00 for full fee paying students, presuming that CSP and full fee students are ultimately equivalent in revenue to the university, this means that the last offering of third-year economic history brought in revenue of \$111,524.00 and the last offering of first-year economic history brought in \$177,528.00. While central administration takes around 53% of this revenue, it is still hard to imagine how continuing to offer these subjects would not more than cover variable costs and make whatever are the required contributions to fixed and other costs (in excess of the 53 per cent automatically taken for fixed and other costs).

enrolments. Unfortunately, this creates the problem identified by Dean and Dolan whereby “so-called upper-level courses that lack the core prerequisites will almost inevitably become geared to the lowest common denominator. In such cases, the depth of learning for the major is clearly compromised” (Dean & Dolan 2001 p.23). One way to address this problem would to include some economic history content in the first-year economics subjects that are undertaken by the many thousands of students across the country who are obliged to do so as part of their degree. This suggestion is really just reiteration of an argument made earlier in this chapter about the benefits of making introductory economics a genuine introduction to economics (rather than just an introduction to neoclassical economics).

Economic history is perhaps the most inter-disciplinary of all the economics sub-disciplines. Consequently, it is particularly dependent on there being a free trade in students between the business and social science faculties. Indeed, students from the social science faculty usually make up a significant proportion of enrolments and are often the most able students.²¹ If either faculty is inclined to hoard their own students, or feels it must retaliate against another faculty’s protectionist measure, the subsequent restrictions on trade can hit a sub-discipline like economic history particularly hard.

A notable feature of how economic historians have responded to the decline of enrolments is that they have sought to name and rename subjects that are more in keeping with the vocational preoccupations of their students. The word history has regularly been purged from economics history subjects, or at least, leavened with something carrying suitably business or vocational connotations; the words ‘modern’, ‘global’, ‘globalisation’, ‘business’ and ‘contemporary’ are all standard words used to rebrand economic history in the curriculum. Once students are enrolled in these subjects they generally find them rewarding; the issue is of working around their initial prejudices against subjects that are explicitly historical. At Monash University, a subject that looked at the economic history of East Asia since 1945 was cannily titled *Business in Asia*. When I enrolled in this

²¹In chapter ten there will be more analysis and evidence put forward in regards to this question of what faculty the natural constituency for political economy resides in.

subject in 1998 it had 330 students. La Trobe University has followed a similar pattern of playing down the historical and emphasising the modern or global. First year economic history was renamed in 2010 as *History of globalisation* with an immediate improvement in enrolments. Second-year economic history has been called *Modern world economy* since 1992. Third-year economic history is called *Growth and decline in the global economy*. These subjects sound markedly different to the economic history subjects offered at La Trobe in 1980: *The origins of modern industrial society*, *The economic history of Australia since 1788*, *Comparative economic history of the US and USSR*, *Economic history*, *The economic development of Europe 1780-1914*, *Late pre-industrial economies*, *The Chinese economy and its modernisation*, *Economic change in the very long-term*, *The origins of industrialism*. Unfortunately, it is hard to imagine how subjects described in this way would currently attract sufficient student enrolments. In the long term, the prejudice against explicitly badged historical subjects needs to be countered, but as a short-term fix it seems to be an effective option.

6.16 History of economic thought (HET)

HET studies the evolution of economic thought from antiquity to the present. It is a subject that can be taught by orthodox economists or political economists, though it tends often to be taught by those with at least some heterodox sympathies. Practitioners of HET see it as the foundation stone for any sensible understanding of the discipline. In arguing this they are not entirely alone. For example, Lawrence Summers, whatever his other shortcomings, still recognises that the problem with economics is as much to do with what it has forgotten, than with what it is yet to know²² (DeLong 2011).

²² It is indeed a good point, though listening to Summers' address at The Institute for New Economic Thinking where this point was made, it seemed to present, wittingly or unwittingly, a prime example of an economist engaging in what Vernengo calls a double discourse, "that allows some economists to sound reasonable under certain circumstances, rejecting the worst parts of orthodoxy, while being able to never break with the mainstream. In other words, one may argue that the authors of the edge of the profession profess principles that they have no intention of following. They seem non-orthodox in many ways, but they have no intention of taking their ideas to full fruition, if that means breaking with mainstream economics. That is a form of what has been called, in other contexts, organized hypocrisy" (Vernengo 2010 p.390).

In 1980 there were 22 subjects in HET (2.4 per cent of the curriculum); by 2011 this had fallen to 16 subjects (1 per cent of the curriculum). HET has suffered for many of the same reasons that CES, political economy and economic history have suffered. HET is particularly vulnerable to students, and their parents, having misconceived notions of vocationalism or anti-intellectualism. One head of department remarked to me, only half-jokingly, that a key problem with HET was that it contained three words that do not appeal to the contemporary business student: history, economic and thought. One way of responding to this problem might be to use subject names such as 'evolution of economic theory'. These names are not overly compromising in descriptive accuracy, but are more in tune with the prejudices and preconceptions of the contemporary business faculty student.

There are few young scholars who have pursued HET. Part of the explanation for this is the fact that it is seen as folly from a career perspective. I have personally been advised not to study a 'dying sub-discipline' numerous times in recent years (on occasion by HET academics themselves). On rare occasion, I have been told HET has no place in an economics department, though overt hostility is not the norm. The more substantial problem is that HET is seen as a peripheral subject, or as a type of self-indulgent luxury that most departments are not in a position to afford. The idea that it could potentially strengthen a department (if it was set up in right way) is not an idea that can be easily sold within traditional centres of economics teaching.

Lodewijks (2002b) points out that, in recent years, Australian academics who did their PhDs in HET, and are active in further research in HET, have not been able to find work in the major research universities. Lodewijks places explanatory weight for this situation on the ever-growing use of mathematics in economics, which has squeezed HET out. Lodewijks also makes the point that HET may well be damaged by being perceived as becoming overly aligned with heterodox economics. This perception of HET by the orthodoxy might not be so wide of the mark. Blaug, for one, notes that HET conferences have a disproportionately high representation of heterodox economists (Blaug 2001).

6.17 Heterodox economics (HE)

As discussed in the previous chapter, heterodox economics is the umbrella term for various non-orthodox schools of economics and includes the Marxian, old institutionalist, post-Keynesian, feminist, ecological and Austrian schools. From looking at the basic figures in table 6.11.3, the situation for heterodox economics seems to have improved, as the number of heterodox economics subjects has increased from 24 (2.6 per cent) in 1980, to 94 (5.8 per cent). However, there are some important things that need to be considered in the interpretation of this figure.

First, 94 subjects in political economy is still far too small a presence in Australian university curriculum. Such a miniscule profile cannot provide political economy with the level of recognition and understanding that it requires to reproduce itself, let alone to exert sufficient influence over areas such as policy analysis. Many of the heterodox subjects are single stand-alone subjects and it is not usually possible to build a stream or major in heterodox economics. This means that graduates are unlikely to develop sufficient depth of knowledge to be able to undertake heterodox analysis.

Second, 39 of the 94 subjects (41.5 per cent) were taught in a single department (the Department of Political Economy at Sydney University), currently the only place in Australia where it is possible to specialise in heterodox economics. As will be shown in Chapter 11, this department was established as a breakaway department from the university's established economics department precisely because it was too difficult to teach and do research in heterodox economics from inside the economics department (Butler, Jones & Stilwell 2009).

Of the remaining 55 heterodox economics subjects that are not taught in the Department of Political Economy at Sydney University, 20 of these subjects are taught outside economics departments and business faculties (see table 6.17.1). This leaves a total of 35 heterodox economics subjects within traditional centres of economics teaching — this is just 2.2 per cent of the curriculum.

Table 6.17.1 Economics outside business faculties and traditional economics departments in 2011²³

Subject Name	Code	Outside	Uni
Money, Power, War	POLS1004	Schl Politics & Intl Relations	ANU
Classical Marxism	POLS2061	Schl Politics & Intl Relations	ANU
Ethics, Capitalism and Globalisation	PHIL615	Faculty of Theology and Philosophy	ACU
Economy and Society	SOC 182	Dept of Sociology	MQU
The New Spirit of Capitalism	SOC 346	Dept of Sociology	MQU
Political Economy for Social Policy and Research	SOC 865	Dept of Sociology	MQU
Avoid Economic Deception: Study Political Economy	POLS306	Politics and International Studies	UNE
State and the Economy	SLSP2000	Faculty of Arts & Social Sciences	UNSW
Society, Economy and Globalisation	58123	Faculty of Arts & Social Sciences	UTS
Political Economy in the New Millennium	POL 319	Politics & History Dept	UOW
Politics & the Economy	POLS2401	Pol Science & Intl studies	UQ
Economic Analysis and Public Policy	POLS5740	Pol Science & Intl studies	UQ
Politics And The Economy	POL2PAE	Faculty of Social Sciences	LTU
Politics And The Economy	POL3PAE	Faculty of Social Sciences	LTU
Australian political economy	PLT2910	Dept Politics Faculty of Arts	MON
Ecological Economics	ENVI1160	Global Studies Social Science and Planning	RMIT
Economics for the Social Sciences	POLI1050	Global Studies Social Science and Planning	RMIT
Economics for the Social Sciences	HUSO2163	Global Studies Social Science and Planning	RMIT
Ecological Economics – Economics of Sustainability	HES4722	Faculty of life and social sciences	SWIN
Political Economy	POLS20031	Arts Faculty	MELB

²³ Because of space constraints, this table excludes the 39 subjects in heterodox economics taught at the Department of Political Economy at Sydney University. These can be viewed at http://sydney.edu.au/arts/political_economy/.

The small presence of heterodox economics in the curriculum does not appear to be due to a lack of student interest. For example, Argyrous (2006) examined enrolments in introductory heterodox economics in 2005 and found that most of these subjects were taught outside of economics departments and faculties of business. Argyrous's table is reproduced below as Table 6.17.2, but with an extra column on the right where the current author has updated enrolments for 2009. The 2009 data shows that, while two of these subjects were cancelled, overall there was a 50.8 per cent increase in enrolments. This increase outperforms the national 21.3 per cent increase in all undergraduate enrolments in economics that Millmow and Tuck (2011) document for the period 2005 to 2009.

Table 6.17.2 Introductory political economy subjects in Australian universities 2005 and 2009

University	Courses	Enrolment 2005	Enrolment 2009
ANU	Money, Power, War POLS1004	102 (10,929) ²⁴	145 (12,816)
Charles Sturt	Economic Philosophy and Policy ECO310	9	Cancelled
Macquarie	Contending Perspectives in Contemporary Economics ECON385	15	39 (subject moved to UTS)
Monash	Australian Political Economy PLT2910/3910	40 (49,426)	130 (51,689)
Ballarat	Economic Policy in Australia BE703	17 (9,782)	20 (12,888)
New England	Political Economy POLS306	74 (18,146)	71 (17,817)
New South Wales	Political Economy ECON3119	30 (38,292)	50 (46,302)
	Introduction to Political Economy PECO1000	55	72
	State and the Economy SLSP2000	120	170
Queensland	Political Economy and Comparative Systems ECON1100	125 (37,177)	120 (40,582)
	Social Aspects of Economic Issues SWSP2244	15	Cancelled
	Politics and the Economy POLS2401	35	35
South Australia	Political Economy and Social Policy POLI1009	190	Did not respond
Sydney	Economics as a Social Science ECOP1001	350 (45,966)	647 (47,775)
Western Sydney	Political Economy 200065.1	70 (35,372)	90 (37,409)
Wollongong	Political Economy in the New Millennium POL319	37 (22,907)	25 (26,614)

Source: Argyrous (2006) Thornton (2012a).

²⁴ Note: the numbers in brackets in the final two columns are the total enrolments in all subjects of study at each university in 2005 and 2009. The combined increase from these bracketed totals is 267,997 to 293,892 students (a 9.67 per cent increase)

Furthermore, the Department of Political Economy at the University of Sydney has large enrolments in its heterodox economics courses. In 2009 the department had a total of 2,083 enrolments, which is an average of 53 students for each of the 39 courses offered. The first-year elective course *ECOP1001 Economics as a social science* had 629 enrolments. This strong growth in enrolments in heterodox economics subjects, combined with the fact that these subjects are usually taught outside economics departments, suggests that if heterodox economics subjects are not offered from within economics departments they may simply continue to develop from outside traditional or standard economics departments, either being offered by other social science departments, or via the establishment of departments of political economy. In general, the evidence supports finding 1.3.4 which asserts that the future for a pluralist economics lies in greater integration with the social sciences.

6.18 Comparative economic systems (CES)

CES is a sub-discipline that compares different types of economic system. Such systems include idealised or actual versions of command socialism, market socialism, feudalism and capitalism. There is usually a strong focus on institutions and history. CES has fared very badly since 1980. In 1980 there were 22 subjects (2.4 per cent), and nearly all universities taught CES. By 2011 there were only three subjects in the entire country (0.2 per cent).

It is sometimes thought that the collapse of command socialism in Europe has made the study of comparative economic systems redundant. For example, Ward (see Thornton and Millmow 2008) recalls being told by his head of department in 1991 that, following the collapse of socialism, it was now pointless to teach CES. Such thinking is misconceived. One of the advantages of looking at different systems, such as command socialism, market socialism or feudalism is that doing so deepens one's understanding of capitalism: to properly understand something often involves comparing it to something else (as was argued in the previous chapter on pluralism, see Section 4.3). The other advantage of CES is that its 'systems view' of the economy allows students to understand the inter-relations between particular institutions, rather than just the characteristics of individual institutions.

In the last two decades there have also been a lot of interesting developments in comparative economics, such as the varieties of capitalism approach (Coates 2005; Soskice & Hall 2001) or the social structures of accumulation approach (Kotz, McDonough & Reich 1994). This material could easily be incorporated into a contemporary CES subject and would considerably strengthen and add to the relevance of CES. Capitalism has, and continues to take, diverse forms. A further reason to look at the study of alternative systems of economic organisation is that of the ongoing, often serious, problems with capitalism itself. CES offers an important resource in determining what possibilities there might be (and might not be) for creating better economic and social systems. If students do not understand this diversity, and the sources of its persistence, it constitutes a gap in their knowledge.

6.19 Development economics (DE)

Development economics is a sub-discipline that looks at problems of developing countries. It can often have a neoclassical dimension, but the emphasis on the political, historical, social and geo-political ultimately anchor it in the social science wing of the discipline. Despite the social science nature of development economics, it usually has a more legitimate status within economics departments than other areas of political economy. This is partly to do with the fact that it can be taught in a quite neoclassical manner: models of growth, gains from trade and analysis from rational choice, game-theoretic or public-choice perspectives.

In 1980 there were 39 development economics subjects in Australian Universities (4.2 per cent), by 2011 this had fallen to 32 (2.0 per cent). Part of the explanation for the decline of development economics is in the growth of development studies within social science and arts faculties since 1980. Many students who are specifically interested in development now enrol in undergraduate or postgraduate degrees in international development. These degrees do not generally require the study of development economics; indeed, development economics may not even be available as an elective. I personally undertook both a graduate diploma and masters by coursework in international development at Monash University. I found that fellow students enrolled in these programs generally avoided doing development economics or economic history. They either did not see it as important to understanding global poverty or were

generally prejudiced against economics and or unsure about their abilities or appetite to deal with any quantitative work. This suggests that if development economics was taught within a social sciences faculty as political economy, this class of students may more willingly embrace it. Indeed, it again raises the question of whether the student constituency for economics as a social science is largely within the social science faculties. Survey evidence to be put forward in Chapter ten would appear to indicate this is the case.

6.20 Modern hybrid economics (MHE)

As noted in Chapter five, the mainstream research frontier (behavioural economics, experimental economics, evolutionary game theory and complexity economics) is initially puzzling to categorise. These schools are different from neoclassical economics (and can actually have some strong affinities with political economy), yet they are not usually perceived as dissident or heterodox by most neoclassical economists and consequently have much higher institutional standing. However, a key part of the explanation of this mainstream acceptance is that modern hybrid economics is divided on ontological lines. For example, there is a 'new' behavioural economics that is now a respectable part of the profession. Its ontology is close to the 'complicated' ontology of neoclassical economics that was discussed earlier. By contrast, there remains the 'old' behavioural economics that was pioneered by Herbert Simon. It is much closer to the 'complex' ontology of the social wing of economics. For this reason I have classified this area of economics as 'modern hybrid economics'. 'Modern' denotes its recent development, 'hybrid' denotes its bifurcated ontological foundations.

A surprising result of the survey is how little modern hybrid economics (in any of its forms) has been incorporated into the curriculum. Table 6.20.1 reveals that there are currently only 12 subjects (0.7 per cent of the curriculum) that are explicitly focused on this category. While it was not entirely uncommon for some neoclassical subjects to have some content from modern hybrid economics, it was nearly always only a minor or tokenistic coverage, and such subjects were essentially neoclassical in nature. It is quite clear that the mainstream research frontier that Colander claims is revolutionising the discipline has had very little impact on the Australian economics curriculum.

Table 6.20.1 Modern hybrid economics in Australian universities in 2011

Subject Name	Code	Year Level	University
Behavioural Economics: Psychology and Economics	ECON2013	2	ANU
Experimental Economics	ECON 2126	2	UNSW
Experimental and Behavioural Economics	ECOS3016	3	USYD
Experimental Economics	ECON6027	pgrad	USYD
Applied Behavioural Economics	EFB332	3	QUT
Behavioural and Evolutionary Economics	ECON2060	2	UQ
Experimental Economics	ECON3060	3	UQ
Behaviour, rationality and organisation	ECC2600	2	Monash
Integrated economic modelling	ECC3860	3	Monash
Information, incentives and games	ECC5840	5	Monash
Behavioural Economics	ECON30019	3	Melbourne
Experimental Economics	ECON30022	3	Melbourne

It is notable that all of the subjects in Table 6.20.1 are undergraduate subjects and that all but one are taught within the Group of Eight universities. It is also worth noting that all of these subjects are stand-alone in that they are not part of a cumulative sequence of subjects. This situation would appear to leave students wanting to know much more — as one student who undertook ECC3860, a subject focused on complex adaptive systems, stated: “This was the most amazing unit I have ever done. It blew my mind (numerous times), changed my world, infiltrated (and dominated) every part of my life, and left me hopelessly craving more. Absolutely loved it!!” (cited in Angus, Parris & Hassani 2011 p.18). Unfortunately, such enthusiastic ‘market signals’ on the part of students do not seem to carry much weight.

6.21 Graduate education

Graduate subjects and undergraduate subjects have been aggregated in this in this chapter. This has been done because they generally face the same dynamics and problems. However, it is worth saying something specifically about the evolution of graduate education.

Graduate coursework subjects in economics were not common in 1980. Extensive coursework was the exception; indeed some honours programmes were 100 per cent research. This situation in 2011 is quite different. There has been a significant increase in the number of graduate diplomas, masters by coursework and doctorates with a significant coursework component.

Doctorates with a significant coursework component were not offered in Australian universities in 1980 but have sprung up in the last decade or so, mainly within group of eight universities such as Melbourne and Monash. The content of these coursework-orientated programs is strongly influenced by US coursework degrees. A good example of the US style coursework-orientated doctorate is that offered by the University of Melbourne. Students enrolled in this degree are required to undertake a masters degree by coursework for two years and then do a 50,000-word thesis over the next two years (4 years in total). The coursework component is heavily quantitative and areas such as HET, economic history, CES and development economics are either not offered or are at least are not part of the required core. The curriculum appears to be designed so as to

maximise one's chances of publishing in elite journals and thus establishing an academic career.

That doctorates are increasingly going in a direction where there is more orthodox coursework involved is undesirable for pluralism. The 100 per cent research doctorate allowed a certain degree of flexibility and specialisation that benefited the social science wing of the discipline. For example, at the Australian National University in 1980, one could undertake a doctorate in economic history (and thus gain employment in an economics department) and not even necessarily have an undergraduate degree in economics. This is definitely not possible today.

Within orthodoxy the establishment of these degrees is seen as improving the education of students and also as a way of responding to competition from US universities and other universities in Australia. For example, the Head of Department at the University of Melbourne described their doctorate program as "international best practice. It's the standard model in Canadian and US universities and increasingly the standard model in European universities" (Olekalns cited in Jones 2010 p.9). However, the intellectual limitations of the US-style coursework-orientated doctorate have been criticised, notably, by the Commission on Graduate Education in Economics (Krueger 1991). They have also been criticised, to varying degrees, in an Australian context (Groenewegen & McFarlane 1990; Lodewijks 2001, 2002a). The essential limitation of these degrees is well summarised by Lodewijks:

Students may obtain their doctorates without any appreciation of economic anthropology or economic psychology or evolutionary economics or the law and economics literature, or indeed the history and philosophy of their discipline. The technocratic narrowing of the discipline, most notable in the American context, crowds out the more applied, institutional and empirical investigation of pressing public policy issues. We note the sparsity of academic economists in public economic debate in Australia in the last five years or so. The narrowing of economics training may mean that the training is not meeting a full range of desirable goals of a university education, nor allowing postgraduates to contribute in a broader sense to Australian society (Lodewijks 2001 p.9).

The narrowness of the postgraduate curriculum deepens, rather than rectifies, all the problems of the undergraduate curriculum. The reform of graduate education seems more important than reform of the undergraduate curriculum, as the former is the precondition for the latter. What to do? The obvious thing to do is to broaden graduate coursework,²⁵ but this seems a particularly tall order, given that the programs seem currently designed to produce graduates who can publish in highly ranked mathematical journals. A more plausible strategy would be to see if departments could still be persuaded to continue to offer a 100 per cent research PhD for students wishing to work in the social science wing of the discipline. This, while limited, keeps a pathway open. The key limitation with this strategy is that it is only short term: eventually economics departments will have to employ such PhD graduates or there will be no academics to supervise incoming doctoral students. It is increasingly unlikely that such academics will be employed in traditional economics departments. This suggests that there needs to be a change of plan.

²⁵ One example of such an approach is the PhD programme at the University of Athens (see Varoufakis 2010).

6.22 Conclusion

This chapter has put forward very clear empirical evidence that shows that the curriculum is currently not plural and that the overall trend is away from pluralism. It underpins the second key finding of this thesis: that the trend in the economics curriculum is away from pluralism towards narrowness (1.3.2). It is also revealed that a pluralist political economy, denied a place in traditional centres of economics teaching, has increasingly found a home for itself in faculties of arts and social sciences. Such evidence provides clear support for the fourth key finding of this thesis: that the prospects for a pluralist economics rely on greater integration with faculties of social science (1.3.4). The following chapter directly builds on this chapter by looking at the closely related issue of economics textbooks. It will be shown that the inertia in the economics curriculum is well matched by a high degree of inertia in the contents of economics textbooks; indeed there is a mutually reinforcing relationship between the two.

7 Economics textbooks

“I don’t care who writes a nation’s laws – or crafts its advanced treatises – as long as I can write its textbooks” (Samuelson cited in Skousen 1997 p.150).

7.1 Introduction

This chapter examines the nature and evolution of economics textbooks. A chapter such as this is warranted because it provides good insights into why the economics curriculum is so moribund, with textbooks being both a contributing cause and an obvious symptom of the problem. The chapter gives particular focus to the difficulty of establishing progressive textbooks, with an examination of the fate of two such resources²⁶. The first is *Microeconomics in context* by Goodwin *et al.* This book is an attempt to produce something that avoids the many problems of the currently dominant orthodox textbooks. Yet it is also a textbook that could (or at least should) be acceptable to the average academic neoclassical economist. The second textbook is *Microeconomics: behavior, institutions, and evolution*, a graduate microeconomics textbook by Samuel Bowles that incorporates developments from within the mainstream research frontier. It is argued that the lack of commercial success of either of these textbooks, and similar textbooks, is indicative of the general lack of interest in curricular renewal by orthodox staff within traditional centres of economics teaching. This adds support to the third major finding of this thesis: traditional centres of economics have little capacity to embrace a pluralist curriculum (1.3.3).

7.1 The importance of textbooks

Textbooks warrant some focus in a study such as this because they exert a significant influence on the curriculum. They are important tools to establish and maintain Kuhnian 'normal science,' promoting reproduction of the dominant paradigm, defining the thinking and behaviour of the community of researchers, and making up an important part of the disciplinary matrix. Economics textbooks are full of prescriptive instruction on how research is to be conducted and what the acceptable observations, questions and puzzles are that can be investigated.

²⁶Constraints of space do not allow for an analysis of all textbooks and introductory economics books. However, in reviewing this chapter Geoffrey Harcourt suggested that the following list of texts is of particular value to those interested in a pluralist economics: (Asimakopulos 1978; Dasgupta 1986; Dasgupta 2007; Deane 1978; Harcourt 1998, 2001, 2006; Heilbroner 1999; Lavoie 2009b)

Textbooks also supply exemplars: seemingly powerful solutions to particular problems that allow the paradigm to attract and maintain followers and also assist in demonstrating the acceptable processes via which research is conducted (Boumans et al. 2010).

It also needs to be explicitly pointed out that economics textbooks do not just exert a strong level of influence over the discipline; they also exert a strong level of influence over society. This reality is seldom lost on textbook authors. For example, Samuelson once stated, “I don’t care who writes a nation’s laws – or crafts its advanced treatises – as long as I can write its textbooks” (cited in Skousen 1997 p.150). This social engineering dimension of textbooks becomes obvious when one considers their huge circulation levels. As Lamm notes:

At the peak of their sales, both Paul Samuelson’s Economics and Campbell McConnell’s Economics exceeded in a single year the lifetime sales to date of Keynes’s General Theory. Every year, six or seven introductory textbooks achieve sales of 60,000 copies or more. The market, variously estimated at a million and a half to two million students per annum, is immense (Lamm 1993 p.104).

Because textbooks are part of the disciplinary matrix and provide exemplars, they are a necessary, though not sufficient requirement for a school of thought to reproduce itself. The fate of a school rests in no small part on the ability of its proponents to provide good textbooks for their students. King (1995) argues that the inability to supply timely, coherent, well-written textbooks in the 1960s and 1970s carries significant weight in explaining why post-Keynesian economics was unable to usurp the orthodoxy:

We could speculate on the reasons for this Cambridge aversion to textbook writing, but the consequences are clear enough. The neoclassical synthesis filled the gap left by the exponents of Keynes, from the elementary level right up to the graduate courses, and beyond. When first Weintraub, then Davidson and Minsky, rebelled against ‘Bastard Keynesianism’ there was no counter-text to which they could refer their students, or their colleagues, and [they] had to write their own. If economists’ thinking is shaped much more by the books they read than by

articles and papers, as Victoria Chick believes (King 1995, p.111) then Robinson's 1937 'Essays' must be put down as an immense missed opportunity. To put it another way, 'Money and the real world' is the book that Joan Robinson should have written, a quarter of a century before Paul Davidson (King 1995 p.22).

While good textbooks are not sufficient in themselves for achieving curricular reform, they are certainly one of the necessary ingredients.

It is often emphasised how the publication of Samuelson's *Principles of Economics* in 1947 defined the nature of the modern economics textbook. This is largely correct, though Samuelson's *Economics* should not be seen as being *entirely* revolutionary and groundbreaking and there is significant continuity of content with textbooks published earlier. This fact is made quite apparent by Lee's survey of the content in US textbooks in the twentieth century (reproduced as Table 7.1.1). Clearly, there are deep continuities in the orthodox curriculum.

Table 7.1.1 Orthodox economics in twentieth century textbooks

Feature	Time Periods			
	1899-1910	1911-40	1941-70	1971-2002
Tools and Models				
Economics defined as the allocation of scarce resources		5 (19)	25 (81)	37 (86)
Scarcity, scarce factor inputs	9 (75)	23 (88)	24 (77)	31 (72)
Production possibility frontier			7 (33)	36 (84)
Opportunity costs	5 (42)	12 (46)	18 (58)	33 (77)
Demand side				
Utility/Diminishing marginal utility	12 (100)	22 (85)	26 (84)	43 (100)
Maximise utility	8 (67)	18 (69)	28 (90)	43 (100)
Utility functions, indifference curves, marginal rate of substitution			21 (68)	43 (100)
Income/substitution effects			20 (65)	43 (100)
Individual consumer/market demand curve	11 (92)	26 (100)	31 (100)	43 (100)
Price elasticity of demand	7 (58)	22 (85)	31 (100)	43 (100)
Production and Costs				
Production function			15 (48)	39 (91)
Single input variation, marginal products	12 (100)	25 (96)	29 (94)	43 (100)
Law of diminishing returns	12 (100)	26 (100)	30 (97)	39 (91)
Proportional input variation, returns to scale	1 (8)	2 (8)	14 (45)	34 (79)
Isoquants, marginal rate of technical substitution			11 (35)	36 (84)
Marginal costs: $MC = P_x/MP_x$	3 (25)	12 (46)	31 (100)	42 (98)
Firm/market supply curve	11 (92)	25 (96)	30 (97)	42 (98)

Table 7.1.1 Orthodox economics in twentieth century textbooks (continued)

Markets				
Perfect/pure, or free competition	10 (83)	24 (92)	31 (100)	43 (100)
Profit maximisation	6 (50)	22 (85)	31 (100)	43 (100)
Marginal cost = price	1 (8)	10 (38)	31 (100)	43 (100)
Imperfect/monopolistic competition		7 (27)	31 (100)	40 (93)
Firm demand curve		6 (23)	29 (94)	42 (98)
Marginal revenue = Marginal cost (or equivalent)		7 (27)	31 (100)	42 (98)
Oligopoly with firm demand curve			19 (61)	34 (79)
Kinked demand curve			17 (55)	27 (63)
Game theory			6 (25)	32 (74)
Distribution and General Equilibrium				
Marginal productivity principle	6 (50)	14 (54)	26 (84)	30 (70)
Wage rate =MPL X Price, Profit = MPK X Price	10 (83)	18 (69)	27 (87)	42 (98)
General Equilibrium			17 (55)	30 (70)
Pareto-efficiency/optimalty			8 (26)	31 (72)
Total Number of Textbooks	12	26	31	43

Table Reproduced from Lee (2009 p.3)

Let me now turn from this general focus and instead look at the specifics of the evolution of economics textbooks in Australia. The emphasis is on introductory texts, but this seems an appropriate focus, given that most students who do economics at university only undertake first-year micro and macro; indeed Maxwell (1999) asserts that it is reasonable to assume that half or more of the teaching measured by official student load statistics is in first-year micro and macro.

In examining the history of economics textbooks in Australian universities, we have the benefit of prior survey work and analysis. Maxwell (1999) asserts that up until the 1950s there were many competing text books, with no particular textbook making any significant impact. Samuelson's *Economics* changed this situation. It was the most popular book in Australian universities in the 1960s and 1970s, with the first Australian adaption (published in 1970) being particularly successful. Its impact on the textbook market, and on the teaching of economics itself, is made clear by Millmow:

The green and gold textbook made its introduction in January 1970. It conquered the Australian textbook market and easily met the expectations of its publishers....The fact that Paul Samuelson would win the first Nobel Prize in economic science that same year lent even more pedigree to the text. As in America, economics courses in Australia became Samuelson courses (Millmow 2011b p.548).

Samuelson gradually fell out of use during the 1980s, though its replacements conformed to the template it established. McConnell, Lipsey, Baumol and Blinder, Waud and Parkin, dominated the market at various times in the 1980s and 1990s (Maxwell 1999).

All of the texts just mentioned were, or are, Australian adaptations of already successful US, UK or Canadian texts (see Table 7.1.2). They combine micro and macro in a single textbook or split micro and macro into two volumes (usually with some discount for people buying both volumes). There have been some original Australian texts, but these have tended to be concentrated on either micro or macro and have not been serious competitors to the US adaptations. Maxwell estimates that about eighty per cent of the market is in adapted US textbooks,

with the market leader often gaining 40 per cent of the overall market. US textbook domination is not unique to Australia, and has occurred in several other countries; thus textbooks are an important mechanism for maintaining the influence of US mainstream economists throughout the world.

The most successful of the Australian textbooks appears to have been *Economic Activity* by Harcourt, Wallace and Karmel. It was first published in 1967 by Cambridge University Press (UK). It was reprinted at least twice and was also published in Italian in 1969. Interestingly, it was reissued by Cambridge University Press in 2009. It was the set text at Adelaide University, Flinders University and also at Cambridge University and Harcourt recalls that it sold well, with sales helped along by the fact that it was in paperback as well as hard back (Thornton 2011d). Interestingly, Harcourt was approached to do the Australian adaptation of Samuelson but declined because he had just finished *Economic activity* and also felt that his differences in view and affiliation with Samuelson would make for a case of “strange bedfellows” (Millmow 2011b p.548) so he suggested that Robert Wallace and Keith Hancock should be approached.

Table 7.1.2 Australian adaptations of US textbooks 1970-96

Text	Edition	Year	Chapters	Pages
Samuelson, Hancock, Wallace	1st	1970	40	901
Samuelson, Hancock, Wallace	2nd	1975	40	950
Jackson & McConnell	1st	1980	44	854
Lipsey, Langley & Mahoney	1st	1981	53	850
Jackson & McConnell	2nd	1985	45	779
Lipsey, Langley & Mahoney	2nd	1985	52	876
Challen, Hager, Hardwick, Khan, Langmead	1st	1985	30	397
Jackson & McConnell	3rd	1988	45	761
Baumol, Blinder, Gunther & Hicks	1st	1988	34	769
Waud, Hocking, Maxwell, Bonnici	1st	1989	34	994
Waud, Hocking, Maxwell, Bonnici	2nd	1992	33	1026
McTaggart, Findlay & Parkin	1st	1992	39	1072
Samuelson, Nordhaus, Richardson, <i>et al.</i>	3rd	1992	38	1060
Baumol, Blinder, Gunther & Hicks	2nd	1992	34	932
Jackson, McIver, McConnell and Brue	4th	1994	42	883
Quayle, Robinson, McEachem	1st	1994	35	843
McTaggart, Findlay & Parkin	2nd	1996	38	1101
Waud, Maxwell, Hocking, Bonnici & Ward	3rd	1996	33	1064

Reproduced from Maxwell (1999 p.120)

The survey work of Maxwell only covers the period up until 1999. However, the period since this time is characterised by continuity. While some titles and authors have changed, the market is still dominated by the Australian editions of US textbooks. The leading introductory textbooks used in Australian universities are Mankiw (Mankiw, Gans & King 2009), McTaggart (McTaggart, Findlay & Parkin 2010), Taylor (Taylor & Frost 2009) and Frank and Bernanke (Frank, Bernanke & Johnston 2009). These books are all very similar in content and still largely conform to the template laid down by Samuelson. A case study of the most popular of these currently dominant textbooks, Mankiw's *Principles of Economics* will now follow.

7.2 Mankiw's Principles of Economics

Greg Mankiw is a prominent US economist and a former economic advisor to US President George W. Bush. His book is currently the world's largest selling introductory textbook (Cengage 2011), and the Australian adaptation (now in its fifth edition) is widely used in Australian universities. Predictably, this book contains many characteristics that are objectionable from a political economy perspective. The text is certainly vulnerable to most lines of criticism in any of the well-known and detailed critiques of orthodox teaching content (Fullbrook 2004; Keen 2001a; Keen & Lee 2004). The section on microeconomics is very neoclassical, and accordingly, ducks issues of historical and institutional specificity. The section on macroeconomics adopts a new-Keynesian approach that emphasises sticky prices and the long-run neutrality of money, and eschews any mention of uncertainty, all the while promoting itself as a Keynesian textbook. The book's first chapter, 'The ten lessons of economics' puts forward ten statements that are entirely contestable or demonstrably erroneous as statements that can claim general validity to the real world.

One could easily produce an *Anti-Mankiw* – a line-by-line attack on this textbook as per Linder's and Sensat's *Anti-Samuelson* (1977), though given constraints of time and space, the focus will be on just two areas. The first concerns the underlying approach of the book, the second concerns the book's clumsy and superficial attempts to incorporate the mainstream research frontier.

The guiding approach of the book is made explicit in Mankiw's foreword. He states that "an economic textbook should remove the 'ifs and buts' and teach the 'rule rather than the exception'" (Mankiw, Gans & King 2009 p.xxviii). For Mankiw, economics is very much a nomothetic, rather than an idiographic, undertaking. To quote from the preface:

I had grown up in a family that often discussed politics over the dinner table. The pros and cons of various solutions to society's problems generated fervent debate. But, in school, I had been drawn to the sciences. Whereas politics seemed vague, rambling and subjective, science was analytic, systematic and objective. While political debate continued without end, science made progress (Mankiw, Gans & King 2009 p.xxii).

There is a strong, obvious and sustained desire to tie economic and social reality into a neat bow. It conforms to a general pattern identified by Garnett (2009b), where scholarly dispute is trivialised and downplayed, thus giving a false sense of consensus. Chapter two of the text, 'Thinking like an economist,' draws on the survey work of Anderson and Blandy (1992) to assert "ten propositions with which most economists agree" (Mankiw, Gans & King 2009 p.32). This is an all-too-early attempt to foreclose debate and persuade the student on many controversial questions simply by resorting to the authority of majority verdict (rather than by an application of reason or evidence to the question at hand). This is strongly suggestive of a political and ideological agenda. The only chapter that makes any attempt to portray economics as a contest of ideas is the final chapter, 'Five debates over macroeconomic policy'. However, the debates are between centrist and extreme right-wing policy positions: whether policymakers should try to stabilise the economy; rule versus discretion in monetary policy; whether to aim for zero inflation; whether budgets should be balanced; and whether tax laws should encourage greater saving. Furthermore, the analysis is conducted very much within the neoclassical paradigm.

As was explained in Chapter four, 'Economic pluralism and economics as science', to ignore or play down disputes is to miss an opportunity and to duck a responsibility. An economics education should concentrate on why economists disagree, not create a false sense of consensus. It is just as important to

emphasise the weaknesses and well as the strengths of particular theories. As Robinson argued, “the purpose of studying economics is not to acquire a set of ready-made answers to economic questions, but to learn how to avoid being deceived by economists” (Robinson 1955 p.3). This plural and critical approach should be pursued from the very outset and it is not appropriate to defer it to upper-level courses. The central importance of this point has been made by several prominent economists:

The catalyst for my escape from this dogma was extremely simple: my first-year microeconomics lecturer [Frank Stilwell] pointed out a simple but glaring error in the application of conventional theory... Had I come across that fragility in my honours or postgraduate education, which is when students normally learn such things, I would quite possibly have been willing to gloss over it, as most economists do. Instead, because I learnt it ‘out of sequence’, I was immediately suspicious of the simplistic statements of economic principle (Keen 2001a pp xii-xiii).

The student who comes to economics for the first time is apt to raise two rather obvious questions. The first relates to the economist’s habit of assuming that agents can be treated as rational maximisers . . . by the time that students have advanced a couple of years, this question is forgotten. Those students that remain troubled by [it] have quit the field; those who remain are socialised and no longer ask about such things (Ormerod 2003 p.72)

There is a standard conditioning technique that puts off children who question a received orthodoxy by claiming that all will be revealed later. But when that question is asked in more advanced course it is dismissed as childish (Binmore 1998 p.ix).

How does Mankiw’s textbook deal with the mainstream research frontier? Chapter 23, ‘Frontiers of Microeconomics,’ provides some coverage of behavioural economics, but it is tokenistic and superficial. Significantly, there is no attempt to discuss whether behavioural economics can be incorporated into the integrated framework presented in earlier chapters. Such an omission could easily suggest to a student that these ‘frontier’ areas can still be part of the old

integrated neoclassical framework; indeed we have seen in Chapter five that some of the ‘new’ behavioural economists understand behavioural economics in this way (see Section 5.3). Tellingly, Mankiw’s book does not take a stance on this question either way and simply ducks the issue. If one wished to be generous it could be argued that the textbook’s minor mention of behavioural economics means that it exhibits ‘soft’ pluralism of the type described by Dow (2007), though I would argue that basic incoherence is the better description in this instance. The embrace of pluralism needs to be explicit and reasoned; in the absence of this it is better understood not as soft pluralism, but as cognitive dissonance (a situation where a person holds contradictory ideas but does not recognise them as contradictory).

The ‘Frontiers of microeconomics’ chapter is a good example of a syndrome identified by Earl (2010) whereby the ‘new’ behavioural economics is couched in such a way that it does not threaten the legitimacy and existence of the neoclassical hard core. Even the title of the chapter can be seen as being defensive: why would a school of economics established in the 1950s be referred to as ‘frontier’ if not to denote it as being of a provisional and uncertain nature? The sheer brevity of coverage is also consistent with a defensive orientation. Only three findings are really discussed, and each of them is given only a paragraph each: people are over-confident, people give too much weight to a small number of vivid observations, and people are reluctant to change their minds. The section is then wrapped up by asserting that the rationality assumption, “even if not exactly true, is still a good approximation” (Mankiw, Gans & King 2009 p.531) and that rational choice theory is “not perfect, but it is good enough” (Mankiw, Gans & King 2009 p.531). The neoclassical hard core is thus defended and business as usual can continue in all other chapters of the book. It certainly is business as usual. Consider lesson three of Mankiw’s ten lessons of economics: ‘rational people think at the margin.’ This is really just an intellectual sleight of hand. It ducks the question of whether these rational people that Mankiw speaks of actually exist; thus it is more of a clumsy attempt to defend marginalism than a general lesson about real people that students should uncritically absorb.

Have events such as the global financial crisis had an impact on recent editions of the book? No, or at least not in the self-reflective way you might think. Recent

promotional literature for Mankiw's textbook featured a promotional flyer entitled 'Economics Saves the World', with a cartoon of a single male student, taller than buildings, ripping back his shirt to reveal a super hero suit with a large 'E' ensign blazed across his chest. The promotional text read:

Right now, you have the most important job in the world. See those teenagers sitting in your lecture room texting their friends? If you get it right, they will grow up to save the world from mayhem, anarchy and ongoing financial crises. Using superb teaching materials you can turn your students into world leaders. Some of them, anyway. And even if that doesn't work out, they can all learn the curiosity and analytical skills that makes good economists (Cengage 2011 p.1).

Responding to accusations that neoclassical economics is imprisoned in a false paradigm, and that it could not adequately predict or explain the GFC, one of the co-authors of the Australian edition of Mankiw, Joshua Gans, argued "everything that has happened in the global financial crisis was economics 101" (cited in Matchett 2009 p.9). It appears that orthodox textbooks and their authors remain locked into the neoclassical paradigm. Empirical evidence, particularly in the form of large economic catastrophes, can prompt some individuals to change their mind, yet clearly it is a mistake to place too much faith in particular events or particular lines of evidence to be sufficient to change the curriculum or the discipline in general.

Part of the explanation for this rigidity of thought and belief is that, if neoclassical economics is the only approach being taught in class or written about in the textbook, then this raises the stakes enormously for it to be sold as a worthwhile product: it is a one-shot game. Neoclassical economics is also rather monolithic. It is hard to modify its key features without the entire structure collapsing like a house of cards. The extreme doggedness of some orthodox economists thus becomes more intelligible: to give up one thing may endanger everything (Galbraith 1992).

Given all these problems, why do Mankiw's textbook, and other similar textbooks, dominate? The initial and most basic answer that can be argued at this point is that they are successful because they meet the current preferences and needs of

academics who teach these subjects. It is not a case of market failure. Interestingly enough, Colander, who has himself authored several standard textbooks, argues that publishers place a lot of pressure on authors to follow a “15 per cent rule,” whereby if any textbook has more than a 15 per cent difference from other textbooks in its subject area it will not be published. If it is published it will not prosper (Colander 2003a p.1). Significantly, Gintis argues that the strong preference for the established textbooks exists in spite of the knowledge of deep problems with the content of these textbooks. Gintis argues that economists “consistently *choose* textbooks that teach material that they *know* is false and/or completely out of date” (Gintis 2004 pp.92-93) [emphasis added].

7.3 The difficulty of establishing progressive textbooks

The Samuelson-style textbook is still dominant. There is no alternative textbook that sells in such large numbers. However, some non-neoclassical textbooks continue to be produced, some which have been able to achieve multiple editions. I will now examine some of these non-neoclassical textbooks.²⁷

An early attempt to usurp the orthodox textbook in the post-Keynesian guise, was *An introduction to modern economics* (Robinson & Eatwell 1973). However, the intrinsic difficulty of the task, and also some lack of knowledge about what was really required, meant that the book failed to make any impact (King & Millmow 2003). It is argued that “its lack of success marked something of a turning point in the history of economics, since it symbolized the collapse of the radical attempt to challenge orthodox theory at the pedagogical level” (King & Millmow 2003 p.105). It is arguable, too, that it was just one battle lost in a larger and still ongoing ideological campaign.

Another more recent example of *commercial* failure is Hugh Stretton’s *Economics: a new introduction* (1999). This carefully compiled introductory text

²⁷ Obviously, space constrains the ability to examine all such texts. For example, Earl and Wakeley’s *Business economics: a contemporary approach* is an excellent example of a pluralist textbook designed for the business student and which by rights *should* be exactly the type of book economics departments adopt (Earl & Wakeley 2005).

does not seem to have been adopted at any Australian university and does not seem to have met with much obvious success overseas. This is a great pity. This book was lauded by prominent heterodox economists for its impressive scale, depth and quality, and certainly, there is much to recommend in this book. Its key limitation is that a textbook of vast scale, depth and quality fits rather awkwardly in the contemporary university curriculum. Its 60 chapters (852 pages in total) were designed to be taught in three or four semesters. This may have been practical in earlier decades, when full-year (two-semester) subjects were more common, but it would be very hard to carve out and maintain such a large space in the curriculum now. It is difficult to maintain a single-semester progressive subject, let alone a three-or four-semester sequence of subjects. This said, the book was no more expensive than many shorter books and academics could simply have taught the chapters relevant to their needs. In any event, in writing the book Stretton was clearly thinking of multiple audiences and multiple uses for the book, supposing that it might be:

a critical 'second text' to alert users of orthodox texts to their controversiality, and to alternative approaches to the subject; as an applied economics text, because of its practical treatment of particular industries, markets, policy issues and national strategies; for courses in political economy given outside the economics discipline by political science departments, management schools, labour colleges and other adult education services; as a well-indexed reference book on a wide range of topics for journalists, back-bench politicians, public servants and others who like plain-language, common-sense economics, criticism of academic orthodoxy, and a simple guide to the warring schools of economic thought (Stretton 1996 p.1577).

Tailoring and marketing the book to these purposes and audiences may have worked better, and certainly the constituencies mentioned above are important enough. This book could and should be revised and reissued. It could be split up into two or three volumes. If it is still to be used as an undergraduate textbook (as opposed to the type of wider uses entertained in the quotation above) then there would be a need for supporting materials (lecture slides, study guides, exam questions). These supporting materials are supplied in competitor texts, and their absence puts such a text at a significant disadvantage.

Not every progressive text has failed. There are some books that have been able to get a minor foothold in the market. The best international example is Sherman *et al. Economics: an introduction to traditional and progressive views* (Sherman & Hunt 2008), which is in its seventh edition. However, it is obviously sustained by sales in its home market. While being a required text for introductory economics at some Australian universities in 1980, it does not appear to be a required text today.

The best contemporary Australian example of success would be Stilwell's *Political economy: the contest of economic ideas* (Stilwell 2002, 2006a, 2011a). This has been used at Sydney University, La Trobe University and also at the University of New England (in the notably bluntly named subject *Avoid economic deception: study political economy*). Stilwell's text has sold "reasonably well" in the United States and the United Kingdom (Stilwell in Thornton 2008 p.1). This textbook has a companion book of readings, *Economics as a social science: readings in political economy* (2011) edited by Stilwell and Argyrous, which has also been successful.

The most obvious constraint that progressive texts face is a chicken-and-egg problem. Academics may well be reluctant to create a pluralist subject without a good pluralistic textbook and supporting material, but if such demand from academics does not first exist it is hard to get publishers to invest in the creation and promotion of such a textbook. Maxwell (1999) estimated that introductory textbooks require between half a million and one million dollars to establish. Sales of 10,000 copies are seen as the norm for acceptable profits in Australia, and sales of 35,000 are seen the acceptable norm in the US market (Carvellas, Kessel & Ramazani 1996). These estimates, while dated, give some indication of the chances of a progressive textbook emerging in the United States that could be adapted for Australia. Of course, a textbook could be developed here and exported to overseas markets, though Stilwell explained to me that:

You have to take into account the way the publishing industry is organised; publishers are now multinational in character, they often have quite a lot of local focus on the development of new titles and this local focus is emphasised in the marketing process. Although [for example] Oxford University Press (OUP) is UK based, its Australian operation is, to some

extent, independent. This means that overseas sales do not necessarily get prominent marketing because one branch (for example OUP UK) wouldn't have the same commitment and incentives to sell the book as OUP Australia. These internal publishing dynamics significantly influence outcomes (Stilwell in Thornton 2008 p.1).

Nonetheless, the advent of desktop publishing, the internet and on-demand printing have created new opportunities for economists to produce their own textbooks. Print-on-demand may also promote the re-issue of old textbooks. However, even with these new technologies, production of a textbook may be prohibitively time-consuming on top of being systemically discouraged. Maxwell, a successful textbook author himself, estimates that the production of a competitive textbook requires three years of consistent effort at about 20 hours per week (Maxwell 1999).

7.4 Microeconomics in context

All of the progressive textbooks just mentioned seek largely to replace orthodox textbooks and the orthodox curriculum. Thus, they are not consistent with Colander's advice to work within the mainstream. What of progressive texts that do follow the incrementalist and reformist strategy? Surely, they provide an interesting test case for some of the strategies advocated by people such as Colander?

One example of such a text is Goodwin, Nelson, Ackerman and Weisskopf's *Microeconomics in context* (Goodwin et al. 2004). All these authors have established backgrounds in feminist economics, ecological economics or radical political economy, yet they nonetheless strike an artful balance. On one hand, they manage to cover all the standard content in an orthodox first-year course; on the other hand, they avoid many of the problems that afflict the dominant textbooks. To quote from the book itself:

Neoclassically minded instructors, and instructors constrained by the requirements of the larger curriculum, can be assured that neoclassical tools are presented in full. Economics instructors who are frustrated by the lack of attention to history, institutions, gender, social divisions, ethics, ecology, or poverty in other textbooks will find much to be enthusiastic

about in our treatment, because these topics are integrated throughout the book. Even some instructors who prefer the market-focused approach of other texts will appreciate this text for way in which its exposition of the market's strengths and weaknesses encourages students to engage with the subject manner (Goodwin et al. 2004 p.xiii).

Goodwin et al. have offered a useful resource for the very common situation where the prospects of radical or rapid change to the first-year curriculum are entirely fanciful. As Nelson herself has pointed out, lecturers may be under departmental instruction (or at least pressure) to cover all the orthodox content. The content that is stipulated is usually material required for upper level economics courses — even though most students are not majoring in economics and won't be doing such upper level courses (Nelson 2009).

Having decided to pursue an incrementalist strategy, the book's authors have seemingly done everything possible to give themselves every chance of success. The writing in the book is diplomatic and careful. It would only seriously antagonise the most intolerant neoclassical economist. At the same time, they still manage to smuggle in not only the 'ifs and buts' excluded by Mankiw, but also some important concepts from feminist economics, ecological economics and radical political economy.

How have they managed this? The less combative tone towards neoclassical economics (relative to other progressive texts) seems to reflect the authors' underlying philosophy and position. For example, Julie Nelson was one of the few heterodox economists to respond in the affirmative when a special edition of the *Post-Autistic Economics Review* asked the question 'is there anything worth keeping in standard microeconomics?' The substance of her argument was that if the content is taught carefully, with a critical eye and with due acknowledgement of the 'ifs and buts', then it is defensible.²⁸

A strength of *Microeconomics in Context* is that it provides all the supporting resources: slides for the lecturer, a study guide, a student website, a teacher

²⁸ Nelson is still arguing that economics needs significant reform. To get a fuller sense of Nelson's stance towards economics see (Nelson 1995a).

website and exam questions. Such additional material is now *de rigueur* for any mass-market textbook. Another strength of *Microeconomics in Context* is that both its editions have been published and promoted by a major publisher. This has meant that there has been the capacity to draw upon the distributional and promotional resources that such publishers possess. It is quite hard to think of anything else that these authors could have done to create a textbook that has some prospect of displacing the established and narrow textbooks that currently dominate the market. Given all this, what success has *Microeconomics in Context* had to date?

In November 2008, I asked one of the authors of the text, Julie Nelson, to give her assessment of what has been achieved. Julie replied that the first edition, published with Houghton Mifflin, didn't sell enough copies to make the publisher happy. However, another publisher, M.E. Sharpe, had been found. In December 2009, I followed up on how sales were of the second edition were faring. Julie responded:

I would have to say that Microeconomics in Context is not exactly taking the profession by storm. New sales of the second edition over the 2009 fiscal year were only a little over 1,000 copies. (Used copies of both the 1st and 2nd editions, of course, now circulate as well.) That's not terrible, but it's not great either...I would guess that it is both recalcitrance on the part of many individual economics faculty members, and institutional barriers (such as textbook adoption being a department decision) that prevent sympathetic instructors from adopting, that are behind the low numbers (Nelson in Thornton 2009a p.1).

It is worth noting that Nelson felt that the resistance was not coming from the students themselves, as the text seemed to work well in an educational sense.

In Australia, the first edition of *Microeconomics in Context* was promoted through a major publisher that had active sales representatives. The second edition does not have active distribution in Australia and the book has to be ordered through DA Information Services, who were not able to supply free inspection copies. Such serious constraints are likely to stop adoption of this text in Australia. No evidence could be found that this book is currently used as a set text in Australia.

I have direct experience of trying to promote this book. Despite the carefully constructed nature of *Microeconomics in Context*, I could not persuade the senior staff responsible at my own university to adopt this book. However, to their credit, they were at least prepared to seriously consider this textbook and it came quite close to being chosen. The good thing about the book was that at least one could suggest adopting it without it being perceived as an antagonistic or provocative gesture (many alternative texts would be seen this way). Part of the problem was not even intellectual, but involved the costs and trouble involved in changing from one textbook to another. This is a recognised problem. Maxwell notes that even if a textbook impresses a lecturer, this may not be enough to get them to adopt it. A change of textbook will only occur “after much reflection and often with reluctance because such decisions involve major investments of time and effort to reorganise lecture notes, tutorial presentations and other areas of course assessment” (Maxwell 1999 p.128).

The *Microeconomics in Context* story demonstrates how difficult it is to achieve even incremental reform from within economics departments. It also casts doubt over the advice that David Colander has provided to his heterodox colleagues: one could not fault this particular group of heterodox economists for trying to work within mainstream structures, nor with their powers of diplomacy. Such traits and strategies have not been enough in this instance. The *Microeconomics in context* story suggests that it is orthodox, rather than heterodox economists, that actually need to reflect more critically on their thinking, conduct and orientation.

7.5 Zero tolerance

A completely different strategy is to create textbooks or companion readers that seek to completely destroy neoclassical economics. As such, these books fall foul of the strategies Colander advocates for political economists. These books are largely confined to critique and so can be considered as companion pieces that reveal limitations in the content of established textbooks. It would be unlikely that they could be the sole set text for a subject.

The best example of all-out critique is Steve Keen’s *Debunking Economics*, now in its second edition. Keen adopts what he calls a street-fighting approach that seeks to completely demolish the neoclassical curriculum and neoclassical

economics in general. The dominant line of attack is to bring to bear many of the accumulated mathematical and logical problems that afflict the neoclassical curriculum (Harcourt 1972; Mantel 1974; Sonnenschein 1972; Sraffa 1926, 1975). The book has been quite successful, with the second edition reaching number one as the bestselling business textbook on Amazon.com UK. Notably, hostile reviews of the book tend not to take issue with Keen's arithmetic or logic, but have instead largely branded the book anti-capitalist (for an example of this see Davison 2001), which is perhaps illustrative of the link between knowledge and social order that was discussed in Chapter two.

Another example of all-out attack is *Foundations of Economics* by Varoufakis (1998). This book follows a structure whereby each section of the textbook provides a chapter that is an exposition of (largely microeconomic) neoclassical content, another chapter that explains the history and origins of the theory, then a full chapter that exposes it to heavy critique. This book would be a good option to remedy the problems created by Samuelsonian textbooks. It is worth noting that, because the first chapter of each section of the book is a neutral exposition of neoclassical theory, it can function as a way of reviewing and clarifying orthodox content (there is nothing like reading a second textbook if one is still a little unclear about what is being said in the first). It is true that it does create extra reading for students, but given that most students are *meant* to be putting eight hours a week into their studies per subject (on the basis that they are full-time and doing four subjects a semester), this is reasonable. To be more specific, first-year economics students are usually required to attend two hours of lectures, a one hour tutorial and read a single chapter of the set textbook, do some review questions and seek any required consultation (two hours at most). This leaves about three hours, which should be more than ample read a chapter out of a book like *Foundations of Economics*.

Another work in this genre is the already-mentioned comprehensive refutation of Samuelson, *Anti-Samuelson* (Linder & Sensat 1977). The strength of this type of book is that it provides a detailed and sustained critique of neoclassical economics. These books do important work in helping to convince students that heterodox economists have legitimate grounds for rejecting orthodoxy, but they are a little cumbersome. The approach taken by Varoufakis in *Foundations of*

Economics (exposition, historical origins and critique) would be more palatable for students, and they would be less likely to be confused or put off.

It is relevant at this point to make a point about pluralism of *strategy*. Is it inconsistent to simultaneously praise the diplomatic incrementalism of Goodwin *et al.* and the 'street fighting' approach of Keen? No. There will be some instances where it is useful to deploy certain textbooks and companion readers and some instances where it is not. Much depends on the character of the department, the class being taught, how much job security one has, and one's own capacities and inclination. Similarly, people should produce the type of textbooks that reflects their outlook and which they feel they are best equipped to produce. If someone like Steve Keen tried to write a diplomatic book like *Microeconomics in Context*, it seems unlikely that the result would be a success. Economists need to adopt or modify particular strategies to fit with their immediate circumstances and their own beliefs and style. Here is a significant point: the achievement of pluralism in economics will itself require a degree of pluralism in strategy and approach. While this thesis certainly evaluates and advocates a number of strategies, they are not being put forward as a one size fits all list. This is another reason why Colander's explicit list of instructions for political economists to follow seems misconceived. It ignores the heterogeneity of political economists, the heterogeneity of the situations they find themselves and the benefits of a division of labour.

7.6 A textbook for the mainstream research frontier

The final textbook I will examine is *Microeconomics: Behavior, Institutions, and Evolution* by Samuel Bowles (Bowles 2005). In 1980 Bowles co-wrote a well known orthodox graduate micro textbook with Peter Dixon and David Kendrick (Dixon, Bowles & Kendrick 1980). *Microeconomics* is his attempt to update (or build upon) this earlier textbook by including developments in microeconomics since 1980. The book draws on behavioural economics, evolutionary game theory, incomplete contracting and various other 'mainstream research frontier' approaches. Notably, the book largely conforms to the orthodox penchant for mathematical tractability; indeed Bowles argues that the future for economics lies in greater amounts of mathematical complexity (Bowles 2005). This is entirely consistent with Colander's call to repackage what have historically been

heterodox ideas into formal models so that they can be rendered palatable to orthodox economists. Bowles would appear to have been so effective in doing this that some reviews have interpreted the work as an extension of standard core theory (Sugden 2005).

The textbook has been well reviewed by some prominent orthodox economists. Kenneth Arrow rated the book a brilliant synthesis and forecasts that “it will be an indispensable part of future teaching in microeconomics at the graduate or advanced undergraduate levels, as well as an excellent source of information for the practicing economist” (Arrow 2005 p.1). The book has also met with the approval of some prominent heterodox economists. The leading institutionalist Geoffrey Hodgson, while having some criticisms of the book, praised it as a “important and highly impressive volume” that provides an “overview of cutting-edge developments in microeconomics for graduate students...The work is well written and carefully structured... this is a very fertile and inspiring book, of much broader use than its intended audience... Its analytical accounts of institutional structures and its masterly fusion of institutional and evolutionary themes might eventually warrant its status as a modern classic” (Hodgson 2006b p.171).

Given these characteristics, Bowles’s book offers an interesting gauge to measure the appetite for the mainstream research frontier within the curriculum. Despite this praise from some of the high-priests of the profession, it has been strikingly ignored by its run-of-the-mill practitioners. In 2009 (four years after the book’s publication), I contacted Samuel Bowles to ask if he knew of any universities that had adopted this textbook. He responded thus:

I do not know who has adopted it. I doubt any have adopted it in PhD micro classes. It is used somewhat in upper level undergrad micro. It is just too different to be the main text at the moment (Bowles in Thornton 2009b p.1).

There is no sign that this book is being used as a set text in any Australian university. This is yet another example that casts extreme doubt on the idea that the profession is reforming itself or has any appetite to reform itself. It also casts further doubt on the strategies that Colander advocates, as *Microeconomics*:

Behavior, Institutions, and Evolution seemed to tick many, if not all, the boxes he advocates for reforming the profession.

7.7 Conclusion

This chapter has stressed the importance of textbooks in shaping the curriculum and the conventional economic wisdom. It was shown that there has been significant continuity in the nature of orthodox textbooks and that established mainstream textbooks are yet to incorporate the mainstream research frontier in any other way than is tokenistic. The latter half of the chapter looked at attempts to develop innovative textbooks, including a careful attempt to create a pluralist mainstream economics text. The difficulty achieving good sales for what are in many cases excellent and innovative textbooks is a clear indicator of the lack of enthusiasm amongst most economists for curricular innovation.

8 Economics departments

“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 somewhat dangerous for the outsider.” (Leijonhufvud 1973 p.327).

8.1 Introduction

This chapter examines the entity that makes most of the decisions concerning the economics curriculum: the economics department. This chapter is a foundation stone for three case study chapters to follow. It is particularly focused on how economics departments go about the two central tasks they are required to perform: teaching and research. The chapter reveals the strong signals and incentives that often induce academics to prioritise research effort over teaching and curriculum development. It also explains how the assessment of research is biased against the social science wing of the discipline. Given the importance of research reputation, this bias can only lead to fewer political economists being employed within economics departments, thus leading to a further narrowing of the curriculum within traditional centres of economics teaching. The final part of the chapter is focused on the overall regulatory environment in Australian Universities. In particular, it examines how the recent deregulation of student enrolments is geared to erode the range of degree and subject offerings of the non-elite universities. Finally, this chapter argues that such an outcome is highly undesirable and can only undermine the pluralist agenda in these universities.

8.2 Teaching

There is a very basic problem that afflicts curricular innovation and teaching in general: it is not highly rewarded in comparison to research work. Without doubt, this problem afflicts economics departments, but it is also a more general problem within the contemporary Australian university. While universities never admit to a bias against teaching over research, and most offer some minor incentives or rewards for teaching, they are mainly preoccupied with raising or maintaining their research standing. This is not to suggest that many academics do not often have quite heavy teaching loads. They often do. The issue is that while they must satisfactorily perform this teaching work, their career security and advancement are usually largely dependent on research achievements. That most universities get the majority of their income for their teaching work makes little impact on this situation. One of the consequences of such an institutional structure is that Australian academics have low levels of engagement with their students. Indeed, they have the fourth lowest preference for teaching amongst 18

countries surveyed (Norton 2012). Given the low priority given to teaching, it is not surprising that there is a common perception that academic standards are falling:

Many academics believe that 'academic standards' are in decline – that courses are being 'dumbed down', or that it is becoming easier to pass or get high grades. In a recent survey, just under half of academics surveyed agreed with the proposition that 'academic standards at my university aren't what they used to be'. Falling admission standards, poor English-language skills among international students, and students not putting in the necessary work are among the reasons given by academics for this perceived decline. Some graduates report that challenging students to achieve high academic standards is an area in which universities could do better (Norton 2012 p.63).

Such sector-wide views are mirrored by the assessment coming from within economics departments. A 2005 survey of departmental heads by the Economic Society of Australia (ESA) found that the majority view was that academic standards at the undergraduate level had fallen. The blame was placed on high student-staff ratios, the poor English of international students, the rise of business studies, a general problem of having to compete with other disciplines, low student entry marks and declining levels of student application to their studies (Economics Society of Australia 2004). A current Professor of Economics and also a former Dean of Business and Economics candidly admits that focusing on teaching is a “a career disaster”, as “promotion depends on research not teaching”. Further, it is rational and unsurprising for academics to “devote as little time as possible to teaching” and the current incentive structure can only lead to the quality of teaching degrading (King 2012c p.9). The acknowledged bias against teaching in Australian universities is consistent with international trends (Colander 2004). For example, Coyle (2012) argues a key problem facing the discipline of economics is insufficient incentives for academics to focus on curriculum and teaching. While there have been some recent moves to try to raise the attention universities give to teaching (via the actions of such bodies as the Tertiary Education Quality Standards Agency and the Office of Teaching and

Learning), this has had little effect, given the stronger incentives (and underlying preferences) that favour research (Bailes 2012; Norton 2012).²⁹

The lack of attention to teaching and the related decline in standards initially seems strange when one considers that for most university departments in Australia, the major source of gross income is the teaching of students. Departments live or die on their ability to secure enrolments and to maintain the reputation of their graduates. One might therefore think that they would be highly orientated to reward teaching effort and curricular excellence and would also be aiming to increase the standard of their graduates, rather than pretending that standards are not falling. Unfortunately, the situation is not as simple as this.

Part of the problem is that it is hard to measure good teaching or even to achieve consensus about what good teaching is. The obvious marker of teaching effectiveness is exam performance (i.e. the percentages of distinctions and high distinctions that are awarded). However, using this criterion faces an immediate uncertainty over whether the content taught has been sufficiently ambitious, whether 'soft marking' has occurred or whether copious exam 'hints' have been given. These problems are recognised within economics departments, as one department head has stated:

...They do brilliantly because they give strong hints about exam preparation. They look to be a good teacher, the book looks good and the students are happy with their grades. A positive sum game, but I have had cases where I have retested their competency in my exams and it is poor (Economics Society of Australia 2004 p.29).

Student surveys that assess teaching are also a source of measuring teaching performance, but again, there are problems and limitations (Bosshardt, Watts & Kennedy 2001). One might be a popular teacher, readily able to demonstrate

²⁹ One initiative that might lead to more attention on the teaching of economics is the Office for Learning and Teaching's recent moves to develop learning standards in economics (Guest 2012). However, this initiative is still under development and it is too early to say whether it will have a real impact. It is also unclear whether it will be beneficial or detrimental to the pluralist agenda.

glowing end of semester student surveys, yet being a popular or entertaining educator is not the same thing as being an effective educator. Needham (1982 p.6) notes that student evaluation of teaching results are “only weakly correlated with objective measures of student learning”, and that “the correlation is frequently negative”. There is also a basic conflict of interest at work. Nowell (2007) found that students' satisfaction with lecturers is influenced by the marks the lecturer has previously awarded to students. This means that if a teacher has high expectations of students, it can lead to a critical assessment of their teaching, yet to have high expectations is generally a good orientation for a teacher to adopt. The danger of being heavily dependent on students' assessments is that it can transform the student-teaching relationship into a customer-service relationship. This is not to say that student feedback surveys are entirely useless: they can tell a teacher what students have found helpful and unhelpful and where improvements might be made. None the less they are problematic as prime indicators of good pedagogy and it is problematic to use such feedback as the single, or even a dominant criterion for evaluating an academic's teaching performance (Needham 1982).

The problem of determining reliable measurements of teaching effectiveness makes it difficult to rank universities against each other for their teaching quality. Rankings, whether done privately or by government, cannot be decisive and may vary wildly, depending on small changes to the criteria and weightings used and on the different socio-economic profiles and intellectual aptitudes of the students enrolled. Unlike high school leaving exams, there is not a common exam across the country. If no university in the country can reliably claim to be significantly better at teaching than any other university, and no university can really be identified as being significantly worse than any other university at teaching, then there is little incentive for universities to invest in or worry about teaching. It is true that if teaching were particularly under-resourced or teaching performance scandalous, then that would be a liability. But provided such situations are avoided, universities tend to conclude that it is best to concentrate on other matters, such as research, marketing and promotion. The situation facing universities is much the same as the situation facing the individual lecturer:

teaching must not be a liability or an embarrassment, but beyond this, narrow self-interest will suggest that it is better to invest in other activities.

Another problem that stops universities investing in teaching is the currently low level of government subsidies to teach Australian students. Some have gone so far to argue that many domestic students are educated at a loss to the university:

In universities, only about 70 per cent of the real costs of government-supported research projects are funded. Teaching is also funded below real cost levels. And the Government's subsidies for teaching are not fully indexed for cost increases. Three things follow from this "structure of financial incentives", as the business management literature calls it. One, universities lose money on every local student and on most of their research. Two, each year the gap between funding and costs gets wider. Three, each year the universities need more non-government revenues to fill the gap. The quickest solution is to increase the number of international students. Applications for student visas each year always exceed the places available. The constraint on numbers is not demand but the willingness of institutions to supply places and the number of visas issued by government. Under-funding and good business plans have created a huge export industry (Marginson 2009 p. 11).

Marginson's point about the 'willingness to supply places' is particularly important. Universities have found it very difficult to resist the temptation to enrol international students who are able to pay large amounts of money, but may not fully meet the entry requirements to adequately cope with the content of the degree into which they have enrolled. The most common deficiency is a lack of adequate English skills (Cervini 2011b). If this syndrome of inappropriate candidature becomes the norm, this cannot but help drive down academic standards, as fellow students draw obvious conclusions about how little might be required to pass a subject. University administrators may counter that overseas students are attracted to Australian universities because of the high standards of education. While it may be the case that standards are higher than in the student's home country, the more likely dynamics are imperfect information about

the realities of study in Australia (Das 2009) or, for some students, a desire to study primarily to obtain permanent residency (Cervini 2011b).

Moving from the sector-wide dynamics to focus specifically on economics departments, it would appear that economics departments are certainly not immune to biasing research over teaching (Guest & Duhs 2002; Hellier et al. 2004). Most academic economists are primarily interested in research, and doing research is what primarily attracted them to academic life. This situation is demonstrated in survey work that indicates that “many economists want a quiet life in their teaching” so as to maximise their research output (Economics Society of Australia 2004 p.29). This helps give rise to a culture that looks down on teaching. Ward (in Thornton and Millmow 2008) recalls that, in a department in which he previously worked, an elite group of staff referred to those that concentrated on teaching as being ‘hacks.’ When I asked him to elaborate, he explained that “a hack means you are not doing enough research, you spend too much time on teaching. Students like you, that’s what they meant” (Ward in Thornton & Millmow 2008 p.6). The creation of such informal norms can have an effect that is as powerful as a formal institution; indeed Ward went on to recall how the labelling of one staff member as a ‘hack’ had a strong impact on that staff member:

When he retired they made the mistake of holding a dinner for him. We were all sitting there and he gave the best speech I have ever heard, he stood up and said ‘welcome, I’m the number one hack in the economics department’, and it went on from there. He absolutely castigated them. That was the last time he ever had any contact with them. It shows how deep the depth of feeling was (Ward in Thornton & Millmow 2008 p.12).

Publications in highly-ranked journals are the central criteria for promotion. Recruitment advertisements nearly always emphasise the importance of proven research performance. One economist working within the group of eight stated to me that the simple reality was that his department did not employ teachers, but researchers. Another economist within the Group of Eight lamented how his department had not offered continuing positions to staff members who had long established that they were dedicated and exceptional teachers.

Exactly how does the poor incentive structure and culture affect curriculum content? Freedman and Blair (2009) point out that it directs the academic to opt for something that is easy to teach and easy to test (the two T's). This is broadly evident, though it can be argued that while orthodox economics is certainly easy to test, students will often struggle with it and require follow-up consultation with the teacher (or more likely, the casually-employed tutor). Nonetheless, the orthodox curriculum is relatively easier to teach than a political economy curriculum. The closed-system, fully determinate and rationalistic nature of the subject is much tidier conceptually. There are few shades of grey, and students can quickly sense when they have fully understood something and when they have not. Also, orthodox content means that most academics can simply teach the same content they were taught. Furthermore, they can do so in the same way, via the same established methods, habits and routines with which they were taught. There is also the advantage of accumulated supporting resources (lecture slides, learning guides etc.) that have been gradually developed and honed to support the established way of doing things. All of this links back to Chapter two, where it was shown that, for better or worse, the habitual and the routine are great sources of efficiency.

Conversely, subjects from the social science wing of the discipline, despite being seen as 'soft' subjects by some orthodox economists and some students, are in fact, demanding. Stretton (1996) notes that practical, historical and institutional content relies less on simplifying abstraction and deductive theory. Instead it requires detailed and careful evaluation of diverse situations. Such analysis is necessarily longer and more involved in exposition. Because it is not as neatly constructed, it is also harder to grasp and to genuinely internalise into one's thinking. It is a content and approach that "can put off, confuse or mislead many average or below-average students" (Stretton 1996 pp.1577-1578). Stretton argues that neoclassical content is far more amenable to being adapted to students of differing abilities. This point has particular relevance to many international students, who may have strong quantitative skills but lack the language and reading capacity for qualitative analysis. These students are thus a natural constituency for orthodox economics. In recent years, these students

have made up an increasing proportion of the overall student body, particularly in faculties of business.

How to respond to the challenge of teaching the political economy approach? One response would be to elevate research on economics teaching so that we could better understand how to effectively teach the social science wing of the discipline. Unfortunately, the journals focused on economics education, such as the *Australian journal of economics education*, *International journal of pluralism and economics education* and *International review of economics education* are not highly ranked and, as will shortly be explained, publishing in the journals is now verging on being prohibited in some economics departments. Lobbying for changes to the poor status of these journals, if successful, could be beneficial. This might be achievable as part of a general push to reform how journals are ranked within economics (see the next section of this chapter).

Another measure worth considering is the creation of academic positions that are dedicated to teaching. This practice exists in the US. For example, Pennsylvania State University has created teaching-only positions. These are fixed-term contract positions of between three and five years' duration (note that they do not go so far as to make them tenured positions). Academics employed as teachers are expected to demonstrate strong student evaluations of their teaching. It is also valued if they can publish articles in teaching research journals and engage in community outreach (Thornton 2011g). A key advantage of this structure is that academics who wish to can focus solely on excellence in teaching. The more important advantage is that it allows universities to recruit staff who have already demonstrated their capacity and interest in teaching, though such staff would surely have to be given time to each year to update their knowledge of the discipline. This 'horses for courses' strategy is superior to the normal practice of recruiting research-orientated staff who may have little intrinsic desire or capacity to teach (Thornton 2011g).

What other measures might be taken to improve the rewards of teaching? From a rational choice perspective, the solution is to increase the marginal returns to teaching or to increase the marginal cost of neglecting teaching. Such a framework of understanding may have some limited role in improving signals and

incentives, though it would have to be used with considerable caution, care and nuance. Rewards, particularly of a monetary nature, can have perverse effects on teaching. Gittins (2010) has pointed out a syndrome that is akin to Gresham's Law: monetary motives can drive out non-monetary motives. "Once you start paying people to do good works the selfish, materialist mentality takes hold and they stop doing those things unless they are paid. People who did good works because it made them feel good about themselves no longer feel that way. Those who contribute to the school community without winning a bonus may be discouraged in their well-doing" (Gittins 2010 p.31). This finding is consistent with other work in behavioural economics that clearly shows how monetary motives can drive out pro-social behaviour (Ariely, Bracha & Meier 2007). It is also consistent with earlier work by Titmuss (1971). Further, these findings can be linked back to Bowles's (2005) more general point that institutions and preferences co-evolve. Thus, the challenge when designing institutions is to induce the desired outcome, at the same time not (unintentionally) undermining the preferences and beliefs that are the underlying foundations for the sought-after behaviour.

Universities may also try to encourage more effort and innovation in teaching via greater monitoring. This amounts to moving closer towards complete contracting: stipulating more clearly what is required, monitoring for compliance and invoking sanctions for non-compliance. Such an approach is common within contemporary universities. However, such measures are costly to administer and may be self-defeating by undermining generosity, trust and reciprocity: socially necessary norms that usually need to be present to maintain morale and good performance (Tabb 1999).

8.3 Research

In the last few years, Australian universities have been preoccupied with preparing for, or reacting to, measures undertaken by the Federal Government's statutory body, the Australia Research Council (ARC), to assess research quality. At the time of writing, the regime of ranking is called Excellence in Research Australia (ERA). In January 2011 the ERA process ranked Australian universities on the basis of their research between 1 January 2003 and 31 December 2008

(the so called ERA 2010 rankings). Another round of the ERA process (the ERA 2012) was undertaken in 2012 with the release of the results imminent at the time of writing. The key metric generated by the ERA is a ranking between one and five for each disciplines assessed, with five being well above world standard and one being well below world standard. Table 8.3.1 lists these rankings for the 2010 ERA.

As part of ERA 2010 process the ARC, usually in consultation with disciplinary bodies, created a ranked list of journals for each academic discipline.³⁰ Journals were ranked in sequence of merit as being either A*, A, B or C. A* was seen as the highest standard and C as the lowest. Notably, the majority of journals in economics were B and C. Journals deemed to be of lower than a C standard were simply not recognised as research. The number and ratio of journals under a particular discipline was generally the key determinant of how a university's research output in a particular discipline was ranked. Ranking is not based on the work of a particular department, but by output in a particular disciplinary code.

How exactly were the economics journals ranked? Abelson (2009) explains that the Australia Research Council approached the Economic Society of Australia (ESA) to develop a ranking of economics journals. The ESA decided that journal rankings should be determined by surveying the views of all professors of economics and econometrics employed in Australian universities. The heads of economics departments were then surveyed on their views of the rankings that had been generated and they were given the opportunity to suggest amendments. Interestingly, the Australia Research Council subsequently made some ad hoc adjustments to these rankings. The decision making process for these ad-hoc adjustments was not made clear (Abelson 2009), though what is clear, and the key point to note, is that academic economists largely got the journal rankings that they asked for, or at least the journal rankings their academic professors asked for.

³⁰ Other journal rankings in economics include those produced by the Australian Business Deans Councils Research, SCOPUS, ISI and Google Scholar.

Given that orthodox economists dominated those invited to participate in ranking journals in economics, nearly all A, or A* journals were orthodox. There were only a very small number of A journals where traditional heterodox analysis could be published: the *Cambridge Journal of Economics*, *Journal of Post Keynesian Economics* were the most obvious ones. Therefore, it is not surprising that an analysis of the 2010 ERA economics rankings found that there were “built-in biases that favour theory and econometric research over applied and other economics research” (Bloch 2012 p.1).³¹ It was found that “membership of the committee that recommended the ratings was disproportionately weighted towards economic theory and econometrics. No suggestion of favouritism is required to realise that the committee lacked sufficient expertise in the applied economics and, especially, the other economics sub-disciplines to be able to counter the bias built into the journal rankings.” (Bloch 2012 p.2). Furthermore, it was found that there was no relevant expertise to properly assess the category of ‘other economics’ (Field of Reference 1499), an area that includes comparative economic systems, ecological economics and heterodox economics (Bloch 2012).

This poor ranking of the social science wing journals is not an isolated or one-off event and is part of a longer-term problem. For example, in 2007 the sub-disciplines of economic history and history of economic thought had to mount a vigorous campaign for their research even to be assessed as part of the discipline of economics (Millmow & Kates 2008). It is also not just an Australian problem. For example, Lee et al. (2010) documents the situation the discrimination against heterodox journals in common ranking regimes used in the US and UK.

This paucity of well-ranked political economy journals is in part a reflection of the minority status of political economists. It also suggests that mainstream economists (perhaps reflecting their fundamentally different ontological position) often have difficulty comprehending the value of the research by political economists — or at least, have a difficulty in viewing the work of political

³¹ Bloch (2012 p.6) also notes that “the relatively high rankings received by journals in economic theory and econometrics, as opposed to the lower rankings for applied journals and, especially, other economics” is not a uniquely Australian phenomena.

economists as part of the discipline of economics. The paucity of well-ranked political economy journals means that it makes it much harder for political economists to find employment in traditional centres of economics teaching. The situation can be easily perceived in zero-sum terms: every time a political economist is employed, there is one less mainstream economist in the department. The end result is that there is increasingly nobody willing or able to teach the social science wing of the discipline.

While the A* and A ranked journals were few in number, the list of B and C journals was considerably larger and captured most of the journals of interest to political economists. While this might indicate that heterodox researchers have an outlet for their research that is at least ascribed some real value, under the ERA, the situation was more problematic than it first appeared (Bloch 2010). A key problem was that the ERA system was structured in such a way that a department publishing a relatively large number of B and C journals would bring the overall average of its publications down. In other words B and C publications, if present in significant quantities, would be a liability for the university and thus for the researcher. In the 2010 ERA the key issue was the ratio of A*+A to B+C publications. This meant that in the 2010 ERA B and C articles had an equally bad effect on ranking (Harding 2011).

The clear signal generated by ERA 2010 regime was that publication in B and C ranked journals is, at best, a most ambiguous research contribution by the academic concerned. Unsurprisingly, some departments have introduced measures to discourage and limit publication in these journals. Because political economists have such limited options for publishing in A and A* star journals and are at risk of publishing in too many B and C journals, to employ them becomes a type of dangerous luxury that could plausibly cause a department to be ranked 1 (well below world standard) and 2 (below world standard). As will become clear in the next chapter, this is exactly what occurred at the University of Western Sydney, where its economics department had a significant number of heterodox economists on staff. Notably, this poor ranking had an immediate effect on the status and resourcing of this department within the university.

This prioritising of A and A* journals is made all the worse by the fact that most leading journals, rather than being open to genuinely new developments, seem to be concerned with upholding Kuhnian normal science. As one US academic stated:

I am currently trying to bring another discipline into understanding economics and the results we're seeing, and I am getting a huge pushback. The editor one of the major journals said, "Well, there's nothing empirical in this," but I said, "I know, but I'm looking at how we think about what we see in our empirics, and this is very important." So, at least from my perspective, that's been frustrating. It's just a challenge for me to improve the quality of what I'm doing in order to reach that audience. But to be successful right now, if you're a junior person trying to get tenure, you have...being innovative in that sense is probably not going to be helpful, you're going to have to publish just like the standard has been (cited in Harley et al. 2010 p.335).

Another problem is that the top-ranked journals cannot even keep up with current research. This is because the processing of submitted papers is characterised by slow turnaround times. This is then combined with a slow-moving process of multiple revisions. The outcome is one where it can easily take five or more years to publish in a leading economics journal (Harley et al. 2010). The internet has meant that working papers are now the platform for the most recent research and journal articles have become an archival version of working papers (Harley et al. 2010). As another US academic has stated:

People show up to conferences, they read papers, they teach papers. All of us are trying to push our field forward. We're still writing and doing research ourselves and the journals are so pathetically slow that they are frequently seven years out of date from where the field is, so if we relied on the journals, we wouldn't know anything (cited in Harley et al. 2010 p.339).

If this is the case, the leading journals can be seen as largely ceremonial and memorial institutions: institutions that uphold and signify status but are of little practical use, and in fact are detrimental, to the task of social provisioning.

Table 8.3.1 Ranking of Australian universities for the research in economics

Institution	Rating
University of Melbourne	5
Australian National University	4
Monash University	4
University of New South Wales	4
University of Queensland	4
University of Technology, Sydney	4
University of Western Australia	4
Bond University	3
Charles Darwin University	3
Queensland University of Technology	3
University of Adelaide	3
University of Sydney	3
Curtin University of Technology	2
Deakin University	2
Edith Cowan University	2
La Trobe University	2
Macquarie University	2
RMIT University	2
Swinburne University of Technology	2
University of New England	2
University of Tasmania (inc. Australian Maritime College)	2
Australian Catholic University	1
Central Queensland University	1
Charles Sturt University	1
Flinders University	1
Griffith University	1
James Cook University	1
Murdoch University	1
University of Ballarat	1
University of Canberra	1
University of Newcastle	1
University of South Australia	1
University of Western Sydney	1
University of Wollongong	1
Victoria University	1
Southern Cross University	Not Assessed
University of Notre Dame Australia	Not Assessed
University of Southern Queensland	Not Assessed
University of the Sunshine Coast	Not Assessed

Source: (Australia Research Council p.280)

How did the ERA 2010 reward publications that were outside the discipline of one's own department? For example, what was the value of an economist publishing in a highly ranked political science journal? Such a publication would be seen as being of less value to an economics department, as it cannot make a contribution to raising the standard of economics research for the department. The article might be beneficial to other departments, or to the university as a whole, but departments are primarily orientated to the standing of their discipline and department. Thus such benefits to the university and other departments have little value to individual departments; indeed, given that individual departments compete for internal funding and prestige, boosting the research standing of another department could be seen as a bad thing. In summary, the current ERA regime is highly damaging to both research and teaching in the social science wing of the economics.

Have things improved for the ERA 2012? (note the results from this round were not yet released at the time of writing) The key change is that the ARC has disowned journal rankings, but rather unsurprisingly (given the importance of journals in determining research standing) many departments are continuing to use the ERA 2010 journal rankings (or using similar rankings such as those produced by the Australian Business Deans Council) as their key reference point in measuring the current research output of their academics. This means that journal rankings continue to have a strong influence over promotions and recruitment, workload allocation, what research is actually done and where it is published.

Part of the problem with the ERA process is that it is largely a winner-take-all system, as many of the processes behind research success are characterised by circular and cumulative causation. This current institutional structure is clearly favourable to the Go8 universities, which will get stronger as the others become weaker. As one professor of economics outside the Go8 has asserted:

In a government-based university system where salaries are fairly equal the best academics will filter into the best-funded universities where research externalities are greatest. These master-of-the-universe universities then stack ARC Grant-giving committees and take turns each

year handing out the bulk of research grants to each other. Even if these grants produce little in the way of output they continue to flow with only token offerings to the 'serf' class of researchers...The injustice of comparing research outcomes from those who do not teach at all and are blessed with abundant research budgets with those who have heavy teaching loads and negligible research budgets is obvious...Even the meagre pickings given to the research 'drones' should be transferred to their better-off prima donna colleagues who can make better use of the loot. It's the Matthew effect - to him that hath more shall be given but to him that hath little, take that little away (Clarke 2010 p.1).

The prestige and publicity generated by strong research performance make it easier to conduct more research. The winner-take-all character of research in Australian universities has caused many universities to be extremely anxious about raising the quality and amount of their research output. The strong universities are anxious to hold their gains and build upon them; the weaker universities are even more anxious about slipping behind further (the case studies in the chapters ahead illustrate this very clearly). On this basis, economics departments will be even more inclined to employ orthodox economists (and research orientated ones at that) as there are simply more highly ranked journals for such economists to publish in.

There is also an important linkage between good research performance and teaching performance. Good research outcomes by a university can be used to attract larger numbers of students, and attract students of a higher calibre. This is because a good research profile raises the overall prestige and profile of the university. It is not hard to see how students can make the mental leap that a world-class research university is also a world class teaching university. If universities are admitting high-calibre students they will be easier to teach and they will probably be more knowledgeable graduates; this will reflect well on the university. Winning research grants brings in income, raises morale and denotes a university as being either dynamic or a backwater. This then affects the research and teaching quality of the academics that a university can recruit and hold. In summary, the dynamics of circular and cumulative causation are pervasive. The process of circular and cumulative causation is mostly virtuous for

the Group of Eight universities and mostly vicious for the non Group of Eight universities. Further deregulation of the tertiary sector, such as the recent deregulation of student quotas,³² will probably exacerbate this situation.

In summary, the current reality of the contemporary economics department is quite perverse. Teaching is too often seen as existing primarily to cross-subsidise research. Furthermore, the research produced is increasingly narrow. Aspromourgos succinctly captures the essential features of situation:

The large number of students doing low-level economics provides a funding base for academic departments of economists who, along with that teaching (and some higher level teaching) are able to undertake all sorts of high-level ('neoclassical' if you like) research, about which maybe nobody but them gives a damn. That research might be the most precious thing in their self-understanding of their professional activities; but in a wider functional sense it's rather incidental in the scheme of things (Aspromourgos in Thornton 2011k p.1).

Recent attempts to rank research in economics will probably increase the neglect of teaching and the narrowness of research.

8.4 What is to be done?

The problems that have been identified in this chapter are substantial, and at this point it is not possible to offer detailed solutions for all of them. However, there are a number of things that can be done, or are least worth considering. The profession, through its bodies such as the Economic Society of Australia or the Society of Heterodox Economics could lobby the ARC to establish a separate two-digit Field of Reference (FoR) code for the social science wing of the discipline. Many good B and C journals in the social science wing would then be

³² Since January 2012 Individual Universities have been able to offer as many (or as few) students into each course as they choose. One of the implications of this change is that Group of Eight Universities can enrol students that would otherwise have enrolled at non-Group of Eight Universities.

upgraded to A or A*, and publications in these journals would go from being seen as harmful to being helpful to a University's research standing.

For several (interrelated) reasons, the establishment of a two-digit FoR code by ARC is not as far-fetched as it might seem. First, economics is a special case. It is unique in the social sciences for having a clearly recognisable orthodoxy and heterodoxy (Backhouse & Fontaine 2010). This fact is partly due to social science wing having different ontological foundations to economics, but it also due to a range of other political, social, historical and psychological reasons upon which later chapters will elaborate. The mainstream is unlikely to see things like this, but these are not the people who need to be persuaded: it is the Australia Research Council that makes the decision and this body comprises a mix of academics, including about 100 career public servants. Given the generally poor perception of economists by other academics and society at large, it is plausible that this rather strong argument for a separate two-digit FoR code may gain positive consideration.

Another response to bias against 'economics as a social science' research would be for political economy journals to move out from under the ARC's two-digit Field of Reference (FoR) economics (FoR 14 - Economics) and into the general social science FoR code (FoR 16 - Studies in Human Society). Here it could have its own four-digit sub-code and be evaluated as a social science by other social scientists, who would have much greater intellectual understanding of, and affinity with, political economy research. This option could be pursued if creation of a two-digit code for political economy should turn out to be unachievable.

It may also be constructive to lobby the ARC to change the ERA rules so that departments do not form the view that publications in B and C ranked journal publications are an *active liability* to a department. This should remedy a situation whereby some departments are currently discouraging and limiting publications in these journals. After all, it would make sense for a body set up to promote research to at least not to *penalise* the practice of research itself. On this point, it is relevant to note that most journals in any discipline are B or C and that much scientific progress does not come from 'Eureka' moments, but from steady work that gradually builds towards a major breakthrough.

Yet another possible response to the problem would be for the ARC to specify that one of its criteria for research quality is research breadth and diversity. If a university could demonstrate that it had contributed to the development of all branches of economics it should be entitled to receive some reward for this. Again, if this strategy were pursued, care would need to be taken that those that assess political economy research have the necessary background and orientation to evaluate it properly.

How to remedy the neglect of teaching and curricular innovation is a rather involved question, though there are some obvious things that might be worth trying. First, national competitions for student essays or student debating could be run by organisations such as the Economic Society of Australia, Society of Heterodox Economists or The History of Economic Thought Society without generating too much work for anybody. Having taught in both Go8 and non-Go8 universities, I know it is possible to develop some very good students. If universities perform better than they expect, this can be used for publicity and marketing purposes. If universities underperform in these areas it might encourage them to think more carefully about how they teach and what they teach.

Some consideration should also be given to establishing teaching-only, or at least teaching-focused, institutions (Norton 2012). If some universities could prioritise or concentrate solely on teaching they might well do a better job at much lower cost to students and also provide better working conditions and job security for staff. The obvious danger in this is that academics would simply be given gargantuan workloads, leaving little or no time to update their own understanding of their area of expertise. However, if time were given for professional development, the workforce effectively unionised and the appropriate industrial awards developed, it need not be so. In any event, it should be noted that the current situation is highly exploitative and unfair to the majority of academic staff: less than half the academic workforce has a permanent academic appointment, because universities have increasingly employed casual staff to teach and then directed the savings to permanent academics who get to do the research (Norton 2012).

Another obvious danger is that teaching-only universities may become stuck with an out-of-date second-rate curriculum as academics (who have had no time to look at developments in their field) are neither aware that the curriculum is out of date, nor in a position to do the necessary work to update the curriculum. Again, there is no particular reason why this would occur if the right institutions could be put in place. In any event, in regard to economics, Chapter six clearly showed that the curriculum is nearly entirely moribund under the current regime. It is hard to imagine it getting any worse than it already is. There is also the danger that prestige universities that continue to do teaching and research may continue to attract the best students. This would lead to a self-sustaining belief that teaching-only universities are second class. However, and yet again, this winner-take-all dynamic is a characteristic of the current system, and dedicated teaching-only universities might actually transcend the problem, rather than continue to fall victim to it.

8.5 The overall regulatory environment for universities

Another issue that appears to be something that might strike at the very viability of many programs (including economics) in the non Group of Eight universities is recent deregulation of student places. The two case studies that follow this chapter will illustrate very clearly just how this deregulation is playing out, but the basic situation can be briefly described at this point. Universities can now enrol as many students into their programs as they see fit: there are neither limits on how many students they wish to admit, nor are there requirements for these students to have achieved a certain Australian tertiary admission ranking (ATAR). What this has meant in practice is double-edged: more students are applying to the elite universities; and elite universities are now enrolling more students (Keen 2012). Of course, the non-elite universities could respond to deregulation by lowering their own ATAR scores. However, past a certain point this becomes counter-productive as the stigma of a course with a low ATAR requirement becomes a further disincentive to enrol into a degree.

The deregulation of enrolments may well set up a vicious circle of circular and cumulative causation in Australian universities. The elite universities will both attract and enrol a larger and larger proportion of students who are both

interested in, and capable of doing, intellectually demanding degrees such as a Bachelor of Economics, Bachelor of Political Economy or Bachelor of Politics, Philosophy and Economics. This leaves the non-elite universities to teach more generic, less intellectually demanding degrees. In turn, this makes it more difficult for these non-elite universities to attract and maintain good teaching staff, which further damages their capacity to offer high quality courses. While such a two-tier system is advantageous to the Go8 universities, it is hard to see how it would be to the overall benefit of the university sector or Australian society.

8.6 Conclusion

This chapter has summarised the most basic institutional foundations at work in economics departments. The next chapters build on this analysis via the undertaking of three case studies. The use of case studies not only allows for further illumination of the common institutional structures that exist in economics departments, but also highlights how individual economics departments are constrained and enabled by their own unique history, current circumstances and personnel. This case study approach thus allows for structure, agency, history and context to be given their due.

9 Reform from within

9.1 Introduction

Given the trends in the curriculum identified in Chapter six, and given the challenges to remedy this situation identified in Chapters six and seven and eight, it is tempting to conclude that further attempts at reform from within economics departments are futile. Indeed, some have argued exactly this (Butler, Jones & Stilwell 2009). Moreover, two central findings of this thesis are that the future for a pluralist economics lies in greater integration with the social science (1.3.4) and that most traditional centres of economics teaching are incapable of being the locus for a plural economics curriculum (1.3.3). However, this thesis does not argue for completely giving up on all traditional economics departments: for this reason finding 1.3.3 includes the phrase '*most* traditional centres of economics teaching' quite deliberately. This qualification is necessary, as the evidence shows that not all traditional centres of economics teaching are always irredeemably monist; indeed, in circumstances where there has been enlightened leadership, a few departments have managed to be quite plural for periods of time. Two examples of this are the Department of Economics at the University of Adelaide in the 1970s (Butler, Jones & Stilwell 2009), and the Department of Economics at UNSW in the 1970s and 80s (Thornton 2010c). A more recent example, and the focus of this chapter, is the School of Economics and Finance (SEF) at the University of Western Sydney (UWS).

The case study of SEF shows that while some plurality within a traditional economics department is indeed possible, the preconditions it requires are rather demanding. These preconditions include support from the upper management of the university; a head of school with a commitment to pluralism; and the managerial skill-set to manage pluralism in practice. There are also some marked obstacles that include the fact that employing political economists to teach the required subjects would probably be a liability to a department's research standing (at least under the current regime of research assessment created by the Australia Research Council). Another issue is that if the department existed within a non-elite university then student enrolments might have to be re-regulated to create the chance of a viable student constituency being found. In general, the UWS case study shows how difficult it is to achieve reform in a traditional centre of economics teaching. In the absence of the required

preconditions, it may well be better for reforms to direct their efforts towards greater integration with the social sciences. As all three case studies in the thesis, the purpose of the case study is to show different reform strategies in action; to evaluate whether the strategy represents a general model that could be applied elsewhere; and to identify any general lessons or tips that might be of general assistance to reformers.

9.2 The University of Western Sydney

UWS is ranked in the middle band of Australian universities (Williams 2007). It is a relatively young university, established in 2000. It was created out of a merger between a range of existing colleges and teaching institutions that existed in Greater Western Sydney. The merger occurred in stages: in the 1990s UWS essentially existed as a federation, whereby each of the former colleges and teaching institutions became a campus of UWS but retained considerable autonomy; by 2000 the various campuses were fully merged and UWS became a genuine single entity.

9.3 The School of Economics and Finance

The School of Economics and Finance at UWS was formed in 2001 through the merger of three departments: the Department of Economics and Finance at the Macarthur campus (previously the Macarthur Institute for Higher Education); the School of Economics and Finance from the Nepean campus (previously the Nepean College of Advanced Education); and the Economics group from the Hawkesbury campus (previously Hawkesbury College of Advanced Education). In addition, the Property Group (which deals with issues such as land valuation), formerly based on the Blacktown campus, was merged into the school in January 2006 (University of Western Sydney 2011b). This school was established in 2001 and existed until the end of 2011, when it was merged into a newly created school of business (this merger will be discussed later in the chapter). The former school is now described as the Academic Program of Economics and Finance.

9.4 Pluralist foundations

SEF's first head of department was Associate Professor Brian Pinkstone, who held this position between 2000 and 2006. Pinkstone had earlier been head of the school of economics at University of Western Sydney (Nepean Campus). He oversaw the amalgamation of the disparate programs in economics and finance that had previously been offered at the three formerly independent branches of UWS (Thornton 2011a). During this process particular attention was given to revamping units in economic history and history of economic thought, as well as introducing new units in behavioural finance and political economy. Several of these subjects were compulsory subjects in the Bachelor of Economics and in the Honours program in economics (Thornton 2011a).

The notably pluralist curriculum that was established from SEF's outset becomes more explicable when one considers Pinkstone's background. Pinkstone undertook a first class Honours degree and then a PhD in economic history from Macquarie University, and he is a Marxist economic historian who also has a strong interest in critical realism. From its inception, then, SEF had a head of school who was both heterodox and supportive of the heterodoxy:

I guess it was an historical accident that I became Head of the new unified UWS School of Economics and Finance in 2000 and that I was committed to a pluralist approach. I'm a Marxist with a keen interest in critical realism and pluralism and I did make that clear at my interviews. Some colleagues have called me a small 'l' liberal Marxist in the sense that I believe that a comprehensive understanding of economics (and political economy) requires a good understanding of the various schools of economic thought, especially those outside the neoclassical mainstream.

Although the new school included people from across the political spectrum and most were of a mainstream orientation, many were open to the idea that the students should be at least exposed to alternative perspectives. In addition I argued that as a new non-sandstone school of economics and finance, we would be better off pursuing a pluralist approach, which would permit us to stake out a unique identity rather than

attempting to simply present ourselves as another run of the mill orthodox school. I put this to a school meeting in 2001 and received overwhelming support for the approach (even from key orthodox economists within the school). This pluralist approach was subsequently enshrined in the introduction on the school's website (Pinkstone in Thornton 2011a p.1).

It is worth quoting this introduction, as the focus on pluralism and on debate is explicit:

In many of our units, we explore simplified models of the economy, and use deductive reasoning and available data, to try to understand how the various economic variables interact and produce the outcomes that so concern society as a whole. Some of the issues we will examine are hotly contested and we introduce controversies among economists regarding economic theory and policy.

The school aims to provide students with an understanding of the theoretical and methodological variety that exists in approaches to understanding economic and financial phenomena, as well as the comprehensive technical skills in economic analysis and statistical techniques. Our school is committed to pluralism in theory and methodology (University of Western Sydney 2011b).

Pinkstone explains that the pluralist orientation of the department was not imposed from above, but through a process of collegial discussion and persuasion:

I was appointed Head of School in late 2000. Over 2001, with the assistance of the school's undergraduate programs coordinator (Dr John Ablett) I developed rough proposals for the general structure of our new degree programs in Economics, Bachelor of Business (Economics and Finance) and the Bachelor of Business (Applied Finance). These proposals were then put to a series of school meetings for discussion and development and finally approval via a vote of all academics in the school.

The key issue for the Bachelor of economics for me was persuading the more orthodox members of the school that a pluralist approach was legitimate. I wanted to avoid a split along the lines that had occurred at Sydney University between mainstream and political economy approaches. So I was keen that all staff became involved in discussions over the new degree programs and that the content of the subjects and programs were developed by the staff that would be teaching in them.

To ensure consistency across programs and subjects (units) we created a sub-structure within the School involving five unit review committees and an honours committee. There was no limitation on staff membership of the committees so anyone could attend any of them to have a say about how units were to be developed and how each would fit into the new structure and complement others in terms of their content. The review committees then made recommendations for the school to vote upon. The five unit review committees were microeconomics, macroeconomics, finance, quantitative units and miscellaneous units, the latter covering history of economic thought, economic history, political economy, Asian economies, labour economics, development economics, international economics, managerial economics and economics of tourism (Pinkstone in Thornton 2011a pp.3-4).

Pinkstone believed that the school should offer at least three distinct degree programs in economics and in finance. There were two motivations for this. First, he believed specific degrees attract specific constituencies and do not compete with each other. Second, having a diversified set of degree programmes meant that the department could create orthodox degrees (to allay the concerns of orthodox staff) and pluralist degrees (to satisfy their heterodox staff). Consequently the Bachelor of Economics was developed to be a pluralist degree, while the Bachelor of Business (Economic and Finance Major) and the Bachelor of Business (Applied Finance) were developed to be orthodox.

While there was initial concern about having distinct degree programs within the school, his previous experience at University of Western Sydney (Nepean Campus) and some survey evidence he had undertaken of existing UWS

students indicated to him a number of reasons to create separate degrees. First, Bachelor of Economics students were more likely to have studied economics at high school and were more likely to be interested in becoming professional/academic economists, and they had a bias towards seeking alternative views and subjects in their study of economics. Secondly, those who took the Bachelor of Business double major in economics and finance were more business oriented and preferred a structured programme. Pinkstone feels that this may be because they were less likely to have studied economics before. Thirdly, those who took applied finance had clearly decided upon a career in the finance sector, most commonly in areas such as financial planning.

Pinkstone believes that time has vindicated his position. All three degree programs expanded rapidly, to annual intakes of around 100 per year each. He argues that recent moves by senior management within the university to remove the economics and finance major in the Business degree for 2012 on the grounds that it duplicated Bachelor of Economics were misconceived. While enrolments in the Bachelor of Economics did initially improve by around 30 per cent, this was only about the average additional demand for all business degrees majors, and in subsequent 2012 enrolments in the Bachelor of Economics *dropped* (Thornton 2011a). By reducing the programs in economics and finance, and by dissolving the school itself, carried the danger of leading prospective economics and finance students to conclude that UWS is winding down its activities in this discipline area — and thus encourage students to look elsewhere for places with secure and established departments/schools which offer explicitly specialised degrees and programs in economics and finance.

The eight core units in the Bachelor of Economics had a clear orthodox component: first-year and second-year microeconomics and first-year and second-year macroeconomics as well as an introductory quantitative unit. The remainder of the core was made up of three units taught from a heterodox perspective, *Australia and the global economy*, *History of economic thought* and *Political economy*. Third-year micro and macro and second and third-year econometrics were available via the majors or as electives, and students were required to take these subjects if they wanted to do honours. The degree program in the Bachelor of Economics was designed to be quite open-ended and

interdisciplinary in terms of electives. Students could undertake a diverse set of majors that ranged from areas such as econometrics and management to history, politics and philosophy.

The Bachelor of Economics has undergone little change since its inception. However, a 2006 restructure of UWS colleges and schools forced SEF to make changes to its Bachelor of Business (Economic and Finance Major) and Bachelor of Business (Applied Finance). All Bachelor of Business programs were required to have a common first year. The rationale for this was to reduce the number of units offered by the College of Business. The school was also instructed to cancel any subjects that had fewer than thirty enrolments in units that were taught in the business degree programs. These subjects were managerial economics, development economics, labour economics, and the economics of tourism. The removal of these subjects had a negative effect on the overall programs and their cancellation may well have been a case of false economy: individual subjects with low enrolments, while not profitable in themselves, can sometimes play an important role in increasing the attractiveness (and thus profitability) of the entire degree program, as well as supporting the reputation of the department as being well rounded.

9.5 Change and attempted restructuring

An important chapter of SEF's history under Pinkstone was the defeating of moves to merge SEF with the School of Accounting and thus create a School of Business. The achievement of this outcome required working in coalition with accounting and in bringing external pressure to bear:

Together with the Head of School for Accounting I called for an external inquiry, to which the university agreed. Although the university appointed the external committee members, that committee ended up agreeing with our position that the difference between the two schools (one with an pluralist academic approach and the other with a professional orientation) meant that there were few if any synergies to be obtained from an amalgamation and that we would lose our respective professional identities in a general School of Business. The schools then survived as

independent entities. Not surprisingly, I was not re-appointed for another term in late 2006, when schools were restructured along managerialist lines (Pinkstone in Thornton 2011a p.1).

In April 2007 Professor John Lodewijks was appointed Head of School. Like Pinkstone, Lodewijks was a head of school with a broader eclectic approach to economics; his interests encompass development economics, history and philosophy of economics and macroeconomics. He also has an interest in teaching, having received a number of awards (University of Western Sydney 2011a). Lodewijks was in the first cohort of students in the Political Economy program at Sydney University in the 1970s, though he was generally not actively involved in the various episodes of collective struggle and protest that occurred as part of the political economy dispute (see Chapter eleven for a full description of this dispute). Lodewijks studied both the orthodox and political economy courses, graduating with a first-class Honours degree. Lodewijks then undertook his PhD at Duke University. From 1985 until April 2007 he worked at the School of Economics at the University of New South Wales, eventually becoming head of department (University of Western Sydney 2011a).

At the time of its dissolution, SEF had the strongest representation of heterodox economists in the country. Lodewijks (2011) estimates that of the forty academic staff that were employed at SEF, approximately twenty would identify themselves as heterodox. While the curriculum has only four subjects that are explicitly heterodox, it is important to note that many predominantly orthodox subjects also have a heterodox component, or are at least taught by staff who have a heterodox inclination. The school has also maintained its subjects in history of economic thought and economic history.

SEF under Lodewijks continued its strategy of differentiation. Lodewijks stresses the creative possibilities, rather than the limitations, of being outside the Go8. He points to the fact that SEF was able attract some excellent PhD students because of its range of supervisors. Furthermore, the school has recently employed some very good PhD graduates who could have worked anywhere in the world but were attracted to SEF's unique environment and expertise (Lodewijks 2011).

How did such a plural school function? The school seems to have functioned well enough and there is not any indication of any deep dysfunctionality. However, Lodewijks has made the point that heterodox economists can be prone to fight with each other (as well as with the orthodox economists). In such circumstances the head of school needs to take an active role in making sure that the culture of the school is collegial and respectful of difference. The criterion for the individual staff member is to be a good exponent within their chosen field of economics (Lodewijks 2011). Lodewijks recalls early on in his appointment having to outlaw instances of ‘death by email’, whereby staff would launch withering broadsides at each other (Thornton 2010d). This indicates that, even when a department has officially embraced the concept of pluralism as a guiding principle, its members may sometimes struggle to internalise the concept in their day-to-day habits of thought and action.

9.6 The 2010 ERA

How did this plural and quite heterodox department fare in the 2010 ERA national assessment of research quality? SEF was given an overall ranking for economics of one out of five (against the national average for economics of 2.17 out of 5). A ranking of one is described as “evidence of performance well below world standard presented by the suite of indicators used for evaluation” (Australian Research Council 2011 p.5). This ranking breaks down into subcategories. Specifically, one out of five for economic theory (FoR 1401) and one out five for applied economics (FoR 1402). It was not assessed for econometrics (FoR 1403) nor for ‘other economics’ (FoR 1499). SEF’s ranking of 1 out of 5 seems surprisingly low. The low ERA ranking is explicable when one reflects on the point made in Chapter eight that a department’s publication in A and A* star journals was the most decisive factor in 2010 ERA rankings and that such journals are generally neither heterodox or pluralist. That approximately half of SEF’s academics were heterodox could only have put it at a disadvantage. Additional frustrations were that the 2010 ERA was focused on the period 2003-2008 (the early years of the SEF’s existence) and did not take into account the good output of research that had occurred since this time. This included growing external research funding — funding that seemed to be characterised by an orientation to solving real-world problems. Some of its academics, such as

Professor Steve Keen, had also been very active in public debates in both Australia and overseas. The latest comparative research performance data for UWS covering 2010 indicates that in terms of the quantity of research publications (sum of weighted higher education research data collection points) SEF was ranked number one among all 16 Schools with 8.02 per cent of all UWS publications (Thornton 2012f).

Did a low ERA 2010 ranking really matter? Yes. Lodewijks (Thornton 2012f p.1) describes the ERA 2010 ranking of one as a “crushing result” (Thornton 2012f p.1). Officially the result was seen as a “disappointment” to the university, and not long after the rankings were announced research funding to the school was considerably restricted and redirected to areas of research concentration in the university that had achieved higher ratings (Thornton 2012f p.1). Clearly, this rapid internal adjustment of funding can only make it hard to obtain a higher result in the next round of the ERA.

It is initially surprising to see that SEF did not submit the minimum number of thirty works so that it could be assessed for FoR 1499 (Other Economics), as this category includes heterodox economics and ecological economics. The anomaly can be explained by the fact that analysis done prior to ERA 2010 suggested that choosing to rank research under this code would be disadvantageous (Bloch 2010) and departments would be better off classifying political economy research under the 1401, 1402 and 1403 codes. On this point, it is worth noting that only six of Australia’s 39 universities were assessed for the 1499 category: Victoria University, Flinders University and Sydney University were ranked one, La Trobe University was ranked two, University of Western Australia ranked three and Australian National University ranked four. 1499 had the lowest average ranking of the four four-digit FoR codes – vindicating the suspicion that 1499 would be dealt with harshly.

9.7 Merger into School of Business

While the ERA process was neither kind nor fair to SEF, it was not simply the ERA 2010 that led to its demise. SEF was dissolved primarily due to an organisational restructure. While SEF had survived the previous attempt to merge

it with the School of Accounting, this time it was swept away in a restructure that was university-wide and which occurred unexpectedly, and at great speed. The restructure was announced in the latter half of 2011, with the restructuring to be in place by the beginning of 2012. Up until 2012, UWS had been structured around three colleges: Arts, Business and Law, and Health and Sciences. These colleges were essentially faculties, with five to six schools in each college. The college layer was removed and UWS is now structured around the existence of nine large schools, which were created by merging the schools that had previously existed. In the case of the School of Economics and Finance it was merged with the schools of marketing, management and accounting to create a single business school. The new business school is extremely large, with 132 permanent academic staff.

Economics and finance at UWS is now defined just as an 'academic program' within the business school. The obvious danger in these new arrangements is that economics will lose its autonomy and thus its distinctive direction:

Despite the school's outstanding success in producing honours and PhD students I'm not hopeful that under the latest restructure the Bachelor of Economics will survive as a pluralist program and indeed I have strong doubts that the Bachelor of Economics will survive in any form in the longer run, given that UWS is so focused on cutting costs in the business schools in order to increase the surplus that business disciplines provide to the rest of the university (Pinkstone in Thornton 2011a p.3).

It needs to be emphasised that economics and business programs at UWS generated and continue to generate significant revenues (i.e. the department was not merged because it was loss-making). The issue is that senior management wanted it to produce *even more revenue* so that it could be siphoned off to the rest of the university to support university overheads, the divisions, the Medical School, the new research institutes and various 'strategic initiatives' (Thornton 2012f). The obvious (though seemingly short-sighted) strategy is to have more students enrol into fewer subjects and degree programs. As an illustration of this trend, at the time of writing (September 2012) the university is considering only offering subjects that have at least 100 enrolments in some programs (Thornton

2011a). This requirement for business faculties to deliver greater surpluses to cross-subsidise other aspects of a university's operations is not unique to UWS and seems to be a common syndrome in Australian universities, occurring at other universities such as La Trobe and Monash University. There are obvious risks to a department or faculty when this cross-subsidisation is pursued too far: namely, the killing of the golden goose.

While it is hard to see how a merging will be helpful to development of a pluralist economics at UWS, it is too early to tell exactly what will happen. It may be that a pluralist economics will continue to prosper and build; clearly, much now depends on the proclivities of the Dean of the newly created School of Business. Nonetheless, any success will likely be in spite of the restructure, not because of it (Thornton 2011a).

As will be clearly evident in the other two case studies in this thesis, this type of sudden and radical restructuring of departments is a general syndrome in Australian universities, in which growing corporate managerialism has replaced more collegial systems of administration (Lafferty & Fleming 2000; Lodewijks 2007). The pattern is one whereby incoming senior managers (be they deans, deputy vice-chancellors or vice chancellors, suddenly impose changes from above. The academics at ground level have little or no input into the decision and often struggle to see either the intellectual or practical justification. The new organisational structure is put into place and then within a few years (perhaps even a few months) it can be changed yet again. Such changes consume an enormous amount of time and energy and can be very disruptive and bad for morale. One does not have to really read too much between the lines of the 2011 SEF Annual Report to see that it is a classic example of this syndrome:

2011 was a very hectic year for change. It is sometimes said that the only constant at UWS is change. The beginning of the year was dominated by preparation for, and participation in, the daunting Australian Universities Quality Agency (AUQA) Audit. Immediately after that Audit it was announced that UWS would be undergoing very significant restructuring that was to be operational by the beginning of 2012. It certainly took many of us by surprise and involved not only the removal of the College layer but

also encompassed the merger of four Schools – Economics and Finance, Marketing, Management and Accounting – into one School of Business. In total it replaces a structure of three Colleges and 16 Schools with just nine Schools. So the end of this year also marks the end of the School of Economics and Finance!

The AUQA audit and then the restructuring proposals absorbed much staff time and discussion and we certainly had to be disciplined enough to not let these distractions take us away from the 'main game' of achieving quality teaching, research and engagement outcomes (University of Western Sydney 2012 p.3).

The report then provides an extensive account of meetings and committees that occurred throughout the year and the ways in which a significant amount of what was achieved in such forums was made entirely redundant by the restructure. One SEF staff member lamented that constant change was not only time-consuming, it also interfered with the 'learning by doing' processes that are at the heart of efficiency improvements. Stability in structures and academic programs is also important for achieving a stable coherent 'brand' in the academic market place.

What is driving this process of constant change? In part, it is a reflection of federal government policy to make universities more self-sufficient and market-orientated. There is an increased intensity of competition between universities for research funding and for student enrolments. University management has generally responded to these pressures by becoming hyperactive, impatient and overly focused on the short-term. Appearance can become more important than substance. In such an environment senior managers with a demonstrated appetite and capacity for rapid organisational change will be more employable, thus creating an incentive for senior managers to orientate themselves to playing the restructuring game.

9.8 Conclusion

Despite SEF's recent dissolution, and its low ranking in 2010 ERA, the SEF story illustrates that pursuing reform from within economics departments *is* possible. Furthermore, while a pluralist department requires careful management, such departments can clearly be productive and exploit a particular niche with considerable success. Is it plausible that other schools or departments that are similar to that at UWS may be established? Yes, but certain preconditions would have to be met. First, the department or school would need to appoint a head of department with the necessary orientation and skills. Second, the department would need to find, and commit itself to, a viable niche (as opposed to the normal strategy of attempting to follow in the footsteps of a Go8 economics department). Third, the university would have to be prepared to commit to support the existence of a pluralist department; this would include embracing a somewhat different set of criteria to evaluate the department's work, in particular, not being centrally concerned if the ERA ranking regime produces a perversely poor ranking. Different measures of success would have to be adopted: for example, such measures as the quality of its teaching, the innovativeness of its curriculum and the social impact and benefit of its research. Fourth, if the university were non-elite, it would have to have both steady nerves and entrepreneurial flair to continue to offer a degree such as a Bachelor of Economics in the new deregulated environment for student enrolments (as discussed in Section 8.5). Fifth, a university would also have to be patient and provide the department with a degree of a stability and support as it carved out its particular niche. The absence of these last two requirements seems to have been the biggest problem at UWS:

You would think that the school with the best teaching record, best research output and greatest success in generating income might have ended up being lauded and used as an exemplar for the rest of the university. Instead it has followed the fate of the golden goose. In part the explanation is simply the general drive to cut costs in business to cross-subsidise the rest of UWS as happens elsewhere. But in part it was also a difficulty in persuading senior management that the university stood to gain from having a successful and uniquely oriented economics school

and programme. The university has maintained the School of Law (which was part of the old College of Business) as an independent school, but there is no similar affection for economics. Indeed from the first days of the restructure in early 2001, senior management and the dean at that time proposed not to have an economics degree. I had just been appointed as Head of School and I had to tell them that I had no interest in being the Head of School of a School of Economics and Finance that did not have its own program, before they conceded to allow it to exist. I failed to ever convince senior management that the pluralist strategy would be effective in raising the profile of the school and UWS or that the school would prove as successful as it did. There seemed to remain an underlying lack of interest which I could never break through... So one important lesson from our experience for any economics group that tries to pursue such an approach in the future is that senior management needs to be convinced of the merit of the project from the very start and continually courted to ensure ongoing support at senior levels (Pinkstone in Thornton 2011a p.2).

While the future of a pluralist economics at UWS faces some challenges, it is still possible that economics at UWS can capitalise on its good work and that the value of its pluralist approach ends up being as recognised and rewarded as it deserves to be.

9.9 Postscript

Following the preceding case study, on the 7th of December 2012 The Dean of the School of Business issued the final version of an Organisational Change Plan that dealt a heavy blow to the teaching of economics at UWS. In the plan, the Bachelor of Economics will be cancelled, with eleven economics staff to be made redundant, and this includes four of the five Professors. One of the key drivers of this change is a reduction in student preferences for the Bachelor of Economics that has primarily arisen as result of the deregulation of tertiary enrolments (see Section 8.5). One of the UWS Professors, Steve Keen, attributes much weight to this factor:

Now that open slather is permitted, students have responded by applying for courses only at the top-ranked universities. So now, as the current academic year ends, the projected intake into UWS's economics program is catastrophically low. In previous years we had well over 100 applicants for our first year intake at this point. This year, we have just 19.

UWS management's reaction to this has been to propose to shut the degree down completely because it is no longer economically viable. As they put it... "This is largely attributable to the advent of the open market for undergraduate courses which was implemented this year" (Keen 2012 p.2).

Keen goes on to make the point that because the Go8 universities cannot take all applicants this figure of 19 would certainly rise as the start of semester gets closer. It is also quite important to note that the figure of 19 is of students listing UWS as their *first* preference and that it is often the amount of first- to fourth-preferences that is a more realistic predictor of final enrolments. However, the number of preferences to study economics at UWS have, by whatever measure, fallen, thus final enrolments are still likely to be less than before deregulation. Much depends on how many students the Go8 universities decide they wish to enrol. In any event, university administrators, often known for their aversion to even short-term financial risk, currently appear unwilling to adopt a wait-and-see approach.

Other documents and online blogs produced by UWS staff (authored anonymously) also argue that the budgetary crisis is in part the result of central administration drawing too much money away from the teaching units and investing this money imprudently. The already mentioned proposal to cut subjects with fewer than 100 student enrolments appears to be one example whereby the range of subjects offered is unduly limited by the need to generate very large surpluses per subject. In addition, in order to streamline offerings, electives are now much more limited. Arguments have also been made that the Dean of the School of Business has been insufficiently supportive of economics and that some staff members have felt they have not been able to engage productively with the Dean.

A public campaign has been mounted to oppose the level of cuts and various heterodox economists and heterodox associations have written in support of the economics at UWS. This has had no effect other than an olive branch of allowing economics a major in the business degree with highly restricted student choice.

10 A hybrid model

“It must be considered that there is nothing more difficult to carry out, nor more doubtful to success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who profit by the new order, this lukewarmness arising partly from fear of their adversaries, who have the laws in their favour; and partly from the incredulity of mankind, who do not truly believe in anything new until they have actual experience of it” (Machiavelli 1532 [2003] p.48).

10.1 Introduction

I have used the term ‘hybrid model’ to describe a structure in which the teaching of economics is structurally integrated in some way with other social science departments. These are relatively rare innovations in Australian universities, but they do exist. One example of a hybrid model was the undergraduate major in political economy at the University of New South Wales (UNSW) that ran between 2005 and 2011.³³ This major was partly taught from within the social science faculty, and partly taught from the business faculty. Another example of the hybrid model, and the concern of this chapter, is the Politics, Philosophy and Economics (PPE) degree that was established at La Trobe University in 2011. Like the UNSW case, it is cross-faculty in nature.

While I will show that the hybrid model of reform comes with its own challenges, I also argue that it is a promising approach to reform and has the potential to transcend some of the problems associated with trying to push for pluralism solely from inside a traditional economics department (as examined in the previous chapter), or entirely from outside a traditional economics department (as examined in the next chapter). The hybrid model is an approach to reform that is simultaneously inside *and* outside traditional centres of economics teaching. As such, it is a contemporary reform strategy that warrants close examination.

10.2 The PPE Degree at La Trobe University

The PPE degree was first established at Oxford University in the UK in the 1920s, where it has a long record of producing that country’s political elite. Kelly (2010) goes so far as to say that the PPE rules public life in the UK. The strong success of Oxford’s PPE degree has resulted in around 60 universities worldwide offering a PPE degree. Roughly, a third of these universities are in the UK, a third are in the US and a third are elsewhere. La Trobe University, which first offered

³³ I undertook some of analysis of this major, but in the end, have not included it as a case study. This was due to word limit constraints, time constraints and other complications. It was also judged that La Trobe PPE case study provided the superior illustration of the hybrid strategy of reform.

the degree in 2011, is the first Australian university to offer a PPE degree, though the Australian National University will offer a PPE degree in 2013. PPE degrees are founded on the robust intellectual premise that most social and economic phenomena have political, philosophical and ethical dimensions and thus students need to have a grounding in each of the three disciplines, alongside an understanding of the interrelationships between the disciplines. The intrinsic merit of the degree has been recognised to an extent in the Australian cultural mainstream. *The Australian's* education writer Stephen Matchett remarked:

The more obscure the degree the more extravagant the claims for where its graduates can work – “a bachelor of this and that qualifies graduates to edit lyric verse, short the bond market and present gender neutral home renovation TV shows,” that sort of thing. But despite the extravagant claim for its new Bachelor of Politics, Philosophy and Economics degree La Trobe is probably correct in claiming that the degree suits students with ambitions to be “decision makers and opinion shapers.”

And good on the university for introducing it next year. The problem with Australian policy debates is that there is not enough economics and too much politics uninformed by political history and the work of serious political theorists (your list is as good as mine). As for philosophy, it sometimes seems our sense of what is just is created by what politicians feel – scary when you watch them on Q&A. A degree course specifically designed for people who want to make and implement policy can provide aspiring MPs and bureaucrats with the sort of needed knowledge they will never acquire stacking branches or networking.

The University of Oxford created the PPE in the '20s and since then it has become, there and in other UK universities, a prep school for ministers and mandarins. Elitist certainly, but it provides the bedrock knowledge for shaping debates, crafting policies and convincing voters. Bundoora is light-on for dreaming spires but if it creates an Australian equivalent of the British PPE it will do us all a service (Matchett 2011 p.1).

There are two basic PPE models. The first approach is the 'pillar model', in which the three subjects are taught largely independently of one another. The pillar model is relatively easy and inexpensive to establish, as the curriculum can be created from an already-existing pool of subjects in each discipline. The second approach is the 'bridge model', in which there is an emphasis on understanding the interconnections between the three disciplines. The bridge model has the intellectual edge, but it is more expensive and time-consuming to establish, as it requires the creation and maintenance of a set of inter-disciplinary subjects specifically designed for the PPE degree.

10.3 Description

La Trobe's PPE degree, mainly by virtue of being in its early stages, is largely based on the pillar model rather than the bridge model. Given the obvious cost and political challenges of establishing the bridge model, this was a prudent and practical starting point. However, some subjects in the degree have a specially created bridge component and over time it is hoped that La Trobe's degree will move closer towards the bridge model. The degree at La Trobe is a cross-faculty entity. Economics is based in the Faculty of Business, Economics and Law while politics and philosophy are based in Faculty of Humanities and Social Sciences. The degree is currently administered by the School of Economics. Professor Don Harding is the Program Director, and at the time of writing, I am the Program Coordinator.

10.4 History

The idea of La Trobe University establishing a PPE degree originated in 2008 with Professor Belinda Probert, then Pro Vice-Chancellor (Education). Probert thought that a PPE degree might address what she perceived as the inadequacies in Australian social science education. Probert's view is that, currently, social science graduates are not sufficiently equipped to undertake empirical analysis, particularly statistical and quantitative analysis. It was felt that this impaired the ability of social science graduates to fully participate in public policy analysis and formulation. Probert also thought that social science departments do not really interact with each other, particularly economics

departments as they have the significant obstacle of being based in a different faculty from the other social sciences (Thornton 2011h).

Probert initially raised the idea of a PPE degree in a meeting with three professors from the social sciences faculty and received a positive response. Probert also had the support of the then Vice-Chancellor, Paul Johnson, an economic historian and a former deputy director of the London School of Economics. The initial meeting with the three social science professors led to a larger meeting that included all of the original attendees plus another professor of politics and four professors of economics. All four economists had either a social science or public policy orientation: one was an economic historian, one was a development economist, one was a professor with a background in macroeconomics, econometrics and applied economics and public policy, and one was a heterodox economist and historian of economic thought. All parties to the meeting expressed interest in the idea of establishing a PPE degree. The interest from the four economics professors was genuine; indeed, two of the economists (Magee and Jayasuria) had been thinking independently of something along these lines (Thornton 2012e). Subsequent meetings moved to specifics. Magee recalls that by this stage Professors Harding (Economics) and Bisley (Politics) were the driving forces in making the degree operational (Thornton 2012e), though Harding views it as more of a team effort. For Harding, the key achievement was the fact that the economics professors had been able to establish a good working relationship with Professors Bisley (Politics) and Brennan (Philosophy): this was seen as an essential prerequisite to practically get the PPE off the ground. To this, one could add that it was helpful that there was an expectation by the most senior administrators in the university that it *would* get off the ground

Moving the PPE from an idea to reality turned out to be an involved job. It surprised some involved that an initiative so fundamentally sound, and one that had wide professorial support and that also had support from the very top of the university, could still be so difficult to establish. Why? The detail to come later in this chapter provides part of the explanation, but at this point it can be said that some of the general process predicted by the evolutionary theories of the firm presented in Chapter two have been at work. These include problems of inertia,

path-dependence and institutional truce. Furthermore, getting strategy, structure and organisational capability to match each other can be indeed be difficult as organisational routines can take on a life of their own (Nelson & Winter 1982).

It was agreed that the degree was to be administered from the School of Economics and Finance (renamed in 2012 as the School of Economics), which was in the Faculty of Law and Management (renamed in 2012 as the Faculty of Business, Economics and Law). The decision to base the degree in the business faculty was based on the advantage of a greater level of administrative staff to support the degree and also because of the willingness of one of the professors of economics, Don Harding, to take on the work and responsibility involved in establishing and administering the program.

It is somewhat unclear as to who suggested that innovative modifications be made to the economics curriculum (i.e. the extra weekly tutorials for micro and macroeconomics). Probert recalls that the suggestion to change the economics curriculum originated with the non-economists, whereas Magee recalls that the creation of an extra tutorial that focused on policy/applications/philosophical aspects was there from the outset and was something that economists all agreed to be essential for the integrity of the degree. Magee recalls that Harding was enthusiastic about this dimension of the degree, with the original intention being to draw the material back to public policy analysis (Thornton 2012e).

How was the initiative perceived within each of the three departments? The PPE degree encountered no obstacles within economics. This can be explained by the fact that it was actively supported by the then Head of School and all of the professors who attended the initial meeting to discuss the degree. The degree was sold to other staff in practical rather than intellectual terms. The emphasis was placed on the potential of a PPE degree to be a new revenue stream and a source of high-calibre students (including honours students). It was also seen as being a form of risk diversification that would make the school less reliant on revenue from the Bachelor of Business degree (a degree with large enrolments, but one over which the school had diminishing levels of influence and where it feared its subjects would be increasingly marginalised). Concern about the PPE degree was limited to staff needing reassurance that PPE students who wanted

to undertake Honours in economics would have needed to have completed third-year micro, macro and second-year econometrics. Once this reassurance was given, the degree was accepted.

While the establishment of the degree seems to have generated no apparent controversy or resistance in the politics department, there was some discussion and debate over the degree in the philosophy department. The issue was on the determination of what philosophy subjects would be core (compulsory) requirements and what subjects would be electives. The underlying source of the debate was between philosophers working in the analytic tradition and those working in the continental tradition. A compromise position was reached, though the analytic approach is more heavily represented within the core. Clearly, economics is not the only discipline beset by strong differences of approach that need careful management and a degree of cooperation and compromise.

10.5 Structure

The basic structure of the degree is as follows. In the first year, students undertake six common subjects (two from each discipline) and two electives (from any discipline in the university). From the second year onwards students can undertake a balanced program that is equal parts politics, philosophy and economics. Alternatively, students can specialise in just two disciplines: politics/philosophy, politics/economics or philosophy/economics. Each specialisation has its own program of compulsory and elective subjects. Depending on the program in which a student enrolls, and depending on their grade average, a student can potentially qualify for Honours in any of the three disciplines.

This ability to progress into a standard Honours degree is particularly significant with regard to economics. The possession of Honours in economics is often a minimum requirement for those wishing to enter graduate programmes in government agencies such as Treasury, the Department of Finance, the Australian Competition and Consumer Commission and the Productivity Commission. Such graduate economists can go on to exercise enormous influence over public policy in Australia (Pusey 1991). Thus the PPE degree may

provide a pathway by which broadly-trained social science graduates have the opportunity to contribute to policy discussions that were previously the preserve of those who had a conventional economics degree.

The economics component of the degree warrants specific attention. If students are undertaking the 'balanced' version of the degree, then first-year micro and macro are compulsory. First-year statistics is also explicitly recommended. At second year, students have to undertake either second-year microeconomics or second-year macroeconomics. They must then choose three other economics subjects. The only stipulation is that these subjects are at the second- or third-year level. Originally, it was stipulated that students needed to complete standard microeconomics and macroeconomics from years one to three, but this requirement was relaxed in early 2011, when it was judged that such a requirement might deter capable social science orientated students from enrolling in the degree. Note here a very significant point about how the constituency of the social science orientated student prompted changes to the structure of the degree. However, note also some continuities: microeconomics and macroeconomics in years one to three is still a requirement for admission of PPE students into the Honours program of economics, as is a requirement for second-year econometrics.

The economics component of the degree includes some measures designed to bolster the bridge credentials of the degree. Specifically, students doing standard subjects in microeconomics and macroeconomics undertake an additional one-hour tutorial each week. The creation of this extra hour of face-to-face teaching allows the opportunity for a much richer introduction to economics than would be the case if the students were doing any other degree. While the topic chosen for each week's tutorial relates to the lecture material in some way (though sometimes rather indirectly), the main objectives are to show the interrelationship between economic analysis and politics and philosophy, and to redress some of the excessive narrowness that occurs in introductory micro and macroeconomics. Students are given a reading list or set textbook at the beginning of semester and each week a particular reading or chapter is discussed in the tutorial. Students' attendance and participation in these tutorials constitutes ten per cent of their

overall mark. Given the extra work involved, the final exam is worth ten per cent less than would otherwise have been the case.

It is significant that administratively, the modified subjects exist as separate entities. They have their own subject codes, websites and (slightly modified) exams. The structure provides the flexibility to add to and modify the standard content as much as might be required. This allows for increasing levels of autonomy into the future. The core micro and macro subjects could, with almost complete administrative ease, become completely independent subjects from orthodox microeconomics and macroeconomics. The only real requirement would be that students would stop attending the standard two hours of lectures each week (where they sit in lectures with hundreds of other students) and instead have their own specialised lectures. Students are already grouped together for both the standard weekly tutorial (where the standard content is taught and the standard exercises are dutifully worked through) and the extra weekly tutorial (where the PPE perspective and broader discussion are fostered). That PPE students have had separate tutorials for both the standard and PPE (extra) tutorials has cultivated a very strong *esprit de corps* among the students. As we shall see later in this chapter, this generated some interesting behaviour.

Both the standard and the extra tutorial were taught by me. I experimented with various approaches in these tutorials. Initially, I set particular readings for discussion (see table 10.5.1 and 10.5.2). However, in the end I concluded that it was best to use textbooks for first and second year students and to set readings only for the third year students. This was because first and second-year students appeared to respond best to a structured and sequential set of readings. For this reason, in 2012, I opted to set Stretton's *Economics: a new introduction* as the first year micro and macro textbook. For second-year micro and macro Earl and Wakeley's *Business Economics* and Cohn's *Reintroducing Macroeconomics* currently seem the most appropriate textbooks. These tutorials have allowed students to have an early exposure to the social science wing of the discipline. Such early contact with political economy and a political economist raises the probability of PPE students pursuing the social science side of the discipline later in their degree.

These extra tutorials allowed for the introduction of broader ideas about economics at the *start* of the student's economics education. As was mentioned in previous chapters, the order in which ideas are introduced in economics is critical. If key concepts in political economy are not introduced until the later years of study, students may struggle to fully understand or accept them as legitimate; indeed, if an uncritical over-emphasis on concepts such as equilibrium and rationality is acquired early on in someone's education it can "set up an analytical confusion that captivates the student more or less forever" (Bernstein 2004 p.33).

Table 10.5.1 PPE tutorial content for first-year microeconomics

Week	Topic
1	Methodology and economics
2	Ontology and economics
3	Epistemology and economics
4	Institutions and economics
5	Power and economics
6	Values in economic analysis
7	Paradigms
8	Rationality
9	Incentives
10	Comparative advantage
11	Evolution and economics
12	Review

Table 10.5.2 PPE content for first-year macroeconomics

Week	Topic
1	Business economics versus economics as a social science
2	The consumer price index as a measure of the cost of living
3	Circular and cumulative causation
4	Keynes on uncertainty and speculation
5	RBA paper risk and uncertainty
6	Endogenous money
7	An institutional perspective on inflation
8	The Bretton Woods system
9	Part-whole relationships and microfoundations
10	The great depression
11	The global financial crisis
12	Review

Had someone other than myself been responsible for developing the tutorial content, or had I not been given the autonomy by the Director of the PPE (Professor Don Harding) to decide on tutorial content, then the tutorials may have been far more conventional. Credit must be given to Harding for allowing this pluralist approach. While not being from the heterodox/political economy tradition, he had no obvious problems with the content of the tutorials and granted me an entirely free hand. The goodwill and liberalism of such a stance is rare, yet this case does demonstrate that some degree of productive partnership between mainstream economists and the social science-orientated economics is indeed possible. Regardless of whether one is working within or outside economics departments, identifying and pursuing these possibilities for cooperation is important.

Here it is worth making a general point about the importance of agency. While it is certainly argued that the existence of a PPE degree is just the sort of structure that reformers should see as an opportunity, much depends on fully exploiting the opportunity. There is nothing about the degree that *guarantees* any dividends to the economics pluralism agenda; indeed, at worst, the degree could conceivably simply teach (in silo mode) the narrowest version of all three disciplines.

10.6 Potential benefits to the social science wing of the discipline

The potential benefits of the PPE degree to the social science wing of economics, and in particular to political economy, come largely from the fact that political economy as an area of knowledge has always had strong and explicit philosophical and political roots. Indeed, one could argue that political economy *is* philosophy, politics and economics. Consider the linkages with each discipline. Nearly all political economists would readily admit to the political dimension of the work. For political economists, power is not just market power, nor is it something that just structures the costs and benefits of particular choices. It is much deeper: power changes not just what we do, but also who we are, what we want and what we believe (Bartlett 1993). The economy is a system of power (Samuels & Tool 1988) and the answer to most economic problems nearly always raises political questions (Robinson 1981).

Political economy also has a strong philosophical dimension. Indeed, it can be argued that economics is, in the end, just a sustained form of philosophical reasoning (Fusfeld 2002). This is clearly evident in the greater focus on methodological issues in political economy (which is in many respects just the philosophy of science as applied to economics). Stretton (1999) has argued that one of the key problems in current undergraduate economics education is lack of attention to the philosophy of science. Dow has also made the point that if one really wants to get to the bottom of many disputes in economics, one has to think methodologically and philosophically (Dow 2002). Philosophy is ultimately about rigorous and clear thinking. Thus it is, or at least should be, the foundation stone of economics. Given this, Colander's advice for economists to think less about methodology (Colander 2009c) seems misconceived.

Given the inherent linkages between political economy and politics and philosophy, it follows that students who have some grounding in all these disciplines will be much better placed to study political economy than students undertaking a standard business or economics degree. The former such students will start specialist subjects in political economy already aware of the big debates and issues in the social sciences and can thus get the best use out of any political economy subjects available to them. Some evidence to support this claim has been the generally strong academic results of nearly all PPE students who have completed the third-year pluralist economics subject *ECO3CAE Competing Approaches in Contemporary Economics*.

PPE students also appear to be a student constituency that is more likely to *enrol* in political economy subjects. For example, PPE students have been heavily represented in enrolments into the just mentioned pluralist subject *Competing Approaches in Contemporary Economics*; indeed, the PPE students who have completed this subject have often stated that they feel the subject should be made compulsory in the PPE degree.

The PPE is also an effective mechanism for transcending a basic administrative problem that has often limited the capacity of economics students based in the business faculty studying other social sciences (and vice-versa): faculty restrictions on outside faculty subjects. While a double degree in economics/arts

is another way to get around faculty quotas, the PPE has the advantage of doing so as a single undergraduate degree.

Another advantage of the PPE degree is in its potential to facilitate cross-faculty collaboration in teaching. While cross-faculty teaching is possible without a cross-faculty degree, a cross-faculty degree makes it more probable to occur, if only because it brings different groups of academics together in a way that would otherwise not occur. This scenario also makes such a degree easier to expedite (because the faculties are already closely involved in a partnership). Cross-faculty teaching is an important strategy to achieve greater economic pluralism. Obvious contenders for cross-faculty teaching include economic sociology (with sociology departments), economic history (with history departments), economic methodology (with philosophy departments) and behavioural and experimental economics (with psychology departments).

Cross-faculty teaching of a subject has five obvious attractive aspects. First, staffing and other costs can be shared between two or more departments, allowing a department to offer a new subject at half the normal cost. Second, it can expand the catchment area for students to double what it would otherwise be (i.e. potential students can be drawn from not one, but two, faculties). Third, shared teaching means that social scientists can deepen their knowledge of economics and economists can build their knowledge of the other social sciences. Fourth, it is a way of economising on the shrinking pool of expertise within economics departments to teach the social-science wing of the discipline. Fifth, it is an approach that can avoid what Keen (2011) views as being the ruthless proprietorial instincts of economics departments, whereby the teaching of any subject with economic content is prohibited outside the economics department. Under a shared-teaching subject, economics departments could be appeased by the fact they would still be getting half the fee income from these subjects, and economics staff would still be involved in teaching the subjects. Sixth, cross-faculty teaching could be useful in dissipating the intellectual isolation of political economists by bringing them into working contact with other social scientists such as historians, sociologists and political scientists, who have similar methodological and theoretical orientations; this will probably become more important for the remaining political economists based in economics

departments if we accept that economics departments are increasingly staffed by “technocratic specialists with little grounding in the broad fundamentals of enquiry in the social sciences” (Hodgson 2007 p.20).

While collaborative subjects are a promising idea, it has to be conceded that the efforts to realise this thus far have not entirely managed to transcend the familiar problems that characterise cross-faculty collaboration, nor escape the general predicament that a university such as La Trobe faces. One issue is that ECO3EAE Economics and Ethics is still counted as an outside subject in the faculty of social sciences — thus some students who have used up their quota of outside faculty subjects would not be able to enrol into it. Another issue is that the modest pre-enrolments for the subject (initially around ten)³⁴ have meant that the staff member from the Faculty of Humanities and Social Sciences (Dr Miriam Bankovsky) was asked by her school (The School of Social Sciences) to downgrade her role in the subject to sharing coordination duties and just giving three two-hour guest lectures. Bankovsky, who has been actively involved in developing and promoting the PPE, explained the two main reasons for this. First, her school and faculty were under pressure to cut costs (even though her school had a healthy operating surplus) which means that low enrolment units are even less viable to resource; and second, the politics program has certain subject offerings to cover in the face of staff research leave, and this can be facilitated by reassigning her to teach other units (Thornton 2012b). This situation captures the reality of many of the issues discussed in earlier chapters: the inadequate level of funding universities receive, the high pressure on academics and individuals schools to ensure their research output is highly ranked, and the need for curricular innovation to pay immediate dividends or come under immediate resourcing pressures. None of this is conducive to the steady work required to build up a substantial and ambitious program like the PPE in a non Group of Eight university.

³⁴ It is worth noting that final enrolments reached 27 students, a respectable enrolment for a new subject.

10.7 The role of student activism

Perhaps the most interesting finding of this case study is not simply that many of the PPE students are interested in political economy. It is that they are passionate about it, to the extent that they will actively campaign for it. This passion was unexpected, though PPE students had always made clear that they appreciated the content of the extra PPE tutorials and most had enrolled into whatever political subjects were on offer. The intensity of their preferences became clear when the students decided (entirely of their own volition) to compile an eight-page petition that was sent to the Vice Chancellor in April 2012 arguing for the extension of my contract – which had been otherwise scheduled to end on the 1st of July 2012. The petition appears to have been the decisive factor in achieving an extension of my contract to December 2012. The petition was not just a list of names, it was also a collection of statements from current and past students (including two winners of the D M Myers award for best economic Honours student) of the value of having studied political economy and of the author's teaching. While some of the participating students had simply done my political economy subjects, the majority of students on the petition were PPE students.

Such activism has not been a one-off event. At the time of writing, the PPE students are currently engaged in further campaigning for the status of political economy at La Trobe. This includes pushing for the reinstatement of *Competing Approaches to Contemporary Economics*, the reinstatement of third-year economic history *Growth and Decline in the Global Economy*, and for assurances that the specialist PPE tutorials will continue in their current design. While some other students and student organisations have been co-opted into the campaign (notably the La Trobe Business Students Association), the initiation of the campaign has been by PPE students. The current strategy of campaigning is in the form of seeking meetings with senior academics and administrators, where carefully compiled arguments and research are presented. The development of a Facebook page for PPE students has apparently been helpful in formulating strategies.

Remarkably, the students have not just confined themselves to protesting. Realising that enrolments into the degree have thus far been quite modest, and that this detracts from their campaign, the students have been very keen to participate in marketing the degree. An early suggestion from the students was that they should form a PPE Society so that they could get \$2,000.00 from the university. They would then spend this entire amount not on social activities, but in promoting the degree. Taken aback by this level of belief and commitment, I set up a three-way meeting between the PPE students, the marketing staff and myself to work out how best we might all work together. Marketing staff have since been very active in supporting the degree (in part because they were impressed by the PPE students themselves) and the university has taken out banner advertising in major newspapers and made promoting the degree much more of a priority. For example, in late December 2012, the students will be participating in the creation of an online video. Two of the PPE students also agreed to my invitation to participate in a feature article in the 'Higher Ed' section of the *The Age* that was about the falling level of student interest in economics. The students and I stressed how the PPE degree was just the type of curricular innovation that traditional centres of economics teaching should be pursuing (Anderson 2012).

Finding such strong student support was of great practical help and also very motivating. I now have a *much* deeper appreciation of something that those involved in the political economy dispute at Sydney University had long argued: that it was the sustained commitment of both staff *and* students working *together* that was critical to success (Butler, Jones & Stilwell 2009). It is fair to say that the students have driven a large part of the political economy agenda and have come up with various ideas and strategies that I would not have thought of and that I am not in a position to pursue. Who was leading, and who was following, became less and less clear as 2012 progressed: the political economy agenda simply became a team effort characterised by mutual support and the sharing of ideas.

10.8 Future of the degree

The PPE degree is a good initiative and has solid prospects of success if given the required time and support. However, it faces a number of obstacles. The first problem is that the degree program has to operate in the ever-changing environment of a contemporary Australian university. In this respect there are some strong parallels with the UWS case study. For example, the School of Economics and Finance, from where the PPE is administered, was dissolved in the latter half of 2011, with finance becoming a separate department residing in the newly created School of Business. This has created uncertainty about the revenue base of the School of Economics, and it has upset morale. Almost unbelievably, the faculty structure created in 2011 is already under review, with further structural changes likely to be recommended in January 2013.

Second, much time and effort was spent complying with the 2010 ERA process, only to be left with a result that left all surprised and dismayed (an overall ranking of two for economics³⁵). This low ERA ranking contributed to difficulties in replacing staff, which in turn has led to a reduction in the number of subjects offered. There have also been continual personnel changes in all the upper-level management positions that were of importance and relevance to the PPE initiative. A key change for the PPE was the resignation of Professor Belinda Probert in July 2011. Because Probert had initiated the degree she had always afforded it a level of support and protection in what has been a constantly shifting environment. As an example of how much changed has occurred, since the time the PPE was first mooted in 2008, there has been a change of Vice-Chancellor, Deputy Vice-Chancellor (Education), two Deans of the Faculty of Law and Management (renamed the Faculty of Business, Economics and Law in 2012), three different heads of the School of Economics and Finance (now School of Economics) and in April 2012 the incoming Vice-Chancellor restructured senior management. This constant change in structures and personnel is not uncommon in the contemporary Australian university, yet it is not conducive to the gradual building up of substantial programs, as there is the uncertainty about

³⁵ This was upgraded to '3' in the 2012 ERA.

whether incoming managers would understand and support ambitious initiatives established by previous senior managers.

Another problem that the PPE degree confronts is that a cross-faculty degree is always more fragile because it needs a higher level of discussion, negotiation and coordination than is normally required. In many respects it would be easier if all three disciplines were in the same faculty. Part of the issue is that faculties like to have autonomy and to standardise their degrees. For example, in late 2011 it was proposed from within middle management of the business faculty that PPE students must do the same six first-year business subjects as all other undergraduate degrees in the business faculty (the so called 'common core'). Such a requirement is fundamentally incompatible with the PPE degree, which needs a two-thirds representation of politics and philosophy in the first year. The Director of the PPE Program was able subsequently to arrange for the PPE to be exempt from what would have been a highly inappropriate requirement, but the fact that such an exemption even had to be argued for in the first place is illustrative of the inherent vulnerability of the cross-faculty degree.

A key issue for the degree will be in ensuring that both faculties feel that they are gaining (and not losing) from the degree's existence. Faculties do not always welcome or encourage inter-faculty trade in students. Thus if either faculty feels it could be losing potential fee income from collaborating it could become a problem. This is certainly a problem that has occurred at other universities:

We all set up a committee to set up a political economy type subject (EC109) that would fit into a Bachelor of Social Science in the Faculty of Arts... I was teaching over 250 students, in a subject that was less technical. I had to teach basic micro, but I was allowed to teach whatever I liked in EC109 because it was only the Faculty of Arts, and the Faculty of Economics was happy with me because we got a lot of enrolments. A lot of these arts students would go on to do second-year economics. But then it all collapsed because the Faculty of Arts was losing numbers and so the Vice-Chancellor and the Dean of the Faculty of Arts came under pressure because they were losing numbers and the Vice-Chancellor wasn't prepared to respond to this problem by following my suggestion of

redistributing the money (a bit like the Australian Football League). Because that didn't happen, the Faculty of Arts then imposed restrictions as to how many subjects outside the faculty students could do... more and more of our students were forced to be doing our faculty's subjects. And so our involvement with sociology and history or geography diminished, it's a tariff thing, so my subject just got squeezed out at that time (Ward in Thornton & Millmow 2008 p.15).

To avoid the risk of this sort of dynamic occurring at La Trobe, the PPE degree needs to bring in new students of a high calibre who might otherwise have gone to Group of Eight universities and thus demonstrate that it is 'growing the pie', or distributional anxieties could come to the fore.

Another threat to the future of the degree is that the PPE degree is relatively unknown in Australia. It will take confidence and commitment on the part of the school, the two faculties and the university to build up the degree. It is also simply more difficult to establish a degree like the PPE outside the Group of Eight. Students are attracted to universities with a prestigious reputation (whether such a reputation is warranted in matters of teaching or quality of curriculum is another matter). It is particularly unfortunate the degree was established just when quotas for enrolments were abolished. This has meant that the Group of Eight universities have been able to enrol students who would have otherwise enrolled at non-Group of Eight universities. On this point, it is relevant to note that quite a few students with high marks expressed an interest in the PPE. There were 166 students who selected the PPE degree as one of their choices for further study in 2012. Thirty-one of these students had an ATAR above 90 and a further 29 students had an ATAR above 80. Nearly all of these students were subsequently lured to other institutions. Thus it appears some particularly active and entrepreneurial marketing will be required to transcend both the lack of knowledge about the PPE degree and the pulling power of the Group of Eight Universities.

There are three scenarios that are quite undesirable, but which may occur. First, the university may simply lose patience with the degree and cancel it. Second, enrolments might start to grow but the university may decide it cannot resist

taking the 'low road' whereby admission requirements (specifically the ATAR mark) are set at a low level so as to attract the maximum number of enrolments. While this may indeed bring in more income (at least in the short term), it is also likely to lower standards and decrease the chances that La Trobe's PPE degree will produce the number and type of elite graduates it may have been able to. Third, uncertainty about the university's ongoing commitment to the PPE degree might make it too risky for academics to make the necessary investment of their time into further development and promotion of the degree. The consequent lack of investment by academics may then damage the PPE degree's enrolments and then prompt the university to withdraw its commitment: a classic case of chronic uncertainty retarding investment that then leads to fulfilment of the initial fears. Despite these potential obstacles and dangers, there are some factors that prompt optimism that the PPE may yet fulfil its rich potential. Chief among these is the commitment and capability of students currently enrolled in the degree.

10.9 Conclusion

A hybrid approach of the type described in this chapter clearly comes with its own problems, frustrations and uncertainties. However, there is enough evidence to indicate that closer integration with the other social sciences departments is something that should be more widely considered. While La Trobe's PPE currently seems somewhat vulnerable on a few fronts, it is still in its early stages and may yet fulfil its rich potential. Even if this particular hybrid strategy does not succeed, it still suggests that hybrid strategies of reform could be very successful, particularly if these are given enough time and a modest level of sustained institutional support.

It is appropriate to finish this chapter by emphasising that an important strength of the type of hybrid strategy described in this chapter is its compatibility with both the 'reform from within' and the 'reform from without' strategies. To be more specific, if one feels it is worthwhile to continue to work for change from within economics departments then the PPE type strategy would seem to be complementary; economists would still be employed in economics departments but they would be drawing powerfully on the support of the social science faculty and its students. Alternatively, the PPE degree is just as valid an option for those

who feel the future for political economy lies in establishing a separate institutional base. This is because it provides a plausible foundation from which it can be clearly demonstrated to senior university administrators that there is a significant constituency of students interested in the political economy approach — and thus it justifies making the necessary staffing and resourcing commitments to establish a separate institutional base for the social science wing of economics. It seems plausible that La Trobe's PPE might eventually provide just such a foundation.

11 Reform from without

11.1 Introduction

Chapters six to ten have demonstrated that reform of curriculum is complex and difficult. While pursuing a 'reforming from within' or 'hybrid' strategy can sometimes be worthwhile (and may sometimes be the only short-term options available), they come with their own set of challenges and uncertainties. It must also be recognised that the gains from these strategies are quite modest thus far. Given this, it is prudent to evaluate other reform strategies. This chapter focuses on a strategy whereby economics is taught from a separate institutional base, namely, a DPE of political economy. The chapter provides much support and explanation for the key findings of the thesis. In particular, that traditional centres of economics teaching are often unable to embrace a pluralistic curriculum (Finding 1.3.3) and that the prospects for a pluralist economics curriculum lie with greater integration with the social sciences (Finding 1.3.4). In this particular case, we can see the benefits of *total*, rather than just partial integration into the social sciences.

The case in question is the DPE of Political Economy (DPE) at Sydney University. The chapter is necessarily extensive not only because it is the exemplar of the 'reform from without' strategy, but also because this very strategy has been so successful. As has already been pointed out in Chapter six, and is apparent in Table 11.1.1, DPE is the single largest centre for the teaching of political economy in the country, teaching 41.5 per cent of all political economy subjects in Australian universities. Something has clearly been achieved here that has not been achieved anywhere else. Furthermore, DPE has played an important part in producing political economists who have then gone on to teach in other Australian universities. For example, Argyrous views his foundational intellectual contact with political economy at Sydney University as a key driver for his own part in helping to establish a political economy major at UNSW. Argyrous argues that DPE has triggered a process of circular and cumulative causation that has led to the teaching of political economy across the Greater Sydney area:

Almost all the faculty involved in teaching these courses [throughout Greater Sydney] have a connection of a fairly direct kind (especially through PhD supervision) with the Sydney University Political Economy movement. In a manner resonant of the cumulative causation theory of industrialization, graduates of Sydney PE have often found jobs at universities 'close to home' and then have sought to introduce non-orthodox courses at these universities. The existence of this cluster of heterodox courses then provides a steady base of casual tutoring work for postgraduate students, and potential supervisors, who then further expand the pool of faculty pushing for the introduction of heterodox courses in the region (Argyrous 2006 p.61-62).

This strategy and its apparent success raise two obvious questions: how has this surprising outcome come about? Does it constitute a desirable model that could be, or should be, pursued at other universities?

Table 11.1.1 Subjects offered by the Department of Political Economy 2012

Enrolment	Code	Session	Description
620	ECOP1001	1	Economics as a Social Science
500	ECOP1003	2	International Economy and Finance
190	ECOP1004	2	Economy and Society
160	ECOP2011	1	Economics of Modern Capitalism
62	ECOP2012	2	Social Foundations of Modern Capitalism
4	ECOP2550	1	Political Economy Exchange
4	ECOP2551	1	Political Economy Exchange
1	ECOP2551	2	Political Economy Exchange
4	ECOP2552	1	Political Economy Exchange
1	ECOP2552	2	Political Economy Exchange
64	ECOP2601	2	Analysis of Business Cycles
175	ECOP2612	2	Economic Policy in Global Context
44	ECOP2911	1	Political Economy Honours II
126	ECOP3012	1	Global Political Economy
122	ECOP3014	2	Political Economy of Development
61	ECOP3015	2	Political Economy of the Environment
26	ECOP3016	1	Gender in the Global Economy
134	ECOP3017	1	Human Rights in Development
97	ECOP3019	1	Finance: Volatility and Regulation
2	ECOP3551	1	Political Economy Exchange
2	ECOP3552	1	Political Economy Exchange
2	ECOP3553	1	Political Economy Exchange
102	ECOP3620	2	Distribution of Income and Wealth
43	ECOP3623	2	The Political Economy of Neoliberalism
20	ECOP3911	2	Theories in Political Economy
19	ECOP3912	1	Research in Political Economy
14	ECOP4001	1	Political Economy Honours A
14	ECOP4002	1	Political Economy Honours B
13	ECOP4003	2	Political Economy Honours C
13	ECOP4004	2	Political Economy Honours D
16	ECOP6010	1	International Trade Regulation
8	ECOP6011	1	USA-Europe-Japan: Trade and Investment
13	ECOP6012	1	Country Risk Analysis
28	ECOP6016	1	China in the World Economy
28	ECOP6018	2	Economic Development: Growth & Wellbeing
21	ECOP6031	2	Research in Political Economy
23	ECOP6101	1	Core Concepts in Political Economy
15	ECOP6101	2	Core Concepts in Political Economy
28	ECOP6103	1	Strategic Debates on Economic Change
1	ECOP6104	1	Long Essay/Project
13	ECOP6108	2	Economic Management for Sustainability
23	ECOP6130	2	Human Rights & International Development
21	ECOP6901	2	Finance and Economic Change
280	INGS1001	1	Power and Money in Global Society
146	INGS3601	1	Current Global Issues

11.2 A long and complex dispute

As Groenewegen (2009b) correctly points out the four-decade dispute that ultimately led to the establishment of DPE in the Faculty of Arts was long and complex. It has its own literature, including a monograph (Butler, Jones & Stilwell 2009), a symposium (Groenewegen 2009a, 2009b; Hawkins 2009; O'Donnell 2009), journal articles (Jones & Stilwell 1986; Stilwell 2006b, 2011b), a chapter in a Vice-Chancellor's memoir (Williams 2005), and discussion of the dispute in official histories of the Business and Economics Faculty (Groenewegen 2009b) and of Sydney University (Williams 2006). There are also several cubic metres of archival records on the dispute at the Fisher Library at the University of Sydney.

For all the abundance of material, the analysis within is highly polarised: a reflection of the fact that nearly all of the analysis has been undertaken by those who were directly involved in either side of what was also a bitter dispute. In general, the protagonists have a poor opinion of each other's rendering of the dispute. A thorough analysis of the dispute that can adequately consider every claim and counterclaim within the dispute warrants an entire doctoral thesis. Accordingly, what is presented here should not be seen as the definitive history or analysis of the dispute. My focus is narrower: to study the dispute so as to ascertain how a separate institutional base for political economy came to be established and to evaluate the possibility and desirability of it being a general model of reform.

11.3 The issue of balance

The fact that the dispute was long and complex, and also characterised by extreme bitterness and disagreement, brings the issue of what might constitute fair and balanced analysis into particularly sharp focus. As Myrdal has argued, values are always with us (Myrdal 1970) and there is no neutral vantage point from which to analyse a complex social phenomenon such as this. This analysis is therefore necessarily written from a particular perspective and starting point. In particular, from the outset of my research I thought the initial agenda to establish a four-year sequence of subjects in political economy was both desirable and reasonable. Starting from an orientation such as this has meant that my view of

events often has an affinity with that of the political economists. However, my view of events is in other respects different from the political economists involved, and I have also sought out and evaluated various lines of criticism of the political economists. In the tradition of the sociology of scientific knowledge, I have also sought (as best I can) to understand how those opposed the political economists understood the dispute.

11.4 Basic description

The teaching of political economy at Sydney University was founded by Marxian, (old) institutionalists and other non-mainstream economists, with these academics also providing coverage of feminist and ecological approaches from the outset (see Stilwell & Wheelwright 1976). Because the political economists at Sydney University have always adopted a critical and reformist perspective on the capitalist economy, it has no tradition of research or teaching in Austrian economics — a school often seen as heterodox, but whose proponents nearly always hold to libertarian philosophical moorings. DPE also undertakes research and teaching in post-Keynesian economics, though the political economists initially saw post-Keynesian economics as being too close to orthodoxy (Jones & Stilwell 1986).

DPE does not employ neoclassical economists: the university's neoclassically orientated economists are located in another department, the Department of Economics. Despite this, DPE still provides some coverage of neoclassical economics, particularly at the introductory level. The first-year subjects in political economy cover, albeit briefly and critically, most of the concepts encountered in standard first-year macroeconomics and microeconomics: supply, demand, marginalism, elasticities, externalities, IS-LM, markets structures, distribution, and so on (for further details see the set textbook for first-year, Stilwell 2011a).

11.5 History

The origins of the struggle can be traced back to the late 1960s and 1970s when some staff members in the Department of Economics (this group is hereafter referred to as the political economists) sought to develop a greater presence for non-neoclassical economics. At this point they were not seeking to establish a separate department or a new degree, though they wanted non-neoclassical economics to be at the core rather than the periphery of the curriculum. It should be emphasised that this was a surprisingly bold ambition, then as much as now. This ambition is evident in the fact that the political economists rejected a 1972 offer from the Department of Economics to develop a single second- or third-year elective in 'radical economics'. To accept a single upper-level elective was seen as insufficient and a strategic error that was likely to dissipate the momentum to achieve something more substantial. While this may indeed have been a far-sighted decision, the rejection of an upper-level elective subject in radical economics antagonised the orthodox professors (Hogan 1974; Simkin 1975) who complained of "there never having been a willingness to compromise or seek a measure of mutual accommodation" (Hogan 1974 p.8).

The lack of success in establishing political economy in the curriculum led to a significant degree of sustained protest on the part of both political economists and their students (this group of staff and students is now referred to as the political economy movement). Some sense of the depth of feeling the conflict invoked can be gleaned from the foreword from a textbook the political economists produced in 1976, *Readings in Political Economy* (Stilwell & Wheelwright 1976). The foreword was written by the Dean of the faculty, G.A.J. Simpson Lee, variously seen as one of the political economists, or someone sympathetic to them:

I should have liked to have been able to say in this 'Foreword' that it is a matter of pride and propriety that this highly innovative and important book should have originated in the oldest, largest and most illustrious university in Australia, but that would be to mislead the reader into believing that things are as they should be in such an institution. In fact, the book is born of a long and bitter struggle involving staff and students in the Department

of Economics for the right to try and come to a better and fuller understanding of how the economic system really works and how it can be made to serve the welfare of mankind.

One day the history of this struggle will be written, and its repercussions throughout the University of Sydney and the wider academic world will be documented. Until that time, the reader who gains enlightenment from this volume cannot know what efforts were made to deprive him of it (Simpson Lee in Stilwell & Wheelwright 1976 p.v).

An early example of collective action was the staging of a day of protest in 1973. The protests involved the boycotting of lectures and the staging of alternative workshops. A proposal to establish political economy subjects was also developed and put forward. Such actions contributed to the faculty establishing the first of three committees of inquiry (the Mills Committee Report of 1973). The committee recommended establishing a separate department of political economy. The recommendation was approved by a majority of the faculty, but was opposed by the economics department and on this basis vetoed by the Vice-Chancellor, Bruce Williams (Williams 2005).

One of the key rationales for rejecting a separate department had been that there was no intellectual basis for separation in economics (Hogan 1974; Simkin 1975). Unsurprisingly, this was disputed by the political economists (Butler, Jones & Stilwell 2009; Stilwell 1988). This illustrates the point made in Chapter five, that having clear and defensible intellectual foundations for a distinct political economy is important. Nonetheless, it is noteworthy that Sydney University had *already* subdivided economics by creating a separate Department of Economic Statistics and a separate Department of Economic History. This illustrates the fact that the creation of departments within universities is guided as much by administrative convenience and convention as anything else. Notably, both of these departments were able to integrate their teaching and other responsibilities with the Department of Economics, as required.

In 1975 the political economists established a first-year undergraduate course in political economy. This was followed by a second-year course in 1976. The

courses attracted strong enrolments. Jones and Stilwell (1986) state that by the 1980s, the political economy subjects were approaching 50 per cent of all enrolments in the economics department. The fact that enrolments were so strong could only have hardened opposition from within the economics departments: generally a token heterodox subject with minor enrolments can be tolerated, but these much larger enrolments genuinely challenged the orthodox dominance of economics education.

In 1976 the second committee of inquiry was established (the Ward committee). It recommended the establishment of an 'independent unit' of political economy within the Department of Economics, but this recommendation of a quasi-department was also rejected by the Department of Economics, with the Vice-Chancellor supporting this decision.

Stilwell (2006b) argues that the hostility towards political economy from other economists, combined with the lack of support for political economy by the then Vice-Chancellor, meant that subsequent attempts to further develop political economy from within the economics department at Sydney University were not possible. A particular frustration was not being able to offer a third-year subject in political economy (thus establishing a three-year major). Another frustration was that political economy could not be offered at an honours or postgraduate level. The political economists also complained of discrimination in matters of hiring and promotion of staff (Jones & Stilwell 1986).

The resistance that the political economists encountered in curriculum development, appointments and promotions was usually justified on the basis of academic standards (Butler, Jones & Stilwell 2009). However, this appears to be primarily due to the orthodox economists viewing political economy through the orthodox political paradigm. The political economists certainly reject any general claim that the standard of their teaching or research was insufficient (Butler, Jones & Stilwell 2009). Grounds for such a view include: the fact that they had been employed by an elite university as economists; nearly all had doctorates; they ranked up to the level of Associate Professor (with one going on to the rank of Professor); and that most of the political economists published regularly. Furthermore, student feedback and enrolments the political economy subjects

was generally high (Butler, Jones & Stilwell 2009; Stilwell 2011b). Also, textbooks produced by the political economists such as Wheelwright and Stilwell (1976), Stilwell (1975) and Stilwell (2011a) and Stilwell and Argyrous (2011) have also been adopted in other universities, with the latter two publications both in their third edition with commercial publishers.

While I am not in position to assess the standard of every single student, tutor or lecturer that has had any contact with the department, the accusation of any general problem with academic standards appears on this basis to essentially be of paradigmatic origins. In any event, it is necessary to make a distinction between the *idea* of a political economy program or department, and evaluating a particular political economy program or department that has evolved under specific historical circumstances and compromises (O'Donnell 2009). In particular, any imperfections (be they non-existent, unfair, minor or otherwise) in an actual political economy department do not of themselves negate the idea of a political economy department as a response to mainstream hegemony (O'Donnell 2009).

In 1981 ongoing protest and agitation led to the establishment of a third committee of inquiry (the Wilkes Committee). The 1982 report produced by this committee recommended the establishment of a third-year undergraduate and honours course in political economy. It also recommended that the first-year political economy course be deleted from the curriculum and that the Department of Economics teach a single introductory economics course that contained both orthodox and heterodox content. The rationale for this recommendation was that first-year students should not have to choose between approaches at such an early point in their university studies. The recommendation was implemented, and by 1984 all first-year students in economics were doing a course that was one-third Marxian and institutional, and two-thirds neoclassical (Butler, Jones & Stilwell 2009).

This jointly taught orthodox-heterodox introductory subject is worthy of specific comment. From the standpoint of pluralism, such an introductory subject is highly desirable. At least one of the political economists now states that it could have provided the foundation for a lasting solution to the dispute, though he recalls that

“no one was enthusiastic at the time” (cited in Gilling 2010 p.1). The lack of enthusiasm by the political economists is evident in the fact that they abstained from the departmental vote to establish the subject (Groenewegen 2009b). The source of their ambivalence was in having to give up the first-year political economy subject that had been so hard-won (Butler, Jones & Stilwell 2009). While the political economists were not initially enthusiastic about the subject, they placed the blame for eventual removal of the subject upon the orthodox economists:

...in retrospect it worked well, and could have provided a lasting solution. Unfortunately, Hogan, Simkin and the then Dean, Steven Salsbury – a right-wing Republican from the US – were adamantly opposed to it, and eventually succeeded in scuttling it. Structural pluralism discomfited them (Stilwell cited in Gilling 2010 p.1).

The political economists also claim that attempts were made to move political economy and other ‘softer’ subjects to other faculties, though this was successfully resisted. It is also asserted that, because the orthodox professors were not in a position to directly remove the PE subjects, they worked with the then Dean, Steven Salsbury, to prevent students who were doing a Bachelor of Economics in undertaking political economy subjects (Jones & Stilwell 1986). A new degree, Bachelor of Economics (Social Sciences), was established for students who wanted to do political economy. This degree, despite criticism from conservatives in and outside the university (including such figures as Tony Abbott and David Clark, who both wrote articles deriding the degree), it turned out to be a successful degree that was chosen by one-third of all students in the faculty (Butler, Jones & Stilwell 2009). Notably, enrolments benefited from the fact that the political economists had managed to influence the structure of the degree, so that it was quite open to enrolments from students studying other social sciences (Butler, Jones & Stilwell 2009; Stilwell 2006b). Note here an important point: the enrolment of social science students (and the support of the social science faculty in the form of agreeing to allow a trade in students across faculties) was a key component of the new degree’s success.

The 1990s were not quite as dramatic as previous decades, and the political economists consolidated their previous gains by establishing both a Masters degree and a PhD program. In 1999, as part of a university-wide initiative to restructure departments into schools, the new dean created the School of Economics and Political Science. Ironically enough, this was less the result of collective action and protest and more to do with the faculty wanting to boost its image and credentials as a business faculty. The Dean of the faculty had previously complained that the profile of the political economists had made it more difficult for him to secure the support of business (Butler, Jones & Stilwell 2009). Thus, by delineating the political economists as belonging to a separate discipline from economics, the faculty could create an economics department that had more of the appearance of being business orientated. This is a very clear illustration of how political economy, with its more critical, rather than celebratory, perspective on capitalism, can sit awkwardly inside a business faculty. It therefore provides further support for finding 1.3.3 (the inability of traditional centres of economics teaching to embrace pluralism).

In 2008 the political economists, as part of a larger restructuring in the university, were transferred out of the Faculty of Business and Economics into the Faculty of Arts and Social Sciences. It was at this point that political economy finally became a separate department.³⁶ Notably, political economy has prospered in a way that was not possible previously. Enrolments boomed and this has led to the appointment of additional staff (Thornton 2008). Interestingly, this has occurred despite little change to subject offerings or subject names. Part of the explanation for this appears to be that offering political economy subjects from within the Arts faculty has appeared to make them not only more accessible to Arts faculty students, but also more attractive generally (Thornton 2011f). For example, DPE's introductory unit of study, *ECOP1001 Economics as a Social Science*, has had a long-term average enrolment of about 400 students. However, since the subject has been offered within the auspices of the arts and social sciences its

³⁶ See appendix two for the transcript of a telephone interview I undertook with Professor Stilwell. The material in this interview complements the analysis about this particular period of the department's history.

enrolments have averaged well over 600. This is a 50 per cent increase, against an 18 per cent increase in total enrolments in the university's business and arts faculties.³⁷

Such striking findings suggest that basing the subjects in a social science faculty appears to have had a significant framing effect upon students. This provides further indication that the growth area for economics as a social science appears to be, perhaps rather unsurprisingly, in the arts and social science faculty. It should also be noted that in the Arts faculty there have not been the same issues of having to play down the presence of political economy to cultivate the support of the business community, though it should also be said that at present, no faculty or university in Australia would be totally immune to the opinions and potential support offered by the business sector.

In 2011, the future of DPE was challenged by a proposal to merge it with the Department of Government and International Relations (University of Sydney 2011). However, the combined (but independent) efforts of the staff and postgraduate students managed to defeat the proposal. That the proposal was mooted in the first place appears to be, at least in part, a reflection of the fact that the current Dean of the faculty is particularly enamoured with the 'Chicago Model' of a strong economics department, politics department and philosophy department (Thornton 2011f). Such a predilection carries obvious risks to DPE. DPE can make some clear claims that it is not being fully supported. For example, the current head of DPE, Dr Stuart Rosewarne, asserted that DPE has the highest student-staff ratio in the university and the highest ratio of non-continuing to continuing staff (Thornton 2011f). Rosewarne points out that despite strong and sustained increases in enrolments, DPE has generally been limited to being able to offer only fixed-term contracts. Such contracts make it difficult to attract the researchers that DPE would otherwise be able to employ.

³⁷ It should also be noted that this 50 per cent increase in enrolment was *not* due to *ECOP1001* being upgraded to a required subject in additional degrees, nor were additional staff in the political economy program the cause of the growth of enrolments, although staff numbers have grown a little as a consequence of the general increase in enrolments.

Another constraint is that DPE is currently not permitted to offer a dedicated Bachelor of Political Economy as there is a policy in place to limit the number of degrees being offered within the faculty. This has meant that the most specialised degree offered is the rather generic-sounding Bachelor of Political, Economic and Social Sciences. It appears that the challenges now facing DPE are less to do with methodological or ideological opposition from the economics department, and much more to do with the uncertainties and vagaries of the corporate managerialism that characterises the contemporary Australian university. It should also be noted that departments at Sydney University are simply less powerful and autonomous today than at the beginning of the dispute. Professor Paul Redding, from Sydney University's School of Philosophical and Historical Studies, makes the point that the merging of departments into schools has meant that decisions that used to be made by departments are now made by schools (Thornton 2011i).

I will now focus on four aspects of the dispute that are most central to my thesis: the role of collective struggle; the basis for opposition to political economy; the role of marketing and networking; and the advantages and disadvantages of having a separate institutional base.

11.6 The role of collective struggle

The establishment of DPE was characterised by collective struggle. Such struggles included the on-campus protests, staff and students going on strike, and the Vice-Chancellor's office being occupied by students. There were also a few instances of graffiti and damage to university buildings, as well as graffiti to the private homes of one or two of those who opposed the political economists (Groenewegen 2009a, 2009b). There were also times that protest spilled over into mild violence, though there are differences of opinion as to some of the details of such instances and to how they should be understood (Groenewegen 2009b; O'Donnell 2009). Those who opposed the political economists described it as a serious issue (Groenewegen 2009a; Williams 2005, 2006), while those within the political economy movement considered instances of violence as regrettable, but relatively minor (Butler, Jones & Stilwell 2009; O'Donnell 2009).

Those involved in the political economy movement see the role of collective protest and struggle not as an incidental by-product in the goal of establishing political economy, but as a key requirement (Butler, Jones & Stilwell 2009; Jones & Stilwell 1986). It is necessary to understand that for most of the dispute, the power structures within the university were not geared towards democratic participation. The Vice-Chancellor and departmental professors had a very dominant position in what has been described as a “master-servant structure” (Jones & Stilwell 1986 p.30). If the current era is one of the ‘God-Administrator’, the previous era was one of the ‘God-Professor’. Clearly, a genuinely collegial and democratic structure within Australian universities has remained elusive. It was the absence of democratic structures within the university that led many within the political economy movement to resort to mass protest and struggle as necessary:

Between 1974 and 1976, often hundreds and sometimes thousands of students were active in the movement. It was not only positive personal experiences, but also mistakes I made that led me to assimilate the idea that change was crucially the product of mass action and militancy (Kuhn 2009 p.178).

In its early years, the PE movement learned a vital lesson. One may have excellent intellectual arguments, but when power in a discipline or institution overrides reason, rational argument can make no further progress unassisted. Where reason is necessary but insufficient, people with resolve also campaign on the terrain of power and decision-making (O'Donnell 2009 p.91).

It is important to recognise that campaigning was not always dramatic or openly conflicting: it also involved steady and persistent efforts through more established channels. The importance of undertaking this more mundane work is evident in the reflections of one of the students involved in the earlier phases of the struggle:

On reflection, the real learning from being in the PE movement was about how our society works and what levers can be used to effect change and

mobilise people. It was about how to force your agenda, how to keep your issue alive and not be taken out of the game in the process. In practice, that meant taking action with the ombudsman, petitioning the Senate, soliciting the support of unions and journalists, and writing in the University newspapers, Honi Soit, the University News and Union Recorder. (Porteous 2009 pp.74-75).

While the political economists themselves were not involved in any of the more dramatic manifestations of protest (such as the occupation of the Vice-Chancellor's office), their unwillingness to attempt to influence or restrain these incidents was a point of tension within the Department of Economics. It was felt that it was inappropriate to involve students in what was seen as being a dispute between academics. By contrast, the political economists themselves saw the role of students as being critical, arguing that, "one lesson from the political economy struggle is clear: cooperative and sustained commitment by students and staff is an essential ingredient for turning concern into challenge and struggle into success." (Butler, Jones & Stilwell 2009 p.191).

11.7 Why was the opposition to political economists so strong?

It is clear that the institutional structures of the university frustrated the political economists, but why were those who held the most power in this structure so opposed to their agenda? This is not a simple question to answer, for two reasons. First, within the economics department there were not only two clear sides, but also some economists who supported one side on some matters and were at least sympathetic to the other side on other matters. Thus, ascribing simple 'group think' opposition is not fair. Given this complexity and the constraints of space, I have decided to focus on four key protagonists who held the most institutional power and who most clearly opposed the agenda of the political economists: Professor Bruce Williams (Vice-Chancellor for most of the dispute), Professor Warren Hogan (head of the economics department for most of the dispute), Professor Colin Simkin (a professor in the economics department during most of the dispute) and Professor Peter Groenewegen (head of the economics department between 1979-80, 1983 and 1987-90). It will soon become apparent that even within this narrow band of those who were most

opposed, the reasons, or at least the weighting between reasons, differed significantly.

The second reason for the complex nature of the opposition was that it not only involved intellectual and ideological motivations, but also non-intellectual motivations. For example Hogan claims that the dispute was partially about personality clashes (Hogan in Lodewijks 2007). It has also been claimed that the dispute was partly about some individuals acting to promote or protect their career prospects; this particular claim has been made by both sides in the dispute, though no individual admits to it, nor is any individual explicitly and publicly named as being guilty of it (Jones & Stilwell 1986; Lodewijks 2007). It is quite difficult for me to precisely evaluate the role of non-intellectual motivations because I do not really know any of the individuals concerned (some of whom are now deceased) and also because I do not have first-hand observation of the dispute. While it would have been helpful to have more clearly elucidated the role of non-intellectual motivation, it was simply too speculative and difficult to really analyse satisfactorily. In any event, it will soon become clear that the dispute had a very strong intellectual and ideological component, and it is thus appropriate to put the explanatory focus, and the explanatory weight, here.

11.7.1 Bruce Williams

In his memoirs, which feature a chapter on the political economy dispute, Williams explains his actions in terms of respecting the wishes of the Department of Economics:

I was often asked why, having created a school of philosophy with two departments, I did not do the same in economics. That I did not do so was partly explained by the outcome of my discussions with staff, as outlined above, and partly because there was no danger of losing the best staff, as there had been in philosophy (Williams 2005 p.121).

This was doubtless part of his motivation, but given that more than anyone involved he had the power to impose a resolution, it seems reasonable to try to assess whether his motivation was quite as simple as this.

O'Donnell indicates that it should be remembered that both Hogan and Simkin were appointed under Williams's tenure as Vice-Chancellor and that he supported their vision of wanting to create a department that would be seen by the world at large as being modern and successful (Thornton 2011j). One can also see some indication of Williams having had a degree of methodological opposition to the political economists. For example, he describes political economy as "politicised economics" (Williams 2005 p.105), a term which suggests a belief that there exists some positive, objective, value-free, non-political economics. This said, Williams is somewhat hard to pin down in terms of his methodological or ideological views. Notably, he made a series of statements in his early career that can be plausibly read as being quite supportive of the type of vision for economics that the political economists were pursuing. For example, his 1953 article 'Economics and public policy' asserted that there were no distinct boundaries between the disciplines, no agreed definitions of economics or of other social sciences (Williams 1953). Williams also had an early dalliance with socialism (Williams 1943) which, ironically enough, was reproduced, in part, in the first textbook produced by the political economists (see Stilwell & Wheelwright 1976).

Despite such leanings in the early works of Williams, by the time of the dispute he was no ideological or methodological radical. Indeed, the political economists viewed him as a conservative, pointing to the fact that as well as serving as Vice-Chancellor, he served four terms as a member of the Reserve Bank Board of Australia between 1969 and 1981 (Butler, Jones & Stilwell 2009; Jones & Stilwell 1986; O'Donnell 2009). Holding multiple important roles in the existing economic and social order would hardly predispose him to the political economists who were, and remain, orientated to criticising and changing this order. Notably, Williams argues the dispute would never have occurred had it not been for the rise of student radicalism in the 1960s and 1970s. He ascribes the general rise of such radicalism to the Vietnam War (Williams 2005, 2006).

11.7.2 Warren Hogan

Hogan had a strong belief that the dispute had its origins in the inability of the political economists (and the university as a whole) to accept the idea that the Professors of Economics in the department knew best. He described this idea as being one of “academic leadership” and for him it was “the central issue in the academic debate on political economy” (Hogan 1974 p.8). He viewed younger members of staff, and those of lesser rank to professor, as only being able to make “relatively minor contributions” and to have only “limited grounds for pressing a viewpoint” (Hogan 1974 p.3). Furthermore, Hogan strongly objected to the outside intrusion of both the faculty and the professorial board (Hogan 1974). Again, the basis for this was that such bodies were not in a legitimate position to dictate to the professors of economics how best to manage their department. This rationale of academic leadership is made clearly enough, but in itself it does not answer *why* he opposed the political economists, only that he felt entitled to reject their views and agendas.

Hogan never took the standpoint of the political economists as a serious intellectual challenge. He also argues that others should also not have taken it as seriously as they did. For example, when recalling his colleague Colin Simkin he states:

He found Sydney a challenging experience. He was unable to grip the political economy dispute. He saw it as an academic issue while others, including myself, treated it as purely academic politics and not an academic issue per se. Simkin wrote any number of papers about issues in dispute in an effort to bring them into focus. The negative outcome of his efforts brought him disappointment (Hogan cited in Lodewijks 2007 p.451).

Hogan did not regard political economy as a distinct area of knowledge. For him there was “no distinctive feature in ‘political economy’ that would substantiate academic claims for a separate discipline” (Hogan 1974 p.10). He was resolute that the department needed to adopt the generally held view of academic economists (presumably its senior economists) about what ought to be taught. Hogan saw the political economy dispute as arising not out inherent tensions or

problems within economics, but because the political economists and their students were behaving opportunistically, being aware that the university had previously split the philosophy department following the intellectual schism that had emerged over feminist and continental philosophy:

In my judgement the development of sustained opposition to the economics programme had its origin in the philosophy dispute in July 1973... It showed the possibilities for change in the economics department (Hogan 1974 p.7).

The splitting of the philosophy department does have a role in providing one of the triggers or the initial inspiration for the dispute (see Keen in Butler, Jones & Stilwell 2009). But according to one of the protagonists in the philosophy dispute, Professor Paul Redding, the two disputes are not closely connected (Thornton 2011i).

While Hogan was dismissive of the political economists on intellectual grounds, he did take the dispute seriously in political and ideological terms:

The focus on quantitative work and the subsequent broadening into how to approach economics and what economics was about revealed what was at stake in terms of political and ideological confrontation. Social, economic and political developments in the past couple of decades have cast this challenge as some quaint academic posturing (Hogan cited in Lodewijks 2007 pp. 450-451).

The quotation above seems to suggest that Hogan may have viewed the political economy dispute through the prism of the Cold War (something that was raging for most of the political economy dispute), or at the very least saw it as having clear implications for both economy and society. While none of the political economists advocated Stalinist-style command socialism, it is true that the majority were reformist-orientated institutionalists or Marxians: both groups are capable of being seen with considerable suspicion and fear by those who hold strong right-wing ideological positions.

Something of Hogan's ideological orientation can be gleaned from his association with the Centre for Independent Studies (CIS). The CIS is stridently classically liberal in orientation and views its role as being "actively engaged in supporting a free enterprise economy and a free society under limited government where individuals can prosper and fully develop their talents" (Centre for Independent Studies 2011 p.3). In the official history of the CIS, Hogan is praised for his role as an economist and for his work and dedication in building up the CIS profile in economic policy and philosophical and constitutional issues (Centre for Independent Studies 2011). A founding idea of the CIS was that what occurred in the intellectual sphere was of central importance to their libertarian agenda. For instance, the founding director of the CIS, Greg Lindsay, recalls that "during 1975 I had read Hayek's essay 'The Intellectuals and Socialism', which in one sense was the most important piece that I'd read. It made me realise that what I was seeing was an intellectual problem, not a political problem" (Lindsey & Norton 1996 p.17).

Despite being largely dismissive of the political economists on intellectual grounds, Hogan nonetheless outlines what appears to be the basis of a methodological opposition to the political economists:

The most testing immediate issue [on his arrival in the department] was about the amount of quantitative work which should be required of all undergraduates taking the Bachelor of Economics (B.Ec.) degree. This caused the most turbulence initially which left me dumbfounded, given the requirements were rather modest by standards in other institutions. This feature emerged initially as the 'lightning rod' for disagreements on what Economics was about. If undergraduates cannot understand basic aspects of quantitative work, testing the applicability of theoretical constructs becomes very hard to resolve. A state of indeterminacy may well have been comfortable for some not wishing to seek preferences of one claim to validity over another in order to sustain unsubstantiated claims (Hogan cited in Lodewijks 2007 p.450).

Clearly, such a view is based on the received view of economic methodology. In particular, theoretical validity is assessed primarily through quantitative analysis.

This is in contrast to the political economists who, as we shall see, were early adopters of the views of Thomas Kuhn.

11.7.3 Colin Simkin

As already indicated by Hogan in the previous section, Simkin engaged heavily with the political economists on methodological grounds, though, as Hogan has already noted, he made little progress towards resolution or mutual acceptance. Within Simkin's edited work *Economics vs Political Economy*, a collection of his writings, and also within the political economists' writings on the dispute (Simkin 1975), it is apparent just how deep the methodological divide was. As one of the political economists wrote elsewhere, "since institutionalists and neo-classicists have basically different attitudes to knowledge, you might guess that they don't have much respect for each other. And you would be right. The tragedy is that the conflict stems from basic differences for which there seems little possibility of resolution" (Jones 1976 p.278). This statement captures much of the essence of the dispute: reading through *Economics vs Political Economy*, it is impossible not to see how opposed the two sides were and how small were the chances of their reconciling or compromising on their positions. Simkin *does* engage with the arguments put forward by the political economists, yet he can still only view their arguments as "shallow, mistaken and academically pernicious" and as being "more personal and political than academic" (Simkin 1975 p.1).

The strength and nature of Simkin's opposition becomes more understandable when it is considered in the context of his long and close association with Karl Popper, who had a "huge" influence upon him (Lodewijks 2007 p.447). Indeed Popper's *The Open Society and its Enemies* (Popper 1966) was used as a text in one of Simkin's subjects (Lodewijks 2007) and Popper himself acknowledged Simkin's contribution to the development of his own ideas in the preface of *The Open Society and its Enemies* (Hogan 2007). On matters of methodology, Simkin was most concerned about the political economists' then Kuhnian leanings. This is readily identifiable in his attack on frameworks or paradigms and his belief in objective truth. He is critical of the framework approach as defeatist, as it "exaggerates a difficulty into an impossibility" (Simkin 1975 p.5). He is also critical of the political economists for "glorifying the intrusion of personal bias,"

particularly in the sphere of teaching. He seems particularly concerned with the deployment of a “holistic method that both predicts and facilitates wholesale change” and that “promotes both sympathy and activism in conflicts” (Simkin 1975 p.5).

The mention of wholesale change and conflicts in the excerpt above illustrates that Simkin was also opposed to the political economists on both ideological and methodological grounds. He was certainly of a different ideological persuasion, and was understood by prominent economists such as Fred Gruen as belonging to a group of Australian “radical right libertarian economists” (Groenewegen 1979 p.207). Simkin also had some minor association with the CIS (Butler, Jones & Stilwell 2009), though not to the same degree as Hogan. Simkin seemed to be deeply concerned about the Marxian and radical leanings of the political economists and at various times challenged the political economists to clearly identify their exact stance in regard to Marxist thought (Simkin 1975). His methodological and ideological opposition is articulated with a seemingly high degree of passion and determination. This helps to explain why the dispute was so protracted and hard fought:

Finally, I repeat a denial of the Radical Political Economist's underlying view that objectivity is an impossible, and even undesirable aim, for them or anyone else. There are plenty of examples, even in Economics, of interpersonal agreement about scientific matters – agreement between professional people with very different national, cultural, ethnic, institutional, or economic backgrounds, and with widely different ideologies. Objective science, moreover, has the independent value of providing an intellectual bridge between such people. Assertive intrusion of ideological standpoints can only weaken this bridge, just as it tends to divide teachers from some of their colleagues, teachers from some of their students, and students from some of their fellows. And, more fundamental, denial of objectivity leads, inevitably, to fostering irrational thought and action...None of this is good, unless it can be held that conflict is a virtue and reason a vice, propositions to which I cannot subscribe (Simkin 1975 p.14).

This tight linking of scientific objectivity to social order has a truly striking affinity with a key point made by Shapin and Schaffer in Chapter two, where it was argued that the solution to the problem of knowledge is totally enmeshed with finding solutions to the problem of social order. Just as Hobbes argued that if you “show men what knowledge is and you will show them the grounds of assent and social order” (cited in Shapin & Schaffer 1985 p.100), so does Simkin argue that the lack of clear and objective knowledge will lead to division, conflict and irrationality of thought and action.

On this issue of social order it is relevant to note the high status and prestige of Sydney University. As an elite university, many of its graduates became members of the ruling elite in business, government and the media. This meant that the stakes were higher than if the dispute had occurred at a less prestigious university. It is therefore unsurprising that various notable political figures (or soon to be notable political figures) such as Tony Abbot, Malcolm Turnbull and Anthony Albanese had some involvement in the dispute or that in 1975, 49 members of Federal Parliament would sign a petition to query why one of the political economists, Ted Wheelwright, was passed over for promotion (Jones & Stilwell 1986).

11.7.4 Peter Groenewegen

Professor Peter Groenewegen was a staff member in the department for nearly the entire political economy dispute. He was also the head of department in 1979-80 (as Associate Professor) and again in 1983 and 1987-90 (as Professor). Groenewegen is quite different in many ways from Williams, Hogan or Simkin. For example, he is an internationally recognised historian of economic thought (Lodewijks 2002b) and as such has a much deeper appreciation of both radical and orthodox traditions in economics. Furthermore, he has attacked the narrow training of contemporary economists and has written of a “possible backlash among staff and students once the trivialisation of economics becomes obvious and it is realised that graduates working in business and the public service are hampered in solving concrete problems by an inadequate training and

perspective” (Groenewegen & McFarlane 1990 p.235).³⁸ Groenewegen has also recalled how his own first-year undergraduate study of economics at the University of Sydney was “quite disappointing in the sense that I found the economics lectures, based on very general macro/micro material, exceedingly boring” (Dollery 2002 p.5). Given all this, it is initially surprising that he was not more often on the side of the political economists, yet often he was not, and opposed to their agenda at some important points. For example, in 1985 when Groenewegen was head of department, and a degree restructuring process was initiated by the faculty, he “supported a revised BEc that excluded any remnants of the Economics ‘P’ courses and opposed the proposal to have two degrees, thereby denying space in which the ‘P’ courses could be relocated” (Butler, Jones & Stilwell 2009 p.79).

Groenewegen views the separation of economics at Sydney University as matter of great regret and argues that the costs of the dispute outweighed its benefits (Groenewegen 2009a). Groenewegen’s opposition appears to be based, at least in part, on a conviction that economists of all persuasions should interact and seek to learn from each other. In his 1979 review of radical economics he advises all radical economists that:

They should not lead a separate existence in a situation of intellectual apartheid (as is the aim of the Sydney University Political Economy Group which wants a separate department and separate courses). Radical economists should interact with their more orthodox colleagues (and vice versa), intellectually confront each other and thereby, it is to be hoped, learn from each other (Groenewegen 1979 p.206).

This appears to be a statement of general aversion to separate departments and courses. It also essentially amounts to an argument akin to intellectual pluralism, though the use of the term ‘confront’ perhaps suggest a winner and loser, or at least a singular synthesis emerging from confrontation. Groenewegen still finds the word ‘confront’ appropriate, because it “implies criticism and debate on

³⁸ It is worth noting that Groenewegen’s co-author Bruce McFarlane had clear Marxian leanings.

serious issues” (Thornton 2011e p.1). In any case, the point I make is that the vision he puts forward of interaction between opposing viewpoints and mutual learning is an attractive one, at least as an ideal. However, what is an attractive ideal and what works in reality at often two different things, so the real issue, and the major point of dispute, concerns not the ideal, but what could or should be done in a *non-ideal* world. Stilwell picks up on exactly this point:

...if reforms to economics depend on the tolerance, good will and liberalism of mainstream economists I wouldn't have too much confidence of success. There is nearly always a resident dissident or two. They may try and do innovative things, teach in a way that's engaging to students and put on different types of courses, but they come and go. The courses come and go with them and the mainstream flows on forever. That is why I think it is important to have a separate institutional base. In an ideal world you wouldn't have to separate groups in this way, but in a less than ideal world this is probably the optimal situation (Stilwell in Thornton 2008 p.6).

It must also be understood that Groenewegen rated the research and teaching of some of the political economists at Sydney University poorly, with some particularly harsh criticisms of the teaching of Simpson-Lee and Wheelwright (Groenewegen 2009a). While it is possible to dispute the fairness and accuracy of such an assessment (Butler, Jones & Stilwell 2009), it is nonetheless a position he has maintained consistently (Groenewegen 1979, 2009a, 2009b; Groenewegen & Lodewijks 2008; Thornton 2011e). For example, Groenewegen has argued that political economists’ “knowledge of the Australian situation and economic history, generally speaking, was dismal — as dismal as the science they were criticising” (Groenewegen & Lodewijks 2008 p.102). This quotation suggests that Groenewegen’s stance was perhaps one of *dual* opposition: on one hand, he was critical of much of economic orthodoxy (at least as taught), on the other hand, he was also critical of the political economists’ response to economic orthodoxy as taught.

Providing a completely clear and reliable illumination of the nature and scope of Groenewegen’s opposition to the political economists has not been possible at this point. However, in failing to do this I am not alone, as even some within the

political economy movement who knew Groenewegen well have been unsure about the nature of his stance towards the dispute:

Peter Groenewegen, for whom I have the greatest respect as a researcher, teacher and scholar, contributed many wonderful things to my education, including a love of the history of economic thought, respect for the importance of history, and an appreciation of the careful interpretation of ideas. Although on opposite sides of the PE dispute, we never exchanged a cross word, then or since. Yet to many students his stance was puzzling. On the one hand, his intellectual views indicated openness to, and acceptance of, the ideas of political economy. But on the other, he opposed the PE cause and supported a status quo dominated by orthodox courses. It seemed his opposition was based on other than intellectual grounds which were mysterious to most of us at the time (O'Donnell 2009 p.94).

While no simple or definitive explanation can be offered at this point, some useful insights can still be gained from analysing Groenewegen's opposition. First, broad intellectual compatibility between economists can be a totally insufficient basis for the formation of alliances and mutual support. This finding has implications for how pluralist economics departments might work (or might not work) in practice. Second, it is a reminder that people (and economics itself) are more complex than basic dualisms like heterodoxy or orthodoxy (or economics versus political economy) can sometimes adequately capture. Indeed, Groenewegen himself makes the point that "...there often are more than two positions in a 'great debate' and that, on important points, my position differed greatly from that of Warren Hogan, just as it did from those of Gavan Butler and Frank Stilwell" (Groenewegen 2009a p.85). A third and final point is that even those who are sharply critical of economic orthodoxy may still take a very dim view of attempts to create a separate institutional base outside of traditional economics departments and actively work against such attempts.

11.8 The role of proactive marketing and networking

The success of DPE owes something to strategies of collective struggle and protest, but, less obviously, it owes something to entrepreneurship, marketing

and networking. While nearly all departments engage in some minimum level of self-promotion such as production of brochures and presentation at open days, DPE (and its students) have relatively more active than average. Such an activist marketing orientation is atypical, as Earl and Peng have pointed out:

Heterodox economists mostly take a rather negative view of marketing as a discipline and profession, seeing it as providing tools that can be used to generate unnecessary wants that are wasteful of resources and make consumers socially competitive and anxious. Although the tools of marketing are indeed often used to manipulate consumer behaviour for private profit (Hanson and Kysar, 1999), marketing can also be used to advance socially beneficial causes. Politicians understand the power of good marketing but heterodox economists rarely seem to reflect upon their plight from a marketing standpoint (Earl & Peng 2012 p.451).

One example of the political economy movement's proactive marketing orientation occurred in 2004 when political economy went through a phase where undergraduate enrolments had fallen to the point political economy was becoming very vulnerable to being dissolved on financial grounds, as enrolments³⁹ in first-year were down to 260 students, from a high 400 students in 2000 (Rodrigo 2009). The political economists created new promotional material specifically targeted at prospective first-year students and also enlisted a group of both current and former political economy students to hand out brochures, put up posters and talk directly to prospective students during the university's annual open day. Putting in this additional effort was successful: first-year enrolments immediately returned to 400 in 2005 and the political economists put the explanatory weight for this on the increased effort in marketing (Rodrigo 2009; Thornton 2008). While this was not revolutionary or innovative marketing work, it is beyond what usually occurs. However, the return on investment that results from this work is instructive for those wishing to maintain the viability of the social science wing of the discipline.

³⁹ As mentioned previously, since the department has moved to the Faculty of Arts, first-year enrolments have now increased by 50 per cent or more.

The establishment of an alumni society is also a significant initiative. Set up in 2005, the alumni society has thus far been utilised mainly to protect DPE from potentially harmful actions by university management. Alumni include a former New South Wales state premier, a deputy premier, a state treasurer, ministers for housing and local government, state government parliamentarians, a leader of the federal ALP opposition, federal government ministers, a federal public service commissioner and journalists, among others (Butler, Jones & Stilwell 2009). Such alumni are potentially powerful allies to defend the autonomy and status of the DPE within the university. As asserted in Chapter two, “he who has the most, and the most powerful, allies wins” (Shapin & Schaffer 1985 p.342). The formation and maintenance of this type of society is probably a minimum requirement for any other political economy department, given the vicissitudes of university management, the possible backlash of the business sector against some political economy analysis and various other risks.

11.9 Criticisms by heterodox economists

As has been shown, the DPE has been criticised and opposed by those who have never shared its methodological or ideological orientation. However, it has also been subject to some interesting lines of criticism by those of an explicitly heterodox persuasion. Yanis Varoufakis is one such critic. He is currently a Professor at the Department of Economics at the University of Athens and by any measure is a particularly fierce critic of mainstream economics (Arnsperger & Varoufakis 2006; Hargreaves-Heap & Varoufakis 2004; Varoufakis 2010; Varoufakis & Arnsperger 2009; Varoufakis, Halevi & Theocarakis 2011). Varoufakis was also a lecturer in economics at University of Sydney in the late 1980s and early 1990s, teaching in both the economics and the political economy programmes.

Varoufakis has an assessment of the political economy program that seems somewhat paradoxical. He simultaneously praises it highly and condemns it absolutely. Specifically, he rates it as being intellectually superior: “political economy graduates understood the world as well as one could after dedicating three to four years of one’s life to a university education” (Varoufakis 2007 p.2). This contrasts with his assessment of the university’s orthodox economics

graduates who he sees as being “blissfully ignorant of the important economic issues that typified the world they were about to enter. Technically excellent, they combined the philosophical background of a rather primitive computer with the historical understanding of an amnesiac” (Varoufakis 2007 p.2). Yet for all his criticisms of the orthodox program he nonetheless argues that the approach pursued at DPE was an “appallingly bad idea” (Varoufakis 2007 p.2).

The basis of his criticism appears to be based on the belief that there has been an insufficient coverage of neoclassical economics. In this respect, Varoufakis’s position seems quite close to that of Groenewegen, who has also argued that one of the legacies of the split has been “imbalances in both sets of teaching programmes” (Groenewegen 2009a p.87):

...however narrow-minded and vacuous the economic education offered by the mainstream might be; however irrelevant to the understanding of capitalism neoclassical economics is; any attempt to build a curriculum which sidesteps it is bound to backfire. Mainstream economics is a well entrenched meta-narrative, for better or for worse. Students of capitalism cannot afford to be ignorant of its twists and turns... (Varoufakis 2007 p.4).

Varoufakis argues that an insufficient technical knowledge of neoclassical economics leaves DPE students with insufficient ability and confidence to debate their neoclassical colleagues. Joan Robinson’s argument that one should learn economics so as not to be deceived by economists (Robinson 1980) has perhaps some relevance here. Varoufakis also claims that a sub-section of DPE students were prone to become born-again neoclassical zealots (Varoufakis 2010):

The Political Economy students, although highly employable, lacked in confidence that which they possessed in educational and intellectual essence. Deep down they did not really think of themselves as competent economists. The mere mention of Lagrange multipliers, fixed point theorems and co-integration tests, that their colleagues from across the corridor knew off the top of their heads, cowed them into a form of intellectual submission that was utterly at odds with their actual capacities... Even worse, after graduating, a small number of the Political

Economy students enrolled in mainstream economics graduate programs and became neoclassical zealots. With the infinite pathos that is typical of the 'born again', they espoused the 'orthodoxy' with a ferocity and anti-pluralist fervour that turned them into the greatest enemies of the type of political economy which they had studied as undergraduates (Varoufakis 2007 p.3).

Because Varoufakis has made a set of clear empirical claims, I sought to verify them with the political economists who worked alongside Varoufakis during his time at Sydney University. Professor Frank Stilwell, who was head of DPE economy during the late 1980s and early 1990s when Varoufakis was at Sydney University, disputes Varoufakis' assertions about DPE graduates. Stilwell asserts that Varoufakis had only marginal contact with students in the political economy program (one seminar-based unit for final-year honours students); thus his conclusion about DPE could only be based on a tiny sample size and was thus prone to the risk of sampling error. Stilwell did not know of any identifiable syndrome whereby political economy students were prone to become born again neoclassical zealots (Thornton 2011c), though unsurprisingly, he did not deny that it would be possible for a university student to change their ideological and intellectual beliefs one way or the other during the course of their studies.

Varoufakis's claims, regardless of their empirical accuracy, do raise an important issue: how much neoclassical economics should students be taught in a pluralist department? Varoufakis clearly favours a detailed coverage in the curriculum. He wishes to expose students "to the highest forms of mainstream economics", while still (somehow) preventing mainstream economics "taking over the spirit and direction of the curriculum" (Varoufakis 2007 p.4). This is an attractive sounding ideal, but it comes up against the reality of the problem of opportunity cost. It also appears to ignore the gains that might accrue from departments having a measure of specialisation in both their teaching and research.

The opportunity cost problem is that time spent studying the neoclassical approach in great detail is time lost to exploring other approaches. Alternative approaches are demanding, and time consuming to learn, particularly if a detailed knowledge of such approaches is required for subsequent academic and policy

analysis. To acquire this detailed knowledge will require more than just the offering of the odd heterodox course amongst a sea of neoclassical subjects. It is important not to assume that students, particularly undergraduate students, can simply pick up political economy 'on the fly'. When thinking about curriculum design it is always useful to remember the 'curse of knowledge' whereby a party (in this case a learned academic) who has knowledge about something is very prone to assuming that other parties (students) either already have this knowledge, or alternatively, can quickly and easily acquire this knowledge (Heath & Heath 2006). Consider the recollections of Potts, who, while not connected with the PE dispute, makes a relevant point on how confusing and demanding political economy is if one is not introduced to it in a carefully structured and sequential way:

The thoughtful economist will inevitably be visited by moments of doubt that will thereby admit the possibility of alternatives... Such acts will seldom usher forth immediate enlightenment; more often, the reader will find him or herself estranged within the hermetic seal of heterodox economics, where various points of theory, empiricism and critique that define each school circle impenetrably and self-referentially. Each article presumes that you have read and understood all the others. Even for self-confessed heterodox economists, this rugged aspect of the landscape carries with it in many cases an unwanted and unnecessary sense of isolation. And for students and economists with orthodox training, the absence of clear points of entry, of soft progression and navigational charts, does certainly make for tough going (Potts 2000 pp. ix-x).

Heterodox economics can be a demanding and confusing subject to learn and it warrants having a carefully constructed and sequential suite of subjects in any given curriculum. However, the question then is how can a department hope to provide coverage in an undergraduate degree of 'the highest forms of neoclassical economics' while also providing a coherent and non-superficial coverage of political economy without doubling the length of the degree? There is also an obvious danger that students, particularly, undergraduate students, will not want to spend the majority of their degree mastering difficult orthodox content only to then learn just how limited (and sometimes deeply erroneous) it is in

illuminating economic and social reality. Students may feel a bit like plumbing apprentices who have been known to spend their entire first day in the workforce digging a ditch, only to arrive at work the next day and be told they will now spend the entire day filling it in.

For all this, there is still something in what Varoufakis is saying. There is merit in *some* social science orientated students acquiring a detailed knowledge of neoclassical economics. However, not *all* departments have to do this. The approach Varoufakis advocates is more practical at a postgraduate level; indeed, he has pursued exactly this approach with his impressive PhD program at the University of Athens (Varoufakis 2010). Nonetheless, even at the postgraduate level, there is still a strong case for *some* political economists not to have to acquire an in-depth understanding of neoclassical economics so that they are able to pursue in-depth study of other approaches.

The basic reality is that no degree program can meet all the requirements that we would like it to. Nor can a single department be expected to provide real expertise in all areas of economics. The solution is to adopt a coordinated division of labour *between* departments. Departments can then specialise in producing particular types of graduates and different types of research. The outcome of such an arrangement will be graduates who have different strengths and weaknesses, but this is an outcome of diversity, rather than grey conformity, and should be seen as desirable. Of course, it is also entirely consistent with the concept of economic pluralism that was espoused in Chapter four.

Given that a department will usually struggle to be all things to all people, it begs the question as to whether it could be possible or beneficial for there to be a greater trade in students between the two departments of economics at Sydney University. Because political economy has its own institutional base and negotiations would now be between equal partners, it is an option that now could be conceivably (if cautiously) more fully explored. For example the Department of Economics has subjects such as *ECOS3004 History of economic thought*, the Sraffian *ECOS3016 Capital and dynamics* and *ECOS3016 Experimental and behavioural economics*, which are quite complementary to the political economy vision. Some of these subjects could potentially be core subjects in the political

economy programme. Similarly, the Department of Political Economy has numerous subjects that would broaden the learning of students doing a conventional economics degree. Furthermore, there are at least three members of the staff within the Department of Economics who have an interest in the political economy wing of the discipline.

There would be some limits on the trade in students, given that the orthodox curriculum is somewhat of a package deal that is tightly sequential. Aspromourgos notes:

The difficulty is that a standard undergraduate economics education is supposed to be cumulative. If senior-level options can be taken successfully without the prerequisites of at least three of the four first- and second-year core courses, it gives the lie to this claim – unless of course the introductory and intermediate political economy courses are covering the same material, at least in significant measure (Aspromourgos in Thornton 2011k p.1).

While Aspromourgos is correct in pointing to the rather monolithic nature of the orthodox curriculum, there remains some scope for trade and even some scope for negotiation and compromise on the matter of electives. Engaging in such activity would appear to be the best option to address the type of concerns raised by Varoufakis, for no other reason than it would avoid duplicating the teaching of neoclassical economics within the two departments. Similarly, including existing subjects in statistics or quantitative research methods within the core of DPE's degree programmes could also occur without DPE staff having to teach these subjects. Such innovations would address concerns made by some that Australian social science students lack sufficient technical and quantitative training to fully participate in Australian policy debates. In this respect it is relevant to recall the views of Probert in Section 10.4.

Another interesting line of criticism is that DPE graduates are not properly or rigorously trained and are therefore subsequently disadvantaged in the jobs market (Groenewegen 2009a). The line of criticism has been rejected by the political economists (Butler, Jones & Stilwell 2009; Stilwell 2012). What

constitutes a proper education is somewhat in the eye of the beholder, and is dependent on whether one is talking about the jobs market for economists or for graduates in general. This distinction is rather important as a comparative advantage in the more specific market may be a disadvantage in the broader market. There is a more general question here about whether we should be aiming to always produce “one type of economics graduate, or instead produce different kinds of economics graduate equipped for different roles in both the labour market and the social sphere” (Davies & Guest 2008 p.2).

There appears to be no particular empirical evidence to support the claim that graduates of political economy have been subsequently disadvantaged in the job market. Conversely, some interesting evidence can be presented to the contrary (Butler, Jones & Stilwell 2009; Stilwell 2012). Stilwell points out that PE graduates have still been able to find employment in places such as the public service (one graduate actually became the Public Services Commissioner) and federal agencies and departments such as Treasury, the Reserve Bank of Australia, Social Security and Transport, Infrastructure and Regional Development have all employed political economy graduates. State and local government have also been regular employers of political economy graduates. It should also be remembered that DPE graduates (through picking up subjects offered by the Department of Economics) have the scope to pick up enough orthodox economics to satisfy the requirements of employers who are specifically looking for economists (as the term is conventionally understood). One example of this is the *Sydney Morning Herald's* economics journalist Jessica Irvine. Furthermore, if one accepts that the argument that political economy is better able than orthodox economics to develop the skill set (the so called ‘generic skills’) that some employers seek (O'Donnell 2010), then there is a wide range of occupations for which DPE graduates would be well equipped and competitive. Chapter 11 ‘the market for economic knowledge’ extends the analysis of employer needs.

11.10 A general model?

The political economists claim that empirical evidence shows that the strategy of reforming economics from within economics departments is a failed strategy and

that, by implication, reformers need to consider the separate institutional base strategy pursued by DPE:

Islands of heterodoxy exist in departments of economics in a few other universities, but there is no other department that both protects and extends the traditions of political economy and assays the articulation of interdisciplinary connections with other social sciences...The strategy in some other universities of establishing one or more electives in heterodoxy and then seeking to build on these to create a major in political economy alongside other studies in mainstream economics has not worked. There has been the odd success in instituting courses in social economics with mainstream departments – that is, the use of economic concepts in considering social policy questions – but, although that is to be applauded, it does not directly confront the hegemony of neoclassical economics (Butler, Jones & Stilwell 2009 p.182).

Stilwell's earlier assertion about the 'mainstream rolling on forever' is the most effective articulation of the political economists' arguments. It suggests that reform from within is a Sisyphean task: reformers from within are condemned for all eternity in having to roll a large and heavy boulder up a hill, only to then see it roll back.

Parallels with Greek mythology aside, the DPE story presents a strong *prima facie* case that a separate institutional base is a first-best strategy to reform economics. Given the paucity of political economy teaching in other Australian universities, it seems fanciful for anyone to argue that the political economists would have done better had they stayed within the department of economics (either as part of the department or in some semi-autonomous division within the department). Even if the political economists were later merged back into the department of economics – something they would strongly resist – it would be hard to imagine they would end up any worse off than if they had persisted with a strategy of subservient diplomacy for the past four decades. It is particularly hard to imagine that much would have been achieved if staff and students had followed Colander's advice for heterodox economists to win influence and

support from the mainstream (Colander, Rosser & Holt 2010). Indeed, there is an extremely high probability they would have achieved nothing.

Despite the impressive results from this strategy, careful thought would need to be given as to whether it is always appropriate for every context. Even more careful consideration would need to be given to exactly how such an ambition was to be pursued. As was pointed out in the previous chapter, it would be difficult to persuade university administrators to create, in one fell swoop, an entirely new department of political economy. The obvious sequence would be to establish a political economy subject in a department of politics and build up from there. Another option would be to build towards a separate institutional base via the type of hybrid strategies described in the previous chapter.

It also needs to be emphasised that simply splitting a university department into an orthodox department and a political economy department is not an intrinsically winning formula: rather obviously, much depends on the specific context and the institutional structure in which the new department operates. A salient example of this is the case of the University of Notre Dame in the United States. The case of Notre Dame is rather involved (Donovan 2004; Glenn 2009; Gresik 2003; McCloskey 2003; Panhans 2009; Rakowski 2010; Ruccio 2003, 2010; Tierney 2010) and is beyond the scope of this thesis to address properly, but the essential features are relevant and can be conveyed succinctly.

In 2003, the University of Notre Dame, ostensibly concerned with the rankings of its economics department, opted for the radical strategy of dividing the department in two. On one hand, there was the Department of Economics and Econometrics (DEE) for the orthodox economists. On the other hand, there was the Department of Economics and Policy Studies (ECOP) for the heterodox economists. When the split was engineered in 2003, 15 members of the original department moved to ECOP and 5 staff moved to DEE, which from the outset referred to itself as a 'neoclassical' department (Thornton 2012d). The original stated justification for splitting the department into two was to allow both approaches to economics to flourish (Thornton 2012d). However, even from the outset, the institutional structure was not conducive to ECOP's survival. For example, after 2003, DEE was given the entire Ph.D. program and ECOP staff

were prohibited from offering graduate courses in Economics. The one concession was to include one member of ECOP on the graduate studies committee (Hayes 2007). Furthermore, ECOP could not recruit new staff or even replace staff who had retired or left. By contrast, DEE was able to expand its staffing considerably.

Given the institutional setting of ECOP, it was not able to exist for very long. In February 2010 the Academic Council approved the Dean's Proposal to dissolve ECOP. Former staff members of ECOP were not offered relocation at the Department of Economics and Econometrics (subsequently renamed as the Department of Economics) but were instead instructed to "find positions for themselves elsewhere in the university, or alternatively, to leave the university" (Ruccio 2010 p.1).

Unsurprisingly, some former members of ECOP wondered from the outset, and particularly subsequently, whether it was not all just a complicated ruse to purge the university's heterodox economists. The conditions under which the separate institutional base was established could only prompt such musings. A department obviously needs to be able to access students to teach and to be able to recruit staff or it is simply set up to fail. In a more general sense, a department like ECOP needs the commitment of upper management, or at least needs to be able to apply effective pressure to upper management, or it will fail.

Another potential constraint on this model is that the establishment of any new political economy department may well be blocked by existing departments of economics. This recalls Keen's assertion (2011 pp 136-137) that economics departments act ruthlessly to preserve their monopoly over the topic of 'economics'. The fact that research output is ranked via disciplinary code and not department might increase the probability that mainstream economists would wish to prevent the growth of political economy on the basis that an increased level of publications in political economy journals may drag down the overall disciplinary ranking for economics (see Section 8.3). However, such 'ruthless' behaviour cannot be assumed to be an iron law. Chapter six also illustrates that economics continues to lose institutional power and prestige within universities (for example there are very few dedicated economics departments left); thus

economists may not always have the institutional power to protect their monopoly.

It must also be recognised that other departments of social science might oppose the creation of a new department. On this point it should be noted that in his history of the social sciences in Australia, Macintyre contends that established departments tend to attempt to thwart the development of new departments (Macintyre 2010). Furthermore, the other social scientists may neither fully understand nor appreciate the political economy vision, particularly when they find themselves competing with the political economists for resources and students.

The next issue concerns a problem of political economy departments not being recognised as being part of the discipline of economics. This might impair their ability to exert influence over economics. Some indication that this can occur was evident when the Economics Society of Australia surveyed professors of economics from across Australia. In this case, the professors of political economy at DPE were not asked to participate and were thus not able to exert influence over the rankings of journals (Thornton 2010a). Political economy departments would appear to run some risk of being 'outside the tent'. However, this risk has to be weighed against the fact that political economists are usually a minority within economics departments and have little power or prestige. A growing and independent political economy, rather than a dwindling and dependent political economy, would appear to make the best strategic sense.

Yet another issue is that one cannot assume that such a department will be intrinsically cohesive. The claim by the political economists that their department has, despite some occasional personal and intellectual differences, been cohesive (Butler, Jones & Stilwell 2009) seems reasonable. Still, one cannot assume the personal and intellectual differences will not be marked and can always be managed. It is relevant to note that Lodewijks, in Chapter nine, found that in his experience heterodox economists tend to fight with each other. This suggests independent departments of political economy will require careful management, or at least a degree of luck and goodwill. The intellectual differences within the department are quite marked between some staff

members. For example, Dr Joseph Halevi, a long-term member of staff at DPE suggests that extensive changes to curriculum are necessary:

...I would make it into a Maurice Dobb cum Sraffa plus Kalecki department, with a strong focus on classical economics and on the transition of capitalism from the competitive state theorised by classical economics (not the perfect competition of neoclassicists) to the oligopolistic stage of Lenin, Kalecki, Sylos Labini, Baran-Sweezy etc. In this context I would study how business cycles changed in their nature and the role played by Keynes' principle of effective demand and I would connect it with the financial side of each stage. I would then set up a number of economic history courses and a three courses dealing critically with neoclassical theoretical issues and how neoclassical economics, born as a purely Platonic contemplative way of looking at the economy, has become the mainstay of policy-making (Halevi in Thornton 2011b p.1).

Halevi still supports the idea of a separate institutional base and also rates DPE's graduates highly (Thornton 2011b), but clearly he would like a much greater emphasis on classical or canonical knowledge, more theoretical courses in economics and less of what he calls “social studies type of talk” courses which he sees as being “inconsequential to the hegemony of neoclassical economics” (Thornton 2011b p.1). Halevi's views seem close to those of his sometime co-author, Yanis Varoufakis, that were discussed earlier. The focus that Halevi advocates does sound intellectually worthy in many respects, though it comes up against the same issues of opportunity cost and gains from specialisation discussed earlier. The reference to “social studies type of talk” courses suggests that his own vision of a plural curriculum might not only be more canonical, but also less interdisciplinary.

11.11 Conclusions

Political economy at Sydney University presents itself as a model that many reformers might do well to actively consider as an option appropriate for their particular university. Its success in establishing a separate institutional base, then strongly defending it, dwarfs all the other attempts in other Australian universities

to create a plural economics curriculum. This is not to say that it may still sometimes be more appropriate to direct one's efforts to building up an economics department like UWS that is genuinely plural. Moreover, hybrid strategies of the type studied in the previous chapter may also be the more appropriate and achievable option in some instances. However, DPE presents a compelling option for many universities to seriously consider. If a network of similar (but not identical) departments were developed, then it seems very hard to imagine that this would not have a highly beneficial effect on the discipline of economics and the economics curriculum.

12 The market for economic knowledge

“Ah, the old questions, the old answers, there’s nothing like them!” (Beckett 1964 p.38)

12.1 Introduction

There is ever-more interest in ensuring that education meets employer needs. It is not just employers who have this interest; groups such as politicians, university administrators and students themselves are increasingly keen to have a curriculum that meets the preferences of employers. In many ways this narrow vocational focus is undesirable. Indeed, if pursued too excessively, it can be self-defeating (if not for the individual employer, then for society in general). In any event, the point to be emphasised is that employers' stated preferences can potentially exert a real influence on the curriculum. Given this, this chapter examines what employers currently state they require from the economics curriculum. It mainly relies on recent survey evidence from the Economic Society of Australia, but also includes some interviews and other research. The focus is mainly on employers seeking to recruit graduates with an economics degree, though there is also some discussion of employers that want graduates with some economics education, there is also some focus on what is required of graduates in general.

12.2 An employer backlash?

Some have asserted that both employers and society in general will one day take issue with the type of graduates that economics departments produce and thus force real reform of the curriculum. For example, Groenewegen and McFarlane speak of:

...a possible backlash among staff and students once the trivialisation of economics becomes obvious and it is realised that graduates working in business and the public service are hampered in solving concrete problems by an inadequate training and perspective. If this happens, pressure to reintroduce comprehensive instruction in aspects of the discipline such as the history of economic thought...is certain to occur (Groenewegen & McFarlane 1990 p.235).

A variant on this argument is that employers will increasingly demand a plural and political economics curriculum because it is the superior vehicle to develop

the generic skills and graduate attributes that employers are said to value so highly (O'Donnell 2002, 2010):

...well-designed pluralist courses possess large natural advantages over orthodox courses in developing specific skills in graduates, such skills being important drivers of innovation, creativity and efficiency. These advantages in human capital formation are maximised when pluralist courses consciously incorporate activities that synergistically interact with the pluralist content (O'Donnell 2007 p.1).

Another variant on the argument is that economics departments will not so much be forced to mend their ways as simply be left behind as employers (and the world in general) turn to other sources to gain economic knowledge:

Government employers are themselves already disillusioned with economics, as the financial crisis has demonstrated the futility of standard economic advice and theories. Economics departments may become like departments of philosophy, theology, or ancient studies (Lavoie 2010 p.199).

Perhaps academic economics departments will lose mindshare and influence to others—from business schools and public policy programs to political science, psychology, and sociology departments. As university chancellors and students demand relevance and utility, perhaps these colleagues will take over teaching how the economy works and leave academic economists in a rump discipline that merely teaches the theory of logical choice (DeLong 2011 p.2).

All these assertions are interesting, but most are speculative. Furthermore, while academic economists can put forward their views on what an economics education should provide (for example, see Shackle in Ford 1990 pp.220-242), but what does the evidence on employer needs actually indicate?

12.3 Survey Evidence

There are number of surveys that examine what Australian employers require of economics graduates. Abelson and Valentine (1985) argue that employers seek “an ability to interpret economic data and events, a good knowledge of economic theory, and a good command of expression, both in writing and verbally” (Abelson & Valentine 1985 p.15). Notably, they assert that complementary studies (interdisciplinarity) in an economics graduate are not highly valued, as “employers place much more importance on the acquisition of sound economic skills than they do on training in complementary studies” (Abelson & Valentine 1985 p.15). They argue that “it is important that students be adequately trained in basic economics and not be side-tracked on to studies which are of minor value to them as potential economists” (Abelson & Valentine 1985 p.15). In terms of what other disciplines are valued (to the extent that they are valued at all) the disciplines of accounting, business management and law feature most prominently. Such preferences, if still valid and correct, sound more like an expressed need for a narrow, rather than plural and interdisciplinary, curriculum.

More recent survey work by Hellier et al. (2004) is largely in agreement with the earlier Abelson and Valentine survey work, though they also identify some evidence that employers seek graduates with good generic skills. They define generic skills as the ability to write clearly and concisely, analyse data, present and communicate, be effective interpersonally and have a practical orientation (Hellier et al. 2004). In further contrast to the 1985 study of Abelson and Valentine, they argue that employers seek a more multi-disciplinary and business problem-solving approach from graduates. Interestingly, they point out problems in developing this type of multi-disciplinary economics education: it cuts across established departmental and faculty structures. They also wonder how such courses can be balanced against the substantial mathematical and quantitative prerequisites that are required for postgraduate studies in economics.

More up-to-date information about employer requirements is provided by the Economic Society of Australia, which in July 2011 conducted a survey of policy opinion amongst Australian economists (ESA 2011). A total of 577 economists participated: 25 per cent from the private sector, 33.5 per cent from the public

sector, 3.8 per cent from the not-for-profit sector and 37 per cent from the university sector. The survey questionnaire had a total of 61 questions, seven of which pertained to the adequacy of the economics curriculum. These seven questions and the survey responses to them are presented in table 12.3.1

Table 12.3.1 Opinions of Australian economists on the economics curriculum

Proposition	Strongly disagree	Disagree	Neither agree nor disagree/ unsure	Agree	Strongly Agree	Re- sponse Count
1. Australian undergraduate economics degree programs should contain more subjects that place economics in a broader context, such as economic history, history of economic thought and political economy.	2.1%	9.3%	13.0%	43.9%	31.8%	529
2. Australian undergraduate economics degree programs should contain more behavioural economics and experimental economics.	2.8%	12.5%	27.0%	42.1%	15.7%	530
3. In Australia, undergraduate economics is taught with excessive mathematical rigour.	12.3%	36.4%	26.4%	17.7%	7.2%	530
4. Undergraduate pass degrees in economics should be four years.	6.2%	35.2%	29.1%	23.6%	5.9%	529
5. Australian undergraduate honours economics programs sufficiently prepare students for work as economists in the public sector.	3.4%	19.7%	30.7%	40.2%	6.1%	528
6. Australian undergraduate honours economics programs sufficiently prepare students for work as economists in the private sector.	3.6%	18.1%	38.7%	34.9%	4.7%	530
7. Doctoral programs in economics in Australia generally offer high quality training.	4.3%	12.7%	47.4%	30.2%	5.3%	529

Source: (ESA 2011)

This information provides some illumination, but a sectoral breakdown by employment area is required for the purposes of this chapter. Towards this end, I contacted the Economic Society of Australia to get a breakdown of responses by sector. This more detailed information is presented in tables 12.3.1 to 12.3.6.

Table 12.3.2 Australian undergraduate economics degree programs should contain more subjects that place economics in a broader context, such as economic history, history of economic thought and political economy

Sector of Employment	Strongly Disagree	Disagree	Neither agree nor disagree/ unsure	Agree	Strongly Agree	Re-sponse Count
Private Sector	0.8%	9.8%	11.5%	45.9%	32%	122
Public Sector	1.9%	10.8%	17.1%	43%	27.2%	158
University Sector	3.9%	9.4%	11%	41.4%	34.3%	181
Not-for-profit Sector	0%	5.3%	5.3%	36.8%	52.6%	19
No Sector Reported	0%	4.1%	14.3%	53.1%	28.6%	49
Total	2.1%	9.3%	13.0%	43.9%	31.8%	529

Proposition one (*Australian undergraduate economics degree programs should contain more subjects that place economics in a broader context, such as economic history, history of economic thought and political economy*) gained the agreement of 75.7 per cent of all Australian economists. This initially suggests that there is a general demand for the very type of changes advocated in this thesis. Interestingly, 75.7 per cent of academic economists were also in agreement with the proposition. Such a finding was consistent with earlier surveys that show academics wanted their students to have, among other things, a “head for the social and political dimensions of the profession” (Anderson & Blandy 1992 p.17).

If nothing else, such findings of majority support for a broader curriculum provide reformers with the very rare opportunity to cast themselves to the mainstream as advocates of the stated majority will (the opportunity to do this was taken in Thornton 2012a). However, the survey’s results tell us nothing about the *intensity* of the preference for change or the *amount* of change that is desired or what other subjects economists might be prepared to trade-off to have more of these broader subjects. There are some obvious indications (to be discussed shortly) that suggest the desire for substantial change is absent, the intensity of preference for even small changes is rather small and that there would be little demand to reduce the role and presence of mainstream subjects if it was required.

The obvious question to ask is that if 75.7 per cent of academic economists wanted more broadly based subjects in the curriculum, why have they not acted on their preferences, given they are in a position to offer such subjects? Given the healthy numbers for political economy courses that were apparent in the survey work of chapter six, this does not make sense at face value. Rhetoric would appear to be running in inverse proportion to reality.

Table 12.3.3 Australian undergraduate economics degree programs should contain more behavioural economics and experimental economics

Sector of Employment	Strongly Disagree	Disagree	Neither agree nor disagree/ Unsure	Agree	Strongly Agree	Re-sponse Count
Private Sector	0.8%	12.2%	26.8%	44.7%	15.4%	123
Public Sector	0.6%	9.5%	25.3%	48.1%	16.5%	158
University Sector	5.5%	17.7%	27.1%	36.5%	13.3%	181
Not-for-profit Sector	5.3%	10.5%	36.8%	42.1%	5.3%	19
No Sector Reported	4.1%	4.1%	28.6%	36.7%	26.5%	49
Total	2.8%	12.5%	27.0%	42.1%	15.7%	530

Proposition two (*Australian undergraduate economics degree programs should contain more behavioural economics and experimental economics*) gained the agreement of 57.8 per cent of Australian economists (see Table 12.3.3). So there is majority approval within the profession for more of what I have termed 'modern hybrid economics'. However, less than half of *academic* economists agreed with the proposition. These findings provide some encouragement for reformers, though the lack of majority support within economics departments is not a particularly good omen. In any event, the early indications are that interest in areas such as behavioural economics is very much in the 'new' rather than the 'old' behavioural economics. Indeed, subjects such as *ECON2060 Behavioural and evolutionary economics* at the University of Queensland, which were based in the 'old' behavioural economics, have clearly been redesigned to be now much closer to the 'new' behavioural economics. It seems unfortunate that two subjects (one for each variant of behavioural economics) could not have been created. The failure to do so demonstrates both the lack of value ascribed to the old behavioural economics, and the limited appetite for behavioural economics in general.

Table 12.3.4 In Australia, undergraduate economics is taught with excessive mathematical rigour

Sector of Employment	Strongly Disagree	Disagree	Neither agree nor disagree/ unsure	Agree	Strongly Agree	Re-sponse Count
Private Sector	10.6	35.0	35.0	13.0	6.5	123
Public Sector	8.2	36.7	31.0	19.0	5.1	158
University Sector	17.7	39.2	17.7	18.8	6.6	181
Not-for-profit Sector	0	26.3	26.3	21.1	26.3	19
No Sector Reported	14.3	32.7	22.4	20.4	10.2	49
Total						530

There was no majority preference for or against the proposition that economics is currently taught with excessive mathematical rigour (see Table 12.3.4). However, it is noteworthy that almost twice as many economists disagreed or strongly disagreed with the proposition (48.7%) as agreed or disagreed with it (24.9 per cent). Just as notably, the sector that had the highest level of disagreement with the proposition was academic economists (56.9 per cent), followed by private sector (45.6 per cent), the public sector (44.9 per cent) and the not-for-profit sector (26.3 per cent). It should also be pointed out that the not-for-profit sector had a high level of *strong* agreement with the proposition (26.3 per cent) relative to the other sectors.

Part of the requirement for mathematical rigour by employers may be due to signalling. Successful mastery of this content can be seen as signalling determination and application and a certain type of intelligence. Indeed, even the harshest critics of orthodox economics acknowledge that “it requires intellectual muscle to master” (Keen 2001a p.20). Robert Solow picks up on the signalling issue by arguing that the ability of a graduate to master high-level orthodox theory indicates that she or he will be a more reliable practitioner of more basic orthodox theory:

In economics I like a man to have mastered the fancy theory before I trust him with simple theory. The practical utility of economics comes not primarily from its high-powered frontier, but from fairly low-powered reasoning. But the moral is not that we can dispense with high-powered economics, if only because high-powered economics seems to be such an excellent school for the skilful use of low-powered economics (Solow cited in Colander 2005b p.194).

An alternative way to understand the requirement for advanced theory is that it sets up a self-reinforcing loop between self-interest and *genuine* belief. This is quite evident in Enthoven’s explanation of the making of the working economist:

The tools of analysis that we use are the simplest, most fundamental concepts of economic theory, combined with the simplest quantitative methods. The requirements for success in this line of work are a thorough understanding of and, if you like, belief in the relevance of such concepts as marginal products and marginal costs, and an ability to discover the marginal products and costs in complex situations, combined with a good quantitative sense. The advanced mathematical techniques of econometrics and operations research have not proved to be particularly useful in dealing with the problems I have described. Although a good grasp of this kind of mathematics is very valuable as intellectual formation, we are not applying linear programming, formal game theory, queuing theory, multiple regression theory, nonlinear programming under uncertainty, or anything like it. The economic theory we are using is the theory most of us learned as sophomores. The reason Ph.D.s are required is that many economists do not believe what they have learned until they have gone through graduate school and acquired a vested interest in marginal analysis (Enthoven 1963 p.422 emphasis added).

What Enthoven describes here is not just a simple case of self-interest due to sunk costs; rather it is that the habitual patterns of thought acquired during an education in marginal analysis shift belief in, and preference for, marginal analysis (again, note Enthoven's use of word 'belief'). As argued in chapter two, habits are too easily seen as an optimising response to given preferences and beliefs when the reality is that habits can shape preferences and beliefs. On this point it is relevant to recall Pierce's point that the "essence of belief is the establishment of habit" (Pierce 1878 p.29).

Table 12.3.5 Undergraduate degrees in economics should be four years

Sector of Employment	Strongly Disagree	Disagree	Neither agree nor disagree/ unsure	Agree	Strongly Agree	Re- sponse Count
Private Sector	6.5	40.7	29.3	21.1	2.4	123
Public Sector	6.3	36.1	32.9	21.5	3.2	158
University Sector	5.0	35.6	24.4	26.1	8.9	180
Not-for-profit Sector	10.5	15.8	36.8	31.6	5.3	19
No Sector Reported	8.2	24.5	30.6	24.5	12.2	49
Total						529

Currently undergraduate degrees in Australia are usually three years in length. The ESA survey put forward a proposition regarding whether an undergraduate degree in economics should be four years, but it also failed to get a majority verdict (see table 12.3.5), and it is thus difficult to draw many firm conclusions. The most enthusiastic supporters of the proposition appear to be the not-for-profit sector. Given their expressed preference for less mathematical rigour in the curriculum, their requirement for an additional year may suggest a need for more of the social science wing of the discipline, but we cannot really know this for sure. The relatively high level of satisfaction with a three-year degree in the private sector (47.2 per cent) and the public sector (42.2 per cent) could also be read as suggesting satisfaction with current economics graduates. Clearly, there is a need to look to other evidence in order to draw reliable conclusions (see sections to come).

Table 12.3.6 Doctoral programs in economics in Australia generally offer high quality training

Sector of Employment	Strongly Disagree	Disagree	Neither agree nor disagree/ Unsure	Agree	Strongly Agree	Re- sponse Count
Private Sector	2.4	9.8	58.5	26.8	2.4	123
Public Sector	3.8	7.6	58.2	23.4	7.0	158
University Sector	6.6	19.3	29.8	38.7	5.5	181
Not-for-profit Sector	0.0	5.6	38.9	50.0	5.6	18
No Sector Reported	4.1	14.3	53.1	22.4	6.1	49
Total						

Table 12.3.6 'Doctoral programs in economics generally offer high quality training', shows yet another proposition that fell short of a majority verdict. The not-for-profit sector did consider Australian doctoral programs as being high quality (55.6 per cent support), but they were only a small proportion of the sample. The proposition elicited an interesting response from the university sector, which in this instance is both a producer of doctoral graduates and a potential employer of such graduates. The survey found that 44.2 per cent of university economists agreed with the proposition, yet this is somewhat at odds with the ongoing trend of Australian economics departments to employ US-trained PhD graduates over Australian graduates (Millmow 2011a).

12.4 The Public Service

A key employer of economists is the state public service. To get a sense of what is required by this level of government, I undertook an interview with Mr Chris Mouratidis, a senior economist with the Victorian Treasury, on 12 March 2009. Mouratidis has been closely involved in the recruitment of graduate economists and was able to provide authoritative information on what Treasury requires. Mouratidis emphasised that Treasury requires orthodox microeconomics and macroeconomics (years 1, 2 and 3 and preferably 4). Gaining a mark of distinction (or above) in these areas was generally viewed favourably. These subjects are required primarily because Treasury continues to undertake cost-benefit analysis and some general equilibrium modelling. This is consistent with Ackerman's point that general equilibrium remains fundamental to the theory and practice of economics (Ackerman 1999).

Mouratidis also emphasised that public policy subjects were highly valued, particularly in areas such as labour economics, environmental economics and regional development. Applied economics subjects were much more highly valued in economist roles than specialised finance, accounting or management subjects - though it was noted that first or second-year finance could be useful. A dedicated economics degree is still seen as having a clear advantage over more general business based degrees, though double degrees in law and economics were seen as particularly useful. Interestingly, when I asked Mouratidis what subjects he found most interesting and rewarding in his own economics degree (undertaken at La Trobe University), he immediately recalled subjects taught by heterodox staff: an economic history subject with Michael Schneider and a macroeconomic course that looked at a range of competing approaches with Professor John King. However, while he personally recalled these subjects warmly there was no suggestion that Treasury or the State Public Service actively requires these subjects, or that graduates who have not studied these broader subjects would be seen as inadequately trained.

Mouratidis reported that there was some interest in behavioural economics within Treasury. For example, Treasury economists had recently participated in a one-day workshop on behavioural economics run by Monash University. However,

whether this interest in behavioural economics (even in its 'new' variant) will develop, or even persist remains to be seen, given that it sits awkwardly with the type of modelling and cost-benefit analysis that is clearly still so central in economic analysis undertaken in the public service. Consider Bateman's point about the strong implications of behavioural economics for techniques such as cost-benefit analysis:

The most fundamentally unsettling thing about discovering that people might value fairness more than more personal pleasure is that the whole traditional applied welfare economics is undercut if we need to consider anything besides utility in trying to compare two situations. In all applied microeconomics, from resource and environmental economics to transportation economics, cost-benefit analysis is the basic tool. But if the model of cost-benefit analysis does not fully represent what people value when they are faced with a change in policy, and so does not take into consideration some of the most important dimensions of how people assess the effects of policy, then the tool is no longer a legitimate way to assess the effects of policy. It certainly does not do the work that it claims to do (Bateman 2007 p.5).

A substantial embrace of behavioural economics suggests that large parts of applied microeconomics would need to be discarded, or at least be used with greater modesty, and in conjunction with some new and different tools. This is challenge to how many economists do their work (Samuels & Medema 1998). It is currently hard to see any demand among employers for such revolutionary changes to daily practice. Behavioural economics may turn out to be a curiosity or fringe concern.

Interestingly, when I followed up this 2009 interview with Mouratidis in December 2012, he mentioned “things have progressed a fair bit since we spoke. We have moved away from behavioural economics. Now, experimental economics has become a more important part to Treasury, compared to when we spoke. ‘Market design outcomes’ are now being actively sought. A dedicated executive leads a team of economists on this and Victorian Treasury now works closely with the Centre for Market Design at Melbourne University” (Thornton 2012c p.2).

Moving from the state to the federal public service, the Australian Federal Treasury has been so afflicted by a shortage of suitable graduate economists that it has had to train graduates from other disciplines, such as law and mathematics. Since 2008, this training has been contracted out to Monash University, which has simply taught its long-established Graduate Diploma in Economic Studies to Treasury staff. The diploma represents one year of full-time study, though in the case of Treasury staff, it will almost certainly be undertaken part-time over two or more years. The Graduate Diploma is notable for its orthodox focus, being “designed to provide a sound understanding of economic and economic statistics issues and their function in the business world” (Monash University 2012 p.1). It is heavily neoclassical and quantitative. While there is scope for a small number of electives, there is no requirement for any subjects from the social science wing of the discipline. Nor are any subjects from the mainstream research frontier required.

Another important employer of economists is the Productivity Commission. Its head, Gary Banks, appears to argue that government agencies require, above all, more of the same in terms of the content of their training. For Banks, the key problem is insufficient numbers of economists being produced, rather than the narrowness of their training:

We have seen shrinkage of the recruitment pool of economics graduates in recent years and I wonder whether the study of economics may be turning into a niche discipline in our universities...You can't have good evidence, you can't have good research, without good people. People skilled in quantitative methods and other analysis are especially valuable. It is therefore ironic that we appear to have experienced a decline in the numbers with such skills within the Public Service at the very time when it has been called upon to provide an evidence-based approach that relies on them (Banks 2008 pp.13-14).

To his credit, Banks ascribes some value to ‘other analysis’ beyond quantitative methods, yet this is a long way from calling for significant reform of the curriculum.

Some indication of what the Productivity Commission requires from graduates came to me via a 2010 interview I conducted with an Honours graduate who had recently had a job interview at the Productivity Commission for its graduate program. The graduate reported being struck by the questions about economics, which were all focused on first-year microeconomics — for example, the graduate was asked to continually identify when a dead-weight loss had occurred. The graduate also expressed frustration at how black-and-white the line of questioning was and at the overall level of superficiality and simplicity of the analysis they were seeking (Thornton 2010b).

12.5 The Private Sector

Professional philosophers do not need to be reminded how easy it is to gain popular acceptance by telling people what they want to hear and papering over the inconsistencies that this entails with various obscurantist devices (Binmore 1998 p.ix).

The requirement for more economics graduates, rather than differently trained economics graduates, seems to also be evident in the private sector. For example, the HSBC chief economist John Edwards states that “economics honours graduates are very employable but not enough of them are being turned out” (Matchett 2009 p.25). In response to this shortage, the Economic Society of Australia has in recent years held information sessions at university campuses encouraging students to study economics. The sessions usually include economists from both the private and public sector to speak about the benefits of doing economics and to spruik their own organisations as employment destinations.

Having observed the information session conducted at La Trobe University, it was quite apparent that the demand from employers was very much for graduates trained in orthodox economics, particularly cost-benefit analysis and econometric modelling. This preference by employers is not surprising, given that some have argued that there has been a “modelling mania” that has developed among government departments and economic consultants in recent years

(Gittins 2011 p.21). Indeed, politicians are now almost reflexively demanding the modelling behind any figure or policy idea that an opposing politician put forward:

Economic modelling has, for many people involved in Australian policy debates, become synonymous with the process of serious policy development. Proponents of policy change that are armed with economic modelling are often taken more seriously than those with 20 years' experience working on the same problem. The modelling result that suggests tens of thousands of jobs will be lost or created often trumps logic or experience that suggests such claims are nonsensical (Denniss 2012 p.1).

What should be noted in the excerpt from Denniss is the point about how modelling has 'trumped' other forms of knowledge: case studies, historical evidence or experience from the field is simply not valued anywhere near as much, yet it can clearly be at least as valuable in many instances.

A particularly enthusiastic employer of economic modellers in Australia are big business lobby groups. Indeed, Gittins argues that this group is currently the largest producer of economic modelling in Australia, paying significant amounts of money to economics consultants to produce supposedly independent and objective scientific analysis (Gittins 2012). The underlying objective of the research is less to do with the pursuit of truth, than it is with advancing the interests of the business that has commissioned the analysis:

In the old days, businesses would pluck some big-sounding figure out of the air. These days, the fashion is to pay one of Canberra's many firms of economists-for-hire to do some "independent" modelling. Any economist who can't juggle the assumptions until they get the kind of findings their client is hoping for isn't trying. If you come up with a big-sounding figure for supposed job losses, you can be reasonably sure the media will trumpet the figure in shocked tones. You can also be sure few (if any) journalists will subject your claims to examination to see how credible they are (Gittins 2011 p.21).

Why is this increasingly occurring? In Chapter two, the point was made that knowledge is only a form of power when there is an information asymmetry. Most people in society (including politicians) simply do not know enough about these models to understand their limitations and so this creates the capacity for such modelling to mislead as much as illuminate. Economic modelling (whether it is good, bad or otherwise) will *a/ways* exclude a very large section of the public from following the detail and substance of the argument in a way that case studies or other forms of analysis do not. Modellers can thus all too easily exploit the information asymmetry for their private gain (or the larger gain of whoever has employed them to undertake the modelling).

Modelling also carries an additional attraction in that it is imbued with the aura of science (as the concept of science is popularly understood). This aura of science comes by virtue of the fact it is characterised by the use of mathematics and statistics; these things are associated with rigour, precision and objectivity (recall the section 'popular conceptions of science' in Chapter four).

What is the remedy for the overuse and misuse of modelling and econometrics? That the abuse of econometrics will somehow resolve itself is unlikely, given that "bad economic modelling is preferred by many advocacy and industry groups to good economic modelling for three main reasons: 1. it is cheaper, 2. it is quicker, 3. it is far more likely to yield the result preferred by the client" (Denniss 2012 p.1). Part of the solution relies on better trained economists and also on a more economically literate populace. Towards this end Denniss (2012) has produced a practical guide for anybody (politicians, the media, the general public) that will help them to identify poor quality, and or intentionally mischievous, economic modelling. Denniss provides a list of straight-forward questions such as, does the model rest on structural or technological changes that are yet to occur? What linkages between variables are assumed? Do problems of circularity exist (does the model assume the very conclusions it supposed to prove)? Is the type of model used being used outside its normal domain of applicability? If the modeller cannot, or will not, answer such questions, then this in itself, argues Denniss, should raise immediate questions about the quality of the modelling.

It is useful to think of economic modelling in terms of instrumental versus ceremonial institutions. Economic modelling can surely be an instrumental institution, and can genuinely be a source of knowledge and social benefit when used honestly and intelligently. However, the fact that it *can* make this positive contribution and that it necessarily *will* make a positive contribution are of course two different things (Denniss 2012). Because of issues of information asymmetry and the aura of science as popularly understood, economic modelling is particularly prone to being a ceremonial institution that exists to support established hierarchies of status, wealth and power.

12.6 Conclusions

While O'Donnell is correct in saying there is evidence that employers *in general* require just the type of graduate skills, knowledge and attributes that a plural curriculum is best placed to supply, the evidence on whether employers *of economists* are likely to demand, or at least value, a more plural curriculum is rather mixed and ambiguous. The evidence examined in this chapter appears to indicate that employers of graduate economists (or of graduates with some economics training) are not currently calling for significant change to the curriculum. Indeed, the evidence in the latter part of this chapter indicates that what might trigger an employer backlash would be to reduce the dominance of the orthodox economics within the economics curriculum. If we accept that a pluralist approach to economics would make for better graduates (including economics graduates), political economists have got a task in front of them to persuade more employers (and society in general) that what they say they want may not be the thing that they actually need (presuming that such employers are not in the business of producing intentionally misleading analysis). This process of persuasion will be a long-term process, but continuing to produce research on this issue (and to publicise this research widely) would be time well spent. O'Donnell's recent work in this respect is exemplary (O'Donnell 2002, 2007, 2010).

13 The three purposes of economics

“The completeness of the Ricardian victory is something of a curiosity and a mystery. It must have been due to a complex of suitabilities in the doctrine to the environment into which it was projected. That it reached conclusions quite different from what the ordinary uninstructed person would expect, added, I suppose, to its intellectual prestige. That its teaching, translated into practice, was austere and often unpalatable, lent it virtue. That it was adapted to carry a vast and consistent logical superstructure, gave it beauty. That it could explain much social injustice and apparent cruelty as an inevitable incident in the scheme of progress, and the attempt to change such things as likely on the whole to do more harm than good, commended it to authority. That it afforded a measure of justification to the free activities of the individual capitalist, attracted to it the support of the dominant social force behind authority.” (Keynes 1936 p.33).

13.1 Introduction

This penultimate chapter seeks to tie the reasoning and evidence presented in previous chapters into a cohesive whole and thus lays the groundwork for the conclusion. The mode of analysis is to relate structure to function; in other words, to describe the nature of the economics and the economics curriculum in terms of its purposes. This line of analysis is pursued via the use of an unduly neglected argument of Warren Samuels, who by drawing on the work of Robinson, Shackle and others, argues that there are three (inter-related) purposes of economics: scientific explanation, social control and psychological balm (Samuels 1989). It is argued that these three purposes exert a powerful influence on the nature of economics and that a proper understanding of them, including an understanding of their interrelationship, offers a deeper understanding of the forces that shape economics and the economics curriculum. While Samuels' triptych cannot function as a complete explanation, it is a framework that can integrate much of the reasoning and evidence of previous chapters. As well as utilising Samuels' triptych to draw my thesis together, I have also tried to extend and deepen his ideas. In particular, I put forward the idea that the interrelationship between the three purposes of economics should be understood as being one of circular and cumulative causation.

13.2 Economics as science

How could it be that a set of ideas was at once an intellectual triumph and social and institutional failure? Surely, good science drives out bad science every time? (King 2002 p.241)

The idea that economics exists to provide us with scientific explanation has already been examined in the latter part of Chapter four, 'Economic pluralism and economics as a science', and need not be extensively restated at this point.

However, given its place in Samuels' triptych,⁴⁰ and given that Chapter four is now some nine chapters back, the central points warrant restatement.

The purpose of supplying scientific explanation is the most obvious aspect of economics. Many people (particularly orthodox economists) might see it as the *only* purpose of economics. Certainly, it is the case that many mainstream economists often pride themselves on being the only true scientists in the social sciences (Lazear 2000; Mankiw, Gans & King 2009; Samuelson 1970). Of course, such a belief is driven by a particular conception of what a true science is. Let me succinctly review and summarise this conception of science within mainstream economics.

For orthodox economists a properly scientific economics is characterised by the building (and perhaps statistical testing) of closed-system deductivist mathematical models:

For most mainstream economists, of course, there is only one way to do economics. It requires the construction of a model, collection of relevant data and subsequent testing. The model itself must be consistent with the fundamental principle of methodological individualism: that is to say, it must be based on the assumption of optimising behaviour by rational agents. The tests must employ the most advanced econometric techniques rather than – or at least in addition to – descriptive statistics. For the defenders of mainstream economics these simple rules are what make it a science, which is envied and increasingly imitated by the practitioners of less favoured disciplines in the areas of management and social studies (King 2011 p.64).

This view of science has its roots in the logical positivism of the Vienna Circle, the falsificationism of Karl Popper, and the instrumentalism of Milton Friedman. It has been referred to as the 'received view' of science and of economic methodology.

⁴⁰I have chosen this word quite deliberately: a triptych is a three-sectioned panel painting that was suspended in frame behind the altars of medieval churches. It was quite often folded shut.

It is a rule-based methodology that posits that the single best theory can be found. It is therefore a philosophy of science that is antithetical to the idea of intellectual pluralism.

The problem with the received view, from a modern philosophy of science perspective, is that science is not practised like this, and to an extent, it *cannot* be practiced like this. Under-determination, theory-ladenness, the social nature of science, relativism, anti-foundationalism and naturalism all make the old rules-based approach to science and economic methodology more problematic (Boumans et al. 2010; Hands 2001a, 2001b).

Modern philosophies of science provide much more intellectual support for pluralism, because in the absence of a decisive rule-based methodology to decide between theories, we should be open to consideration of multiple theories and to a degree of eclecticism and even of synthesis. This is not to argue that 'anything goes' or that evidence and testing do not matter (these things remain central). Rather, it is arguing that a modern philosophy of science suggests that we should not pretend that things are simpler than they are, and that all we need to do in our work is to apply a limited and consistent set of rules that will clearly adjudicate between knowledge and error.

There is an ongoing inability of orthodox economics to come to terms with the modern philosophy of science. Remedying this situation is very hard, given that the mainstream has little appetite for methodological discussion (Lawson 1997); if one assumes that one has already clearly arrived at the pinnacle of scientific practice, what would there be to discuss? Furthermore, orthodoxy is unlikely to encounter pressure from society for holding to its view of science, for society itself also has either a highly limited or out-dated conception of science (see the survey work in Chapter four) and is all too receptive to the idea of a mechanistic economics as being queen of the social sciences.

To summarise the key arguments in relation to economics and science, yes, supplying scientific explanation is a valid fundamental purpose (or at least aim) of economics. But the merit of pursuing this purpose is contingent on the economic and political mainstream (and society in general) acquiring a more developed

understanding of the history and philosophy of science. However, in seeking to build this understanding, it is necessary to consider the other two purposes of economics.

13.3 Economics as social control

Dynamic societies built their success on two production processes unfolding in parallel: manufacturing surplus and manufacturing consent regarding its distribution. The 'mind-forg'd manacles', as William Blake called them, are as real as the hand forged ones (Varoufakis, Halevi & Theocarakis 2011 p.22).

What is characteristic of the private enterprise system is that it condemns the wealthiest nation the world has ever seen to keeping an appreciable proportion of its population in perpetual ignorance and misery. The professional economist keeps up a smoke screen of 'theorems', and 'laws' and 'pay-offs' that prevent questions such as that from being asked. This situation is, I think, inevitable. In every country, educated institutions in general, and universities in particular, are supported directly or indirectly by the established authorities and whether in Chicago or in Moscow, their first duty is to save their pupils from contact with dangerous thoughts. (Robinson 1980 p.98)

The idea that economics needs to be understood, in part, as a means of social control has already been directly touched upon via the discussion in Shapin and Schaffer's argument that solutions to the problem of knowledge are inseparable from solutions to the problem of social order. However, it should also be understood that they are not alone in making this connection between knowledge and social control. For example, the philosopher Frederick Nietzsche is famous for putting the argument in its most extreme form – that all things are subject to interpretation and that whichever interpretation prevails at a given time is a function of power and not truth (Kaufmann 1954). In addition to some philosophers, radical political economists have also long understood the relationship between social order and knowledge, particularly with regard to social order and economic knowledge (Marx 1946). Institutionalists have also

long argued that beliefs about economic and social systems are working parts of these systems (Stretton 1999) and that the economy itself should be regarded as a system of power (Samuels & Tool 1988). By contrast, orthodox economics, while being somewhat malleable on this point, is an approach to economics that is powerfully adept at legitimising the capitalist economy. It is an economics that can uncritically over-emphasise the merits of self interest, the self-correcting nature of markets, the idea that one is rewarded in accordance with one's contribution, that we have perfect rationality and that we have the ability to see into the future probabilistically. It therefore has an enduring appeal for any party interested in believing, or at least maintaining, the status quo in economic and social arrangements.

Chapter eleven of this thesis 'Reform from without' provides very clear illustration that the social control aspect of economics is very important. For example, recall that Hogan not only saw the dispute as being about the role of mathematics in economics, it was also a matter of "political and ideological confrontation" (Hogan cited in Lodewijks 2007 pp. 450-451). Of particular illustrative power was Simkin's opposition to the political economists. Simkin was deeply concerned about the political economists' embrace of Kuhnian paradigms and scepticism towards objective truth. He saw this as defeatist, for it "exaggerates a difficulty into an impossibility" (Simkin 1975 p.5). He was also critical of the political economists for "glorifying the intrusion of personal bias," particularly in the sphere of teaching. Listed like this, one would think he is only attacking the political economists' view of science. However, this would misunderstand the fundamental *overlap* between the scientific and social control aspects of economics. The overlap itself becomes obvious in the example of Simkin, who builds on this critique of the political economist's view of science to then attack their "holistic method that both predicts and facilitates wholesale change" and that "promotes both sympathy and activism in conflicts" (Simkin 1975 p.5).

13.4 Economics as psychological balm

It gives us a pleasure to see the phenomena which we reckoned the most unaccountable, all deduced from some principle (commonly a well known one) and all united in one chain (Smith 1795 [1982] p.134).

The learned doth ignore the evidence of their senses to preserve the coherence of the ideas of their imagination (Smith 1795 [1982] p.77).

I now look at the psychological balm purpose of economics (what Samuels called 'psychic balm'). By psychological balm I mean the satisfying of our psychological predilection for order, control and predictability. It is tempting to assume that the purpose of supplying psychological balm could be subsumed under the scientific and social control aspects of economics. This is not what I argue. Instead, it will be shown that psychological balm can be understood as a distinct purpose of economics, which then interacts with the other two purposes of scientific explanation and social control in a circular and cumulative process.

That economics should be called upon to provide psychological balm should not be very surprising, as it is really just a reflection of a more general and deep-seated psychological (and practical) appetite for order, control and predictability. Geuss has noted:

For most of human history, human life has been a terribly dangerous and unpredictable activity; disease struck people down unexpectedly, and so it's not at all surprising that as human beings we have a deep-seated need for regularity and predictability in our lives, and a desire to have a sense of having control over the world, and one of the ways in which we get control over the world is by having predictive mechanisms and having reliable instruments for dealing with situations is a perfectly understandably human desire. And of course it isn't just understandable, it's a good thing we have that desire (Geuss 2009 p.1).

Given that it is both understandable and beneficial to desire a degree of order, control and prediction, what, then, is the problem? Problems emerge when it is not possible to see much order, or to have much predictability and control. Instead of recognising this uncomfortable reality (i.e. that what we want is incompatible with the reality that confronts us), we pretend to either have this desired predictability and control or pretend that we could have it (Geuss 2009). At this point good judgement is necessary, for without good judgement our analysis stops being constructive and helpful and degenerates into becoming

delusional and harmful. We should not overrate our chances of exercising good judgement, given that “staring into chaos and seeing in it significant patterns” is not only the job of the scientist, but the hallmark of the mad person (Varoufakis, Halevi & Theocarakis 2011 p.17) and that “nothing is so difficult as not deceiving oneself” (Wittgenstein 1980 p.34).

Working out when our pursuit for order, predictability and control is helpful, rather than delusional, has been a particular challenge for economics. In particular the allure of the elegant can so easily take us away from the relevant. Adam Smith, for example, spoke of how our minds crave the “the beauty of systematic arrangement of different observations connected by a few common principles,” and compared the pleasure of a grand system of thought to that of listening to a well composed instrumental music (cited in Skinner 1986 p.33):

Philosophy is the science of the connecting principles of nature. Nature, after the largest experience that common observation can acquire, seems to abound with events which appear solitary and incoherent with all that go before them, which therefore disturb the easy movement of the imagination ... Philosophy, by representing the invisible chains which bind together all these disjointed objects, endeavours to introduce order into this chaos of jarring and discordant appearances, to allay the tumult of the imagination, and to restore it, when it surveys the great revolutions of the universe, to that tone of tranquillity and composure, which is both most agreeable in itself, and most suitable to its nature (Smith 1776 [1982] p.47).

Smith appreciated how we crave order, beauty and systematic arrangement from a few common principles, but he was also wise enough to realise the dangers that can result when we uncritically pursue what we crave. For example, he points out that “the learned doth ignore the evidence of their senses to preserve the coherence of the ideas of their imagination”(cited in Skinner 1986 p.33); originally he made this observation in regard to the conduct of astronomers, though it is hard to imagine that he would not hesitate to apply it to the economics profession of today.

In a way that is very similar to Smith, Shackle has also written very perceptively on how our need for order, predictability and control (psychological balm) is very much at the heart of economic theory:

The chief service rendered by a theory is the setting of minds at rest... Theory serves deep needs of the human spirit: it subordinates nature to man, imposes a beautiful simplicity on the unbearable multiplicity of fact, gives comfort in the face of the unknown and unexperienced, stops the teasing of mystery and doubt which, though salutary and life preserving, is uncomfortable, so that we seek by theory to sort out the justified from the unjustified fear. Theories by their nature and purpose, their role of administering to a "good state of mind," are things to be held and cherished. Theories are altered or discarded only when they fail us (Shackle 1967 pp.288-289).

All we can seek is consistency, coherence, order. The question for the scientist is what thought-scheme will best provided him with a sense of that order and coherence, a sense of some permanence, repetitiveness and universality in the structure or texture of the scheme of things, a sense even of that one-ness and simplicity which, if he can assure himself of its presence, will carry consistency and order to their highest expression. Religion, science and art have all of them this aim in common. The difference between them lies in the different emphases in their modes of search (Shackle 1967 p.286).⁴¹

There is abundant evidence of ongoing desire for psychological balm in economics. For example, Hal Varian, the author of the world's leading intermediate neoclassical microeconomics textbook, is entirely candid that most orthodox theorists do the work that they do for reasons of aesthetic beauty and psychological enjoyment:

⁴¹ It is appropriate to note that I originally encountered these two excerpts from Shackle in Samuels (1989).

Why is economic theory a worthwhile thing to do? There can be many answers to this question. One obvious answer is that it is a challenging intellectual exercise and interesting on its own merits. No one complains about poetry and music, number theory or astronomy being 'useless', but one often hears complaints about economic theory being overly esoteric. I think that one could argue a reasonable case for economic theory on purely aesthetic grounds. Indeed, when pressed, most economic theorists admit they do economics because it is fun (Varian 1997 p.108).

This recalls Adam Smith's point that many study "for its own sake, as an original pleasure or good in itself, without regarding its tendency to procure them the means of many other pleasures" (Smith 1800 [2005] p.340).

The economic historian Alexander Gerschenkron also touches on our desire for psychological balm as being a deep-seated yearning to possess a single approach that can unlock the puzzles of any place or time, though he implores us to outgrow this nomothetic objective that he sees as a false chase:

There is a deep-seated yearning in the social sciences for the discovery of one general approach, one general law valid for all times and all climes. But these attitudes must be outgrown. They overestimate both the degree of simplicity of economic reality and the quality of the scientific tools. As the economic historian organises and interprets his material, all he can hope for is the discovery of limited patterns of uniformity which may possess explanatory value for some places and periods but may be utterly inapplicable to others (Gerschenkron 1962 p.67).

Loasby (1991 p.20) also points to psychological balm's centrality in sustaining Kuhnian paradigms or Lakostian research programmes, for they provide the means "to put our minds at rest". Note that this is a different concern from pursuing social acceptance for one's work within the community of scientists: it is a more internally focused motivation (though there is still an obvious inter-relationship between gaining external acceptance and feeling psychologically at ease). Loasby goes on to explain that having embraced a particular paradigm or research program "thereafter we expect to increase our ability to predict and

control by incremental experimentation. We expect that any changes in the theories which we hold will take the form of modifications, primarily extensions; and we may decide in advance that no message from our environment will be allowed to displace any major elements” (Loasby 1991 p.20). Once we have gained the balm we seek, we are obviously reluctant to part with it.

Our need for predictability, order and control is also evident in orthodox economics' inability to come to terms with Knightian or Keynesian uncertainty and the consequent seeking out of psychological refuge in the ergodic axiom (that the past is essentially a facsimile of the future). This delusional retreat from perhaps the most central aspect of economic reality (the fact that we can't see into the future) is not seen as a bizarre and harmful conceit, but as something that needed to be done for economics to be a true science (Samuelson 1970). This is a very clear illustration that, just as we cannot separate economics as science from economics as social control, neither can we separate economics as science from economics as psychological balm.

The concept of equilibrium is another example of psychological balm of pharmaceutical grade purity. Consider its properties: essentially blind to historical process and thus nomothetic, precise and ordered and offering a soothing picture of stability. It is also a fundamentally teleological concept:⁴² it assumes the very future that it seeks to explain, for it is fully determined by its foundations. While post-Keynesians such as Robinson and Kaldor long ago exhorted the profession to break with equilibrium, it has proven a far too potent and addictive substance to part with.

Psychological balm often works its seduction on economists insidiously. Much economic theory starts off as *knowingly* simplistic and reductionist, but along the way this knowingness behind the reductionism and abstraction falls away and the analysis becomes perceived as truth. Blaug picks up on this problem when he talks about the general tendency for neoclassical economists to “read more

⁴² The fact that the teleological nature of equilibrium is so seldom recognised or admitted reflects Mayr's (1974) point that “teleology is like a mistress to the theorist - they cannot live without her but they are unwilling to be seen with her in public.”

significance into the analysis than is inherent in the procedure” (Blaug 1997a p.692). Notably, he describes how the tendency to do this has been “irresistible” and that it was a “temptation” that most neoclassical economists could not help but “succumb” to (Blaug 1997a p.692). Whitehead argued that we should seek simplicity, yet distrust it once we find it (Whitehead 1920). While the former part of Whitehead’s directive comes easily, the latter part of the directive has been a tremendous problem. Pierce provides part of the explanation for this in his argument that a state of doubt is irritant to the human mind, but that a state of belief resolves this irritation (Pierce 1878).

Perhaps the best example of the economics profession’s inability to follow Whitehead’s dictum is general equilibrium theory. Frank Hahn, one of the architects of modern general equilibrium theory, has always stressed that, because the precise nature of the theory required such a exacting statement of the highly unrealistic assumptions involved, its “application to the ‘real world’ could be at best provisional” (Hahn 1994 pp.245-246). Yet, general equilibrium remains fundamental to *both* the theory and practice of economics. One can explain this in terms of economists’ conception of science (the building of mathematical models) and also the social control aspect of economics (by its presentation of a market economy as being self-correcting and stable), yet psychological balm is evidently a factor here as well. Hahn himself talks about the “pleasures of the theorem and proof” and laments how this “pleasure” will be largely denied to those economists who are forced towards “the uncertain embrace of history and sociology and biology” (Hahn 1991 p.48).

What all this suggests is that mathematics, in addition to its clear practical capacity, has a psychological appeal that is seductive. Mathematics has, almost from the very beginning, a special ability to engender a quasi-religious, or even fully-religious, devotion; the most dramatic example of the latter was Pythagoras, who invented a religion based on numbers. Notably, Pythagoras is said to have either murdered (or at least exiled) his student Hippasus, who tried to leak the concept of irrational numbers; perhaps the world’s earliest example of the upholding of Kuhnian normal science. For Pythagoras, the impetus to reduce all phenomena to mathematical relationships was a spiritual one. Are many contemporary economists really all that different?

One need not look back to the ancient Greeks to see a link between mathematics and the divine. Herbert Gintis – a former Marxist and one of Colander’s ‘cutting edge’ economists (Colander, Rosser & Holt 2004) – in the preface to his textbook *Game theory evolving*, not only thanks his friends and family, but also “the creator who gave us consciousness, filled the world with love and joy, and made it understandable in terms of mathematical models” (Gintis 2008 p.i). What is particularly distinctive here is not that he chooses to feel thankful to a creator, or even thankful that the world can be understood; rather it is his gratitude for the *manner* in which it can be understood - via mathematical models. This seems to be a rather Pythagorean take on mathematics: could one not be simply grateful that the world around us can be understood?

Gintis’s close colleague Samuel Bowles also has a telling take on the role of mathematics in the future of economics, arguing (somewhat paradoxically) that a more problem-driven and less tool-driven approach can only be achieved through more sophisticated tools and more complex mathematics (Bowles 2005). I am not counter-arguing that more complex mathematics will not be able to yield more insights into economic phenomena. I am simply questioning the assumption that complex mathematics (as opposed to other ways of knowing) should be so central to progress. For example, perhaps advances in psychology, or anthropology, or sociology, might be more useful to economics than the application of more powerful mathematics. The most obvious danger of the *a priori* commitment to mathematics at the level of method, is that it puts that cart in front of the horse methodologically: if one commits to a certain method, this then drives many of the subsequent commitments at the theoretical, epistemological and ontological level. It would seem more sensible to consider the nature of reality one is confronted with and then let *that* shape the subsequent decisions in matters of epistemology and theory.

The obsession that mathematics is somehow a higher form of knowledge can transcend even lines of analysis that are supportive of one’s own ideological position. Ward recalls how a subject that had content that was very much in line with the right-wing ideological orientation of his department, was still seen as being inferior and lacking in rigour:

Courtenay Wright and I proposed a third-year subject about ideology. It was a sophisticated subject. The head of department said it couldn't be called ideology, so I said 'we'll call it capitalism: contrasting views'. We will have a lot of Hayek and Stigler, which he thought was good. But he said we won't have it in third-year because he said 'its not real economics, you can have that sort of crap at second year, we want rigorous stuff in third-year.' I wouldn't call Hayek crap (Ward in Thornton & Millmow 2008 p.9).

Notably, the two academics persisted with trying to get the subject established at a third-year level, putting the matter to a vote and gaining a majority of votes (6 votes to 5). However, the head of department's response to the majority verdict was to say that he was "not interested in majority rule, it was the truth that matters, what he was arguing was true and what they were arguing for was false" (Thornton & Millmow 2008 p.9).

The problem of excessive devotion to formalism is not limited to economics. McCalman et al. (2008) argue that universities continue to be divided between those who adopt formalism and those who eschew it. This divide was first recognised by Snow in his classic essay on the 'Two cultures' (Snow 1964). Unfortunately, the problem Snow identified has endured all too well and "the shifting boundaries between disciplines within the sciences, the humanities and the social sciences, have made little impact on the fundamental divide between the way humans see, interpret, analyse and explain the world, i.e. between words and mathematics." (McCalman, Muir & Soeterboek 2008 p.17). The relationship between the two sides remains one of incomprehension tinged with hostility (Kimball 1994). Snow's divide is usually understood as existing between departments; for example between the physics department and the sociology department, yet in economics the divide is very much present within the discipline, with the formalists being the dominant side that hold the institutional power.

Why has economics come down so strongly on one side of Snow's divide? Backhouse and Fontaine (2010) argue that "the Second World War brought economists together with mathematicians, statisticians, engineers, and more generally, natural scientists in a way that had profound consequences for the way

the discipline was conceived” (Backhouse & Fontaine 2010 p.6). This led to a strong identity of economics as being a “rigorous, dispassionate and apolitical discipline” (Bernstein in Backhouse & Fontaine 2010 p.6). Such a definition is a long way from Keynes’s view of economics as being an art, based on common sense, subject to the principles of reason (Lodewijks 2002b). I don’t take issue with the importance of the Second World War, nor of the supporting factors that Backhouse and Fontaine also identify, but I would argue that any analysis that neglects the psychological balm aspects of economics is missing something important.

The rejection of pluralism also needs to be understood as being partly to do with the need for economics to provide psychological balm. Because pluralism is inherently tentative it denies, or at least heavily attenuates, the psychological balm that many economists are used to receiving from the analysis that they undertake. The doubt and self-scepticism inherent in the pluralist approach is not something we have a natural appetite for. As previously mentioned, the pragmatist philosopher William Peirce emphasised that human beings seek to free themselves from doubt because it causes us to feel ill at ease and dissatisfied. Doubt “stimulates us to action until it is destroyed” (Pierce 1992 p.114). We long not for doubt but to “pass into a state of belief where our minds can be at rest” (Pierce 1992 p.114). If we accept Pierce’s observation, then it makes sense that we might not only pre-suppose a closed system for the purposes of theorising, but also presuppose it as an actual reality. However, if we opt to do this, it becomes less a process of scientific inquiry and more a flight from a reality that we cannot face. Nietzsche’s point that “the will to a system is a lack of integrity” (Nietzsche cited in Kaufmann 1954 p.470) is apposite here, particularly if he is understood to be referring to a closed system, as is Hegel’s point that “the search for certainty reveals itself as a fear of the truth” (cited in Nightingale 2003 p.1).

It is not just the professional economists who are prone to be misled by their need for psychological balm. Consumers of economic analysis (politicians, public servants, the media and society at large) are also seduced by analysis that promises order, prediction and control. One can see this clearly in the premium put on economic analysis that provides exact forecasts and precise figures and

that elides more descriptive or nuanced analysis. Precision and exactitude suggest that the phenomena under investigation are ordered, predictable and thus potentially controllable.

Students, while often being open to new ideas, are also prone to be avid seekers of psychological balm, particularly those who may have no underlying interest in economics. It takes the most careful management to bring out their open and critical predilections and to avoid demands to be supplied with psychological balm. Consider Earl's recollection of teaching a microeconomics class in a pluralist manner:

...nothing had prepared me for the resistance I encountered from the students, who had no expectation of being taught in a pluralistic manner.⁴³ They were used to multiple choice exercises and short answer types of problems and lacked experience in essay writing and open-ended problem solving. To them, economics was a matter of moving lines on graphs and the invitation 'discuss' meant 'describe' (Earl 2002 p.2).

Earl then goes on to recall another experience of "brutal" resistance to a pluralist course, including a "petition and a steady stream of e-mail complaints about virtually every aspect of the course, which grew into an organized campaign" (Earl 2002 p.1). Earl argues that a pluralist course "looks far harder and more threatening than a typical one-eyed mainstream offering" (Earl 2002 p.1). Earl goes on to explain how the work of Perry (1970) was helpful in managing these types of disputes and rebellions. Notably, the intellectual development from a

⁴³ The avid embrace of psychological balm would appear to be also partly to do with constituency: Earl notes that "they had no intrinsic interest in economics as a subject for making sense of the world; it was taken merely as a hurdle en route to a degree that would provide better job opportunities" (Earl 2002 p.1). By contrast, and I think significantly, he recalls a much happier experience in teaching a first-year subject (albeit at a different university) in pluralist political economy. In this instance the subject "was taken mainly by Arts students, with Commerce and Economics students sticking to orthodox micro and macro papers" (Earl 2002 p.2). Yet again, this suggests that the main constituency for political economy may be with social science students. It also suggests that introducing pluralism at a first-year level may be much easier than at a second-year level.

dualistic conception of the world to “a kind of committed relativism” will be “painful” without careful and proper guidance throughout every stage of the process (Earl 2002 p.3).

13.5 Feminist perspectives

Feminist economics and in particular, feminist philosophers of science, provide further contributions to the understanding of economics as psychological balm. These scholars argue that the excessive and uncritical pursuit of order, predictability and control is a reflection of a deeper masculinist bias in our conception of science. The masculinist conception of science is understood to have emerged during the Enlightenment, where both the natural and social world came to be viewed as clockwork-like and mechanical and thus well suited to being understood via mathematical modelling (Nelson 2002). For feminist scholars this “epistemology reflects a fantasy of achieving solid security through the control of nature by our minds, and a denial of all connection, embodiment, vulnerability, or flux” (Nelson 2001 p.2). Notably, the over-emphasis on mathematical elegance is understood to have its origins in a “misguided attempt to achieve certainty and absolute control” (Nelson 2002 p.1).

This feminist critique offers considerable insights into why it is that the mainstream were never able to, and still are unable to, properly understand the central message of Keynes’ *General Theory*: that we face a fundamentally uncertain future. It was an insufficiently masculinist text; indeed, some have argued that it exhibits feminist characteristics (Tabb 1999). We can also discern the fantasy of total control via rigorous and precise methods in Robert Lucas’s view of how we understand growth (or indeed, understand anything at all):

If we understand the process of economic growth — or of anything else — we ought to be capable of demonstrating this knowledge by creating it in these pen and paper (and computer-equipped) laboratories of ours. If we know what an economic miracle is, we ought to be able to make one (Lucas 1993 p.271).

Note that in Lucas’s view the model maker is not just the one who understands, but is the creator of miracles. It should also be noted that it is not ‘some

understanding' or a 'partial understanding' but simply 'understanding'. Lucas is not alone; many of orthodoxy's leading-lights are make similar claims of control and solid security. For example, consider Solow and Blanchard's claims for macroeconomics:

Most economists feel that short-run macroeconomic theory is pretty well in hand... The basic outlines of the dominant theory have not changed in years. All that is left is the trivial job of filling in the empty boxes, and that will not take more than 50 years of concentrated effort at maximum (Solow 1965 p.165).

For a long while after the explosion of macroeconomics in the 1970s, the field looked like a battlefield. Over time however, largely because facts do not go away, a largely shared vision both of fluctuations and of methodology has emerged. Not everything is fine. Like all revolutions, this one has come with the destruction of some knowledge, and suffers from extremism and herding. None of this deadly however. The state of macro is good (Blanchard 2009 p.1).

The need for absolute control and the denial of vulnerability also helps explain Haldane's four usual stages of scientific advance: "(i) this is worthless nonsense; (ii) this is an interesting, but perverse, point of view; (iii) this is true, but quite unimportant; (iv) I always said so" (Haldane 1963 pp.463-464). Note how the scientist protects that fantasy of total control at every stage of the process.

Feminist economists provide some of the explanation as to why orthodox economists are often so rigid in their views. They emphasise that changing one's view is not just a slow or involved process: it is genuinely psychologically threatening and confronting. Adherence to a paradigm has a strong emotional basis and to abandon it in any real way endangers ties to colleagues and mentors (Nelson 2001). Learning involves not only the joy of realisation, but also involves the loss of certainty and of there being an altered sense of self (Perry cited in Garnett 2009a):

...whenever we call for more connection to social problems, whenever we call for more concreteness, for more flexibility, or for more embodiment, we are asking a lot. We may think we are shaking a disciplinary branch, but in reality we are rattling a very big emotional and socio-cultural tree. We should not be surprised when defenders of the status quo often fail to engage with us at an intellectual level. The fact that we are, in fact, generally much more reasonable than they are (in the broad sense of human wisdom) is almost beside the point. Our calls for change will often be perceived as calls for the emasculation of economics, for making economics soft, for making economics impotent. Our calls for change demand that our listeners “think outside the box” in a radical way that will, at the least, feel unfamiliar and uncomfortable to many, and be perceived as profoundly threatening by some (Nelson 2001 p.1).

What this suggests is that the intolerance that many political economists complain of – the “persistent inquisition of heretics” who question holy writ (Butler, Jones & Stilwell 2009 p.186) – has its basis in fear. Indeed, it has been stressed fear and intolerance go hand in hand:

Intolerance is a psychologically interesting phenomenon because it is symptomatic of insecurity and fear. Zealots who would, if they could, persecute you into conforming with their way of thinking, might claim to be trying to save your soul despite yourself; but they are really doing it because they feel threatened (Grayling 2001 p.8).

By making linkages to the ideas discussed in Section 13.4 ‘Economics as psychological balm’ and the masculinist bias in science, feminists offer a deeper and richer way to understand Kuhn’s observation that science is largely a conservative entity. This also offers a deeper grounding for much of the analysis and observation of previous chapters. The current state of the curriculum cannot simply be seen as just the result of factors such as institutional inertia, cognitive path-dependence and the fact that certain ideas serve certain interests.

13.6 Conclusion

Explaining the nature of economics and the economics curriculum via three inter-related and self-reinforcing purposes is admittedly both reductionist and rather bold. However, it nonetheless draws together most of the observations and reasoning of previous chapters in a way that is not otherwise possible. Of the three purposes I have given the most attention in this chapter to psychological balm: the least obvious and most easily subsumed, yet it is easily as important as the other two purposes and 'psychological balm' warrants being understood as a distinct purpose of economics. While feminist economists and philosophers of science did not use the terminology of psychological balm, their analysis integrates well with the idea that it is a fundamental purpose of economics.

I have tried throughout this chapter to emphasise the self-reinforcing and cumulative interrelationships that exist between the three purposes of economics; indeed, it should be clear by now how difficult they are to separate out in practice. The strong degree of interrelationship can be illustrated with a final example. In *The art of paradigm suppression*, Pullen (1997) asserts that so called economic laws have little empirical basis as laws and thus are more ideological than scientific (in the terms used in this chapter, they are more for the purposes of social control than science). He then goes on to note that the laws themselves are "therapeutic": they reduce "anxiety" and "suffering" and make the phenomena seem natural and comprehensible and ordered (Pullen 1997 pp.33-34) – in the terms of this chapter, they also supply psychological balm. In addition to this, it can be pointed out that the psychological balm thus provided then assists economics to provide both scientific explanation and social control. The relationship between the three purposes is one of circular and cumulative causation. Enhancing the scientific credentials of economics boosts its effectiveness as a means of social control. Enhancing the scientific credentials of economics also increases the supply of psychological balm and by virtue of this increases social control. Science itself is fuelled by the thirst for psychological balm. Psychological balm fuels the need to achieve social order.

14 Conclusion

14.1 Introduction

This concluding chapter reflects upon the content and arguments of the thesis as a whole and offers some final thoughts and clarifications. In particular, it offers a final response to the analysis of Colander that was described in Chapter three, 'The changing face of economics'. This chapter finishes with an identification of future research agendas that can usefully follow on from this thesis.

14.2 Review

This thesis has sought to understand the forces that shape the economics curriculum for the purposes of identifying strategies that have some chance of making that curriculum more plural. The major findings presented in Section 1.3 have all been supported via the analysis of subsequent chapters. The thesis can be thought of as being in three sections. Chapters one to five were concerned with laying the groundwork: explaining the frameworks, clarifying and justifying the important concepts. Chapters six to twelve formed the body of the thesis: surveying, describing and analysing for the purpose of gauging what the curriculum is, what forces shape it, and what strategies for its reform look to be the most promising. Chapter 13 and this chapter are concerned with drawing the preceding chapters together into a cohesive whole and making some overall observations.

At the core of the argument for a separate institutional base is a pessimistic assessment of the prospects for the mainstream to reform itself in the short term, medium term and perhaps even the long term. I argue that orthodox luminaries like Frank Hahn are probably wrong in viewing the future of economics (or at least the future of mainstream economics) in the following terms:

I am pretty certain that the following prediction will prove to be correct: theorising of the 'pure' sort will become both less enjoyable and less and less possible ... rather radical changes in questions and methods are required ... the signs are that the subject will return to its Marshallian affinities to biology...Not only will our successors have to be far less concerned with the general ... they will study particular histories and methods capable of dealing with the complexity of the particular ... Not for them the grand unifying theory of particle physics which seems to beckon

physicists ... less frequently for them the pleasures of theorems and proof. Instead the uncertain embrace of history and sociology and biology. (Hahn 1991 pp.47-48)

The mainstream *should* move in the direction Hahn foresees, but it seems very improbable that they will. Certainly, waiting for these changes to occur is not a good strategy for reformers. If the mainstream somehow *does* eventually go in the direction predicted by Hahn, and political economy has established a separate institutional base in the meantime, then the two branches of the discipline will be sufficiently similar to merge back into one reasonably easily. Indeed, it is hard to imagine that the development of an autonomous political economy could only ever spur desirable change within the mainstream.

14.3 Some caveats

To avoid any confusion or misinterpretation, it may be useful to recap what has and has not been argued in this thesis.

It *has* been argued, in one way or another, that a pluralistic economics requires a flourishing political economy wing. However, political economy has little institutional power or prestige within economics departments and is withering away. It will generally do better by establishing some institutional autonomy, thus becoming less dependent upon on a dominant mainstream that often struggles to understand its contribution and value. This institutional independence can take a range of forms: separate research classifications, separate degrees in political economy, separate departments (or failing this, accommodation in departments of politics, history or sociology). Regardless of whether one favours a relationship with the mainstream of opposition, cooperation, neglect or stealth, a plural political economy will generally do better by having an independent base.

Despite advocating this position quite strongly, it is *not* being implied that every social science-orientated economist should give up on ever finding employment in economics departments: a few positions will continue to be offered and some individual economics departments might even recognise the enormous opportunities that could come from embracing pluralism. Nor is it being implied that if a social science-orientated economist has somehow managed to gain some foothold in an economics department that they should automatically give up

their secure position and emigrate to the social science faculty. If they can find a viable and comfortable base for themselves in economics departments to do the teaching and research in their area of expertise, then this is a good outcome. My point is simply that achieving such outcomes has become increasingly difficult and is likely to get worse. Given this, it makes sense to develop a base in a less hostile environment, particularly when the evidence indicates that looking elsewhere has proved to be a successful strategy.

It should also be stressed that I am *not* advocating intellectual apartheid or hostility: the two wings of the discipline can and should work together whenever it has the chance of being productive in research or of being to the benefit of students. In particular, it is important that students should be allowed to pick up the subjects they themselves come to identify as being most rewarding and that neither side of the discipline is able to overly corral students into its vision of economics. Economists are prone to praise the benefits of competition, so let there be a genuine contest of ideas on a level playing field. If the social science wing of the discipline could establish its own base, it would then be in a much better position to work with the mainstream wing of the discipline as an *equal partner*. This would be vastly superior to the present situation, where the social science wing of economics is inexorably withering away in a position of meek subservience and powerlessness.

It is also *not* being argued that faculties of social science should be perceived as some type of nirvana where political economists will face no constraint or obstacle. It may be the case political economists face some difficulties advancing their agenda and that at some particular universities the social sciences faculty is so underdeveloped or diminished that emigrating is not a prudent option. However, there has been clear evidence presented in this thesis that indicates that the student constituency for economics as a social science is predominantly in the social sciences. Moreover, the social sciences faculty is usually a less alienating and hostile intellectual environment. Given the indications of unmet student demand for political economy, political economists could play a very positive role in further strengthening the social sciences in Australian universities.

14.4 A final response to the arguments of Chapter three

It should now be clear that Colander's arguments are almost the antithesis of my own. I could find no sign of any revolution in economics or the economics curriculum and also saw no evidence that the type of reform strategies he advocates having had any success. There are also several other problems with his analysis of economics and the economics curriculum.

Colander's view of complexity economics as being a revolutionary force that will make for a more scientific economics is too simplistic, and in some ways it is quite misconceived. It is true that the science of complexity is a potentially useful contribution to economics, but its value to economics is contingent on being incorporated into economics in a way that is methodologically sensible. On this point it needs to be remembered that economics has regularly been able to steal obscurantism out of the jaws of useful insight. For example, Blaug (1997b) points out that when game theory first started gaining a profile in economics it was hoped that it would subvert established economic orthodoxy and lead to richer models of rational agency (Hargreaves-Heap & Varoufakis 2004). This has not occurred.

As Randall Wray has pointed out, one economist's 'cutting edge research frontier' can all too easily be someone else's frontier of nonsense (Randall-Wray cited in Cohen 2009 p.1), and much nonsense could come out of the 'complexity revolution'. King's point about the history of the science being full of examples of "prophets spurned, old truths forgotten or neglected, even older heresies enthusiastically embraced, and egregious errors pursued at great speed to the end of the appropriate cul-de-sac" (King 2002 pp.241-242) could be prescient for the supposedly imminent 'complexity revolution'.

Economic modelling using dynamic numerical simulations can be useful and interesting (see for example Epstein & Axtell 1996), and mathematics can be useful in clarifying and communicating ideas long associated with heterodoxy (Chick 2000; Keen 2009), but there is nothing in the so-called complexity revolution that indicates economics should seek to be the servant of mathematics, rather than vice-versa. Colander's analysis of progress in economics seems guilty of an old-fashioned misconception in equating the use of

computers and mathematics with better science. This runs all the risks of producing a more *scientistic* rather than scientific economics. By *scientistic* I mean the inappropriate use of the methods of the physical sciences in the social sciences (Stretton 1999). There also seems to be no real appreciation of the difficult fact that, as models become more like reality, the modelling process itself becomes more difficult:

...when one makes one's model more realistic by introducing more complex premises, one also thereby increases – sometimes dramatically – the problems involved in applying it. The more degrees of freedom in a model, the more parameters that have to be estimated, giving more potential sources of error. Moreover, the number of possible interrelationships that must be precisely specified grows geometrically with the number of parameters involved. The conclusions reached as the model is made more complex become less robust – more sensitive to small variations in the initial parameters – and greater and greater precision in the data inputs is needed to avoid reaching indeterminate conclusions. The result is often an elegant and complex but relatively useless model that cannot produce determinate results unless one has recourse to an often unavailable comprehensive and precise data set. This problem of unwieldiness is particularly likely to occur when the refinements introduced into a model require the measurement of subjective factors – such as changes in attitudes or limitations on cognitive capabilities that are inherently difficult to measure and quantify, and to relate to other, more tangible factors in mathematically precise ways (Crespi 1997 p.154).

The advent of powerful and cheap computer hardware and software is to be welcomed, but it can only go so far in transcending the type of challenges outlined by Crespi. The reality is that the complexity revolution will struggle (just like any other approach) with the same problems that have always beset social and economic analysis. Conceiving of the economy as a complex adaptive system is of little more practical use than is conceiving of the economy as an open system: it is just an ontological starting point. If one wants to make operational theory, one is faced with the very familiar challenges of where to make the provisional closures and abstractions. It is at this point that all the very familiar methodological schisms open up. Given their greater methodological

literacy, complexity economists might therefore profitably seek the assistance of political economists, rather than the vice-versa arrangement that Colander advises.

Another issue is that the idiographic, unpredictable and difficult-to-model nature of complex systems may simply be too unpalatable to the mainstream, and thus may continue to be largely ignored. Complexity economics does not give rise to clear and unambiguous answers, does not offer elegant theoretical proofs, and does not generate analysis that can reliably serve the given social and economic order. To understand the economy as a complex adaptive system, is, above all else, an invitation to modesty rather than hubris. All of these aspects of complexity economics make it hard to view it as the sort of theory that will capture the imagination of mainstream economists. A marketing perspective is useful in respect of this point:

In many ways then the success of a theoretical approach should be understood just as a marketing manager would attempt to understand the success of a consumer or industrial product. If it is launched at an inopportune moment, is poorly packaged, is too complex for the consumer to grasp, and fails to appeal to traditional values, then it will not find a market (Dow & Earl 1982 pp.177-178).

If one also considers how much loyalty there is for the established product of orthodox theory and the ease this product has in supplying all the basic purposes of economics in contemporary capitalist society, then further doubt is cast over the level of demand for a complexity revolution in economics.

Colander's advice for political economists to repackage their ideas in mathematical form to gain favour with their orthodox colleagues is also rather problematic. The key issue is that many political economy ideas do not fit, and may never fit, into mathematical form, at least not without some serious loss of potency or insight. A good example of this is circular and cumulative causation. Argyrus has noted that in 1944, when Myrdal was developing Veblen's original concept, he initially thought he should be able to put it into an interconnected series of quantitative equations for a truly 'scientific' solution (note his initial connection between mathematics and the truly scientific). However, by 1978 he

came to the conclusion that this earlier hope was not possible. He came to opt for “detailed historical analysis of the particularity and peculiarities of individual industries and countries” (Argyrous 2011 p.150). While Myrdal thought that certain aspects of circular and cumulative causation might be suitable to mathematical measurement and modelling, this could only provide part of the explanation; fieldwork, historical case studies and the methods and ideas of the other social sciences were also required (Argyrous 2011).

Finally, it must also be pointed out that there is not really a complexity revolution even in the area of research. For example, Leombruni and Richiardi conducted survey research on papers on agent based modelling (ABM), which is a cornerstone of the complexity approach, and found almost nothing in the top mainstream journals:

Despite the upsurge in ABM [Agent Based Modelling/Complexity] research witnessed in the past 15 years, the methodology is still left aside in a standard economist's toolbox. Among the top 20 economic journals we were able to find only eight articles based on ABM. This number is to be compared with the 26,698 articles that were published since the seminal work of Arthur (1988) in the top 20 journals considered. Agent based modelling thus counts for less than 0.03% of top economic research. It seems to be confined only in specialized journals like the Journal of Economic Dynamics and Control, ranking 23rd, the Journal of Artificial Societies and Social Simulation, and Computational Economics, which are not even ranked. A notable exception is the Journal of Economic Behavior and Organization, ranked 32, which sometimes publishes research in ABM...No matter that non-standard approaches like econophysics, evolutionary economics and Austrian economics have fruitfully employed ABM to develop stand-alone models or to extend analytical results, the mainstream remains sceptical. Of course, it is not necessary to justify scepticism toward a new methodology: it is sufficient to ignore it (Leombruni & Richiardi 2005 p.104).

Whether one looks in the curriculum or in the journals, the signs of an imminent ‘complexity revolution’ are currently rather scant.

Given that I found Colander's analysis so problematic, it is useful to wonder why this is. It seems reasonable to conclude that his analysis is partly the result of his own methodological conservatism. This conservatism seems clear enough. For example, he believes that economics should be (in the main) a formalistic modelling science (Colander 2009c) that utilises empirical verification to identify objective truth (Colander 2008a) and that we should worry less about methodology (Colander, Rosser & Holt 2010). Perhaps Colander's apparent political views have also played some role. At least some of these views appear to be rather conservative in nature:

One of the reasons that I shy away from criticizing our society for limiting openness is my experience with "critical thinking" being put into practice in the 1960s in the US. There, I saw first-hand the internal workings of radicals' calls for change in decision processes in the hope of restructuring all society. Based on that experience I became rather cynical about academics' ability to effect positive change, and came to believe that, in politics, the maxim that the best is often the enemy of the good, is a useful one to follow. So, in my view, any call for critical thought and freedom, calls that I generally support, must be accompanied by a warning about the difficulty and the costs of change. Critical thought has costs as well as benefits.

Academics themselves are part of a complex system and, as such, need checks imposed on them by the society that funds them. If, after hearing an academic's arguments for the competition of ideas, society chooses to limit that competition, as it has generally done, it may well mean that sustainable complex systems must limit the degree of critical thought that their institutions are held up to. Complex systems, looked at from a critical perspective, will always fail to meet expectations. It is possible that continually pointing out those failures can undermine the sustainability of a complex system. It may be for this reason that real-world sustainable complex systems have always developed protection mechanisms that either prevent too much critical thinking, or that push the serious critical thinking outside of the mainstream of the system—into such places as academic environments. So I am open to the possibility that critical

thought itself must be reflexive and accept that critical thought is limited
(Colander 2008a p.xxii).

I am not in a position to know Colander's general political orientation; however it seems reasonable to say that this concern about the dangers of excessive criticism of society, the concern with radicalism, and the desirability of limiting academic freedom are markedly conservative in nature. The fact that these conservative views are spliced together with a passing reference to complex adaptive systems, do not make them any less conservative. The quotation from Colander directly above has some parallels with Simkin's fear and denunciation of the political economists at Sydney University (see Section 11.7.2) and Shapin and Schaffer's general point about knowledge and social order (see Section 2.14). Colander's methodological and political conservatism is his prerogative and right: the point here is that given these views, it is understandable he has produced the analysis that he has.

14.5 Future areas of research

In undertaking this thesis a number of research agendas have become apparent. The most important of these will now be discussed.

14.5.1 Internationalising the research

In this thesis I have concentrated on Australian universities. This has turned out to be a large enough task to manage in a single thesis. However, the focus might be extended to other countries. It would be particularly useful to ascertain whether the PPE degrees that have been established in about 60 universities across the world have triggered the same student agitation for political economy that occurred at La Trobe University. In addition to such work being intellectually interesting, it would also be of practical help to others. For example, the Institute for New Economic Thinking (an organisation established in 2009 with a 50 million dollar pledge by George Soros) has plans to renovate the economics curriculum in both the UK and US. If the evidence presented in this thesis is anything to go by, it suggests that the institute may do well to consider providing seed funding or other assistance to facilitate the growth of political economy in social science faculties. To do otherwise and simply concentrate on reforms in traditional centres of economics teaching may simply be Sisyphean.

14.5.2 Economics education outside of universities

A recent development in Australian tertiary education has been the introduction of university degrees at technical colleges. Given that these institutions would not be so locked-in to the obsession with publishing in elite economic journals and would be focused on teaching, it would be worth examining whether there is the potential to build up a broader based political economy there. It seems plausible that good quality courses in political economy could be provided at lower cost and thus help raise economic literacy in the community.

Another interesting development is the rise of free universities such as Melbourne Free University. This provides another forum for the teaching of political economy. In view of the lectures also being available online, it might also be one way of building up awareness of political economy. Given the increasingly corporate nature of the contemporary Australian university, these new forums offer a useful way for academics to reconnect with the ideas of what a university should be.

14.5.3 Online learning

A related issue would be to look at the prospects of using online learning, where well-prepared material could assist the more autonomous learning of economics as a social science. Of particular interest are Massive Open Online Courses (MOOCs). These are well-designed online courses that are open to all, free of charge. These courses have sometimes been very successful. For example, a MOOC created by the Stanford academic Sebastian Thrun on artificial intelligence has 160,000 enrolled students. Orthodox economics has made the early running with MOOCs. The Department of Economics at the University of Melbourne has set up an introductory macroeconomics MOOC that has 12,000 enrolments. At the time of writing there do not seem to be any political economy MOOCs, though the Santa Fe institute has established a MOOC on complexity economics to run in 2013. The development of MOOCs and similar technological innovations may possibly change the nature of university teaching and thus could have strong implications for the economics curriculum. It is therefore a subject worth exploring.

14.5.4 Political neuroscience

The importance of psychological balm, and a deeper appreciation of its nature, could be further strengthened by an examination of recent work done in the area of political neuroscience (Jost & Amodio 2012; Jost, Federico & Napier 2009; Jost et al. 2003). This branch of psychological research seeks to link certain belief systems to structural differences in people's brain structures and brain functions. Given that there is a branch of economics largely characterised by open-endedness and ambiguity and one characterised largely by determinacy and closure, it would be interesting to see if those attracted to either side of the discipline had any differences in brain structure and function. It should be stressed that such work (if pursued at all) would have to be done with great care, as at present the neuroscience work done in this area appears to be characterised by some rather crude dualisms and seemingly veers towards biological determinism. However, the research is interesting and is worth monitoring closely, given that some prominent economists have at times been at least *tempted* to say "that there are two types of people, those who require determinacy and closure, and those who can tolerate ambiguity and open-endedness" (Samuels 1992 p.11). A close and critical look at this new area of psychological research could perhaps provide new insights on what shapes economics and the economics curriculum.

14.5.5 Finding the right mindset

Inevitably, some political economists will continue to operate within conventional centres of economics teaching. They will generally have little institutional power and influence and may face hostility or indifference to their agenda in teaching and research. Such an environment can easily prompt feelings of frustration and other similar emotions that can become corrosive if sustained over the long-term.

One way of responding to this situation is just to accept it. Bloch (2010 p.13) appears to suggest something along these lines when he states that "the circumstances facing heterodox economists might be described by the old saying, you have to suffer if you want to sing the blues". Such a mindset discounts both our capacity to change the circumstances we operate in and to change the way we think about our circumstances. Obviously, this thesis has been focused on changing circumstances, however, not that much has been said

about better or worse ways to understand the situation in which political economists often find themselves. While there is some good work in this area (see for example, Earl 1988 pp.227-242), it is relatively under-developed. This issue of mindset is important, given that moving to a more hospitable environment will not always been an immediate option for everybody. 'Change your thinking if you can't chance the situation' goes the old adage, yet exactly in what way should one change one's thinking? All this suggests that it would worth interviewing leading political economists and talking to them about the habits of mind they have discovered and cultivated to navigate their way forward. Such a collection of interviews would be a useful resource for more junior political economists. Specific trade wisdom of this nature, combined with insights from psychology and any other relevant literatures, could be useful in assisting political economists to prosper rather than suffer.

14.6 Final thoughts

It is not hard to be frequently incredulous at contemporary economics and the economics curriculum. There is certainly some content in this thesis that is depressing and absurd (sometimes comically so). This creates an obvious requirement to be innovative and entrepreneurial in the full Schumpeterian sense of the term. This can sometimes be hard work, and one does not always meet with full, or even, partial success. However, pushing for a better economics is still vital given the importance of economic ideas to society. Despite the many obstacles, it is clear that many students and economists strongly desire a plural economics curriculum. It also clear that opportunities are there for the taking.

References

- Abelson, P 2009, 'The Ranking of Economics Journals by the Economic Society of Australia', *Economic Papers*, vol. 28, issue. 2, pp. 176-80.
- Abelson, P W & Valentine, T J 1985, 'The Market for Economists in Australia', *Economic Papers*, vol. 4, issue. 4, pp. 1-16.
- Ackerman, F 1999, *Still Dead after All These Years: Interpreting the Failure of General Equilibrium Theory*, Working Paper 00-01, Tufts University, Global Development and Environment Institute.
- Ackrill, J L (ed.) 1986, *A New Aristotle Reader*, Oxford University Press, Oxford.
- Anderson, D 2012, 'Dark Days for the Dismal Science', *The Age*, Melbourne.
- Anderson, M & Blandy, R 1992, 'What Australian Economic Professors Think', *Australian Economic Review*, vol. 100, pp. 17-40.
- Angus, S D, Parris, B & Hassani, M 2011, 'Embracing Complexity in Economics Education: Experiences from a New Unit in Complex Adaptive Systems and Agent-Based Modelling', paper presented to Australian Conference of Economists, Australian National University, 13 July
- Argyrous, G 2006, 'Alternative Approaches to Teaching Introductory Economics Courses in Australian Universities', *Australasian Journal of Economics Education*, vol. 3, issue. 1 & 2, pp. 58-74.
- 2011, 'Cumulative Causation', in G Argyrous & F J B Stilwell (eds), *Readings in Political Economy: Economics as a Social Science*, Tilde University Press, Prahan, pp. 144-51.
- Ariely, D, Bracha, A & Meier, S 2007, *Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially*, Working Paper, Federal Reserve Bank of Boston, Boston.
- Armstrong, J 2011, 'Reformation and Renaissance: New Life for the Humanities', *Griffith Review*, vol. 31, issue. Autumn, pp. 13-51.
- Arnsperger, C 2008, *Critical Political Economy Complexity, Rationality, and the Logic of Post-Orthodox Pluralism* Routledge, New York.
- Arnsperger, C & Varoufakis, Y 2006, 'What Is Neoclassical Economics? The Three Axioms Responsible for Its Theoretical Oeuvre, Practical Irrelevance and, Thus, Discursive Power ', *post-autistic economics review*, vol. July, issue. 38.
- Arrow, K 2005, *Review of Samuel Bowles Microeconomics*, Princeton University Press [online] <http://press.princeton.edu/titles/7610.html?pagewanted=all> viewed 20 Jun 2011.
- Asimakopulos, A 1978, *An Introduction to Economic Theory: Microeconomics* Oxford University Press, New York.
- Australia Research Council *Excellence in Research Australia 2010 Institution Report*, ARC, Canberra.
- Australian Research Council 2011, *Excellence in Research Australia 2010 National Report*, ARC, Canberra.
- Backhouse, R & Fontaine, P 2010, *The History of the Social Sciences since 1945* Cambridge University Press, New York.
- Backhouse, R E 1998, 'Paradigm/Normal Science', in J B Davis, D W Hands & U Mäki (eds), *The Handbook of Economic Methodology*, Edward Elgar, Lyme, pp. 352-54.
- Bailes, M 2012, 'Strength in Numbers: Do Era Rankings Add up for Universities?', *The Conversation*, Melbourne, 13 June.
- Banks, G 2008, *Challenges of Evidence-Based Policy-Making* Productivity Commission, Canberra.

- Barone, C A 1991, 'Contending Perspectives: Curricular Reform in Economics', *The Journal of Economic Education*, vol. 22, issue. 1 Winter, pp. 15-26.
- Bartlett, R 1993, 'Power', in Geoffrey M. Hodgson, Warren J. Samuels & Marc R. Tool (eds), *Elgar Companion to Institutional and Evolutionary Economics*, Edward Elgar, Aldershot, pp. 119-24.
- 1995, 'The Role of Economic Theory', *Journal of Economic Issues*, vol. 29, issue. 4, pp. 1257-59.
- Bateman, B W 2007, 'Predicting an Unexpected Future for the History of Economic Thought', paper presented to Whither the History of Economic Thought?, Hitotsubashi University, 19 March.
- Bates, M J 2005, 'An Introduction to Metatheories, Theories, and Models', in K E Fisher, S Erdelez & L E F McKechnie (eds), *Theories of Information Behavior*, Information Today, Medford, pp. 1-24.
- Becker, W E 2007, 'Quit Lying and Address the Controversies: There Are No Dogmata, Laws, Rules or Standards in the Science of Economics', *American Economist*, vol. 51, issue. 1, pp. 3-12.
- Becker, W E, Watts, M & Becker, S R 2006, *Teaching Economics: More Alternatives to Chalk and Talk* Edward Elgar, Cheltenham.
- Beckett, S 1964, *Endgame: A Play in One Act* Faber, London.
- Beinhocker, E D 2006, *The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics* Harvard Business School Press, Boston.
- Bernstein, M A 2004, 'The Pitfalls of Mainstream Economic Reasoning (and Teaching)', in E Fullbrook (ed.), *A Guide to What's Wrong with Economics*, Anthem Press, London, pp. 33-40.
- Binmore, K 1998, *Game Theory and the Social Contract: Just Playing* Massachusetts Institute of Technology, Cambridge, MA.
- Blanchard, O 2009, The State of Macro, Working Paper 14259, National Bureau of Economic Research Cambridge MA.
- Blaug, M 1997a, *Economic Theory in Retrospect* Cambridge University Press, Cambridge.
- 1997b, 'Ugly Currents in Modern Economics', *Policy Options*, vol. September, pp. 3-8.
- 2001, 'No History of Ideas, Please, We're Economists', *Journal of Economic Perspectives*, vol. 15, issue. 1, pp. 145-64.
- 2010, 'Popper's Logic of Discovery', in M Boumans & J B Davis (eds), *Economic Methodology: Understanding Economics as a Science*, Palgrave Macmillan, Basingstoke, pp. 84-91.
- Bloch, H 2010, Research Evaluation Down Under: An Outsider's View from the inside of the Australian Approach, Working Paper 201010, Centre for Research in Applied Economics, Curtin University of Technology, Perth.
- 2012, An Uneven Playing Field: Rankings and Ratings for Economics in Era 2010, Working Paper 04042012, School of Economics and Finance, Curtin University of Technology Centre for Research in Applied Economics.
- Bloor, D 1991, *Knowledge and Social Imagery* University of Chicago Press, Chicago.
- Bosshardt, W, Watts, M & Kennedy, P 2001, 'Comparing Student and Instructor Evaluations of Teaching', *Journal of Economic Education*, vol. 32, issue. 1, pp. 3-17.
- Boulding, K E 1970, *Economics as a Science* McGraw-Hill, New York.
- Boumans, M, Davis, J B, Blaug, M, Maas, H & Svorencik, A 2010, *Economic Methodology: Understanding Economics as a Science* Palgrave Macmillan, Basingstoke.

- Bowles, S 2005, *Microeconomics: Behavior, Institutions, and Evolution* Princeton University Press, New Jersey.
- Brasfield, D, Harrison, D, McCoy, J & Milkman, M 1996, 'Why Have Some Schools Not Experienced a Decrease in the Percentage of Students Majoring in Economics?', *The Journal of Economic Education*, vol. 27, issue. 4, pp. 362-70.
- Butler, G, Jones, E & Stilwell, F J B 2009, *Political Economy Now! The Struggle for Alternative Economics at the University of Sydney* Darlington Press, Sydney.
- Canterbury, E R & Burkhardt, R J 1983, 'What Do We Mean by Asking 'Is Economics a Science?', in A S Eichner (ed.), *Why Economics Is Not yet a Science*, Macmillan, London, pp. 15-40.
- Carvellas, J, Kessel, H & Ramazani, R 1996, 'Counting Pages; the Evolution of the Economics Principles Text', in N Aslanbeigui & M Naples (eds), *Rethinking Economic Principles: Critical Essays on Introductory Textbooks*, Chicago, Irwin, pp. 225-42.
- Cengage 2011, *Principles of Economics* Cengage [online] http://www.cengage.com/economics/mankiw/edition_6/economics.html viewed 20 June 2011.
- Centre for Independent Studies 2011, *About the Centre for Independent Studies*, CIS [online] <http://www.cis.org.au/about-cis> viewed 1 September 2012.
- Cervini, E 2011a, 'Unis Enter an Age of Uncertainty ', *The Age*, Melbourne, October 25.
- Cervini, E 2011b, 'When Language Is No Barrier', *The Age*, Melbourne, August 8.
- Chavance, B 2009, *Institutional Economics* Routledge, London.
- Chick, V 2000, 'On Knowing One's Place: The Role of Formalism in Economics', *Economic Journal*, vol. 108, issue. November, pp. 1859-69.
- Chick, V & Dow, S C 2001, 'Formalism, Logic and Reality: A Keynesian Analysis', *Cambridge Journal of Economics*, vol. 25, issue. 6 November, pp. 705-21.
- Clarke, H 2010, 'Era Fiasco', *Harry Clarke on Economics, Politics and Other Things*, [online] <http://www.harryclarke.com/2011/02/05/era-fiasco/> viewed 2 September 2011.
- Clarke, P & Mearman, A 2001, 'Heterodoxy, Educational Aims and the Design of Economics Programmes', *Economic and Social Policy*, vol. 5, issue. 2, pp. 1-14.
- Clifford, S P J 2008, 'Eat Grubs and Live: The Habit-Instinct Problem in Institutional Evolutionary Economics', *Journal of Economic Issues*, vol. 42, issue. 2, pp. 407-13.
- Coates, D 2005, *Varieties of Capitalism, Varieties of Approaches* Palgrave Macmillan, Basingstoke.
- Cohen, P 2009, 'Ivory Tower Unswayed by Crashing Economy', *New York Times*, New York, p. 10.
- Colander, D C 1991, *Why Aren't Economists as Important as Garbagemen? Essays on the State of Economics* M.E. Sharpe, Armonk.
- 2000a, *The Complexity Vision and the Teaching of Economics* Edward Elgar, Cheltenham.
- 2000b, 'The Death of Neoclassical Economics', *Journal of the History of Economic Thought*, vol. 22, issue. June, pp. 127-43.
- 2003a, Caveat Lector: Living with the 15 Per Cent Rule, Discussion Paper No. 03-26, Department of Economics, Middlebury College, Vermont.
- 2003b, The Complexity Revolution and the Future of Economics, Discussion Paper 3-19, Department of Economics, Middlebury College, Vermont.

- 2004, 'The Art of Teaching Economics', *International Review of Economics Education*, vol. 3, issue. 1, pp. 63-76.
- 2005a, 'The Crisis in Economics: The Post- Autistic Economics Movement: The First 600 Days - Review Article', *Journal of Economic Methodology*, vol. 12, issue. 2, pp. 336-42.
- 2005b, 'The Making of an Economist Redux', *Journal of Economic Perspectives*, vol. 19, issue. 1, pp. 175–98.
- 2008a, 'Foreword ', in C Arnsperger (ed.), *Critical Political Economy Complexity, Rationality, and the Logic of Post-Orthodox Pluralism*, Routledge, New York, pp. xviii-xxiii.
- 2008b, *Resume*, Vermont Department of Economics, Middlebury College [online] <http://community.middlebury.edu/~colander/resume.html> viewed 1 March 2009.
- 2009a, 'Economics Is the 'Just Right' Liberal-Arts Major', *The Chronicle of Higher Education*, vol. 55, issue. 26, p. 72.
- 2009b, *The Making of a European Economist* Edward Elgar, Cheltenham.
- 2009c, 'Moving Beyond the Rhetoric of Pluralism: Suggestions for an 'inside-the-Mainstream' Heterodoxy', in R F Garnett, E Olsen & M Starr (eds), *Economic Pluralism*, Taylor & Francis, Hoboken, pp. 36-47.
- (ed.) 2000c, *Complexity and the History of Economic Thought: Perspectives on the History of Economic Thought*, Routledge, London.
- Colander, D C, Amato, G & Laudati, L L 2001, *The Lost Art of Economics: Essays on Economics and the Economics Profession* Edward Elgar, Cheltenham.
- Colander, D C & Brenner, R 1992, *Educating Economists* University of Michigan Press, Ann Arbor.
- Colander, D C & Coats, A W 1993, *The Spread of Economic Ideas* Cambridge University Press, Cambridge MA.
- Colander, D C & Klamer, A 1989, *The Making of an Economist* Westview Press, Boulder.
- 2007, *The Making of an Economist, Redux* Princeton University Press, Princeton.
- Colander, D C & McGoldrick, K 2009, *Educating Economists: The Teagle Discussion on Re-Evaluating the Undergraduate Economics Major* Edward Elgar, Cheltenham.
- Colander, D C, Rosser, B J & Holt, R P F 2004, *The Changing Face of Economics: Conversations with Cutting Edge Economists* University of Michigan Press, Ann Arbor.
- 2010, 'How to Win Friends and (Possibly) Influence Mainstream Economists', *Journal of Post Keynesian Economics*, vol. 32, issue. 3, pp. 397-408.
- Coyle, D 2007, *The Soulful Science: What Economists Really Do and Why It Matters* Princeton University Press, Princeton.
- (ed.) 2012, *What's the Use of Economics? Teaching the Dismal Science after the Crisis*, London Publishing Partnership, London.
- Crespi, G S 1997, 'Review: Does the Chicago School Need to Expand Its Curriculum?', *Law & Social Inquiry*, vol. 22, issue. 1, pp. 149-69.
- Cyert, R M & March, J G 1963, *A Behavioral Theory of the Firm* Prentice-Hall, Englewood Cliffs.
- Das, S 2009, 'Unis Need to Lift Their Act on International Students ', *The Age*, Melbourne, June 25.
- Dasgupta, A K 1986, *Epochs of Economic Theory* Oxford University Press, Delhi.

- Dasgupta, P 2007, *A Very Short Introduction to Economics* Oxford University Press, New York.
- Davidson, P 2004, 'A Response to King's Arguments for Pluralism', *post-autistic economics review*, vol. 24, issue. March, pp. 1-5.
- Davies, P & Guest, R 2008, 'Editorial', *International Review of Economics Education*, vol. 7, issue. 1, pp. 1-2.
- Davis, J B 2006, 'The Turn in Economics: Neoclassical Dominance to Mainstream Pluralism?', *Journal of Institutional Economics*, vol. 2, issue. 1, pp. 1-20.
- 2007, 'The Turn in Economics and the Turn in Economic Methodology', *Journal of Economic Methodology*, vol. 14, issue. 3, pp. 275-90.
- 2008, 'The Turn in Recent Economics and Return of Orthodoxy', *Cambridge Journal of Economics*, vol. 32, issue. 3, pp. 349-66.
- Davis, J B & Dolfsma, W 2008, *The Elgar Companion to Social Economics* Edward Elgar, Cheltenham, U.K.
- Davison, S 2001, 'Debunking Keen', *Australian Review of Public Affairs*, issue. 24 August, pp. 1-3.
- Dawson, R 2007, 'Judging Economics Teaching and Textbooks', *Journal of Australian Political Economy*, vol. 60, issue. December, pp. 73-97.
- Dean, D H & Dolan, R C 2001, 'Liberal Arts or Business: Does the Location of the Economics Department Alter the Major?', *The Journal of Economic Education*, vol. 32, issue. 1, pp. 18-35.
- Deane, P 1978, *The Evolution of Economic Ideas* Cambridge University Press, Cambridge.
- Delong, J B 2011, 'The Crisis in Economics', *The Economist's Voice*, vol. May.
- Denniss, R 2012, *The Use and Abuse of Economic Modelling in Australia* The Australia Institute, Canberra.
- Dixon, P B, Bowles, S & Kendrick, D A 1980, *Notes and Problems in Microeconomic Theory* North-Holland, New York.
- Dobusch, L & Kapeller, J 2012, 'A Guide to Paradigmatic Self-Marginalization: Lessons for Post-Keynesian Economists', *Review of Political Economy*, vol. 24, issue. 3, pp. 469-87.
- Dollery, B 2002, A Conversation with Peter Groenewegen Working Paper No. 3, Department of Economics, University of New England, Armidale.
- Donovan, G 2004, 'Economics Split Divides Notre Dame; Creation of Two Unequal Programs Decried by Some as Threat to Academic Freedom', *National Catholic Reporter*, Kansas City, April 9
- Dosi, G 1993, 'Firm, Boundaries of The', in G M Hodgson, W J Samuels & M R Tool (eds), *The Elgar Companion to Institutional and Evolutionary Economics*, Edward Elgar, Aldershot, vol. 1, pp. 229-36.
- Douma, S W & Schreuder, H 2008, *Economic Approaches to Organizations* Prentice Hall, Harlow.
- Dow, S C 2002, *Economic Methodology: An Inquiry* Oxford University Press, Oxford.
- 2004, 'Structured Pluralism', *Journal of Economic Methodology*, vol. 11, issue. 3, pp. 275-90.
- 2007, 'Pluralism in Economics', in J Groenewegen (ed.), *Teaching Pluralism in Economics*, Edward Elgar, Cheltenham, pp. 22-39.
- Dow, S C & Earl, P E 1982, *Money Matters: A Keynesian Approach to Monetary Economics* Robertson, Oxford.
- Duesenbury 1958, *Business Cycles and Economic Growth* McGraw-Hill, New York.

- Earl, P E 1988, 'On Being a Psychological Economist and Winning the Games That Economists Play', in P E Earl (ed.), *Psychological Economics: Development, Tensions, Prospects*, Kluwer Academic Publishers, Boston.
- 2002, 'The Perils of Pluralistic Teaching and How to Reduce Them', *post-autistic economics review*, vol. 11, issue. January.
- 2006, *Capability Prerequisites and the Competitive Process*, Department of Economics, University of Queensland, St Lucia.
- 2010, 'Economics Fit for the Queen: A Pessimistic Assessment of Its Prospects', *Prometheus*, vol. 28, issue. 3, pp. 209-25.
- 2013, *Comment on 'New' Versus 'Old' in the History of Economics*, Personal Communication, 18 January.
- Earl, P E & Peng, T C 2012, 'Brands of Economics and the Trojan Horse of Pluralism', *Review of Political Economy*, vol. 24, issue. 3, pp. 451-67.
- Earl, P E & Wakeley, T 2005, *Business Economics: A Contemporary Approach* McGraw-Hill, London.
- Economic Society of Australia 2011, *Policy Opinion Survey ESA*, St Ives.
- Economics Society of Australia 2004, *A Survey of Student Standards in Economics in Australian Universities in 2003*, ESA, St Ives.
- Elster, J 1982, 'Marxism, Functionalism, and Game Theory', *Theory and Society*, vol. 11, issue. 4, pp. 453-82.
- Enthoven, A C 1963, 'Economic Analysis in the Department of Defense', *The American Economic Review*, vol. 53, issue. 2, pp. 413-23.
- Epstein, J M & Axtell, R L 1996, *Growing Artificial Societies: Social Science from the Bottom Up* Brookings Institution Press, Washington.
- European Commission 2001, *Eurobarometer 55.2 Europeans, Science and Technology*, European Commission, Brussels.
- Feyerabend, P K 1988, *Against Method: Outline of an Anarchistic Theory of Knowledge* Verso, London.
- Flinders University 1980, *Calendar Flinders University*, Bedford Park.
- Ford, J L (ed.) 1990, *Time, Expectations and Uncertainty*, Edward Elgar, Aldershot.
- Foster, J 2005, 'From Simplistic to Complex Systems in Economics', *Cambridge Journal of Economics*, vol. 29, issue. 6, pp. 873-92.
- Frank, R H, Bernanke, B & Johnston, L 2009, *Principles of Economics* McGraw-Hill Irwin, Boston.
- Frank, R H, Gilovich, T & Regan, D T 1993, 'Does Studying Economics Inhibit Cooperation?', *Journal of Economic Perspectives*, vol. 7, issue. 2, pp. 159-71.
- 1996, 'Do Economists Make Bad Citizens', *Journal of Economic Perspectives*, vol. 10, issue. 1, pp. 187-92.
- Freedman, C 2000, 'Economic Convictions and Prior Beliefs: Akerlof Wrestles with the Ghost of John Maynard Keynes', *Journal of Economic and Social Policy*, vol. 4, issue. 2, pp. 71-87.
- Freedman, C & Blair, A 2009, 'Silver Linings: Teaching Economics in Times of Crisis', *Australasian Journal of Economics Education*, vol. 6, issue. 1, pp. 1-20.
- Fullbrook, E 2001, 'Real Science in Pluralist', *post-autistic economics review*, vol. March.
- 2003, *The Crisis in Economics: The Post-Autistic Economics Movement: The First 600 Days* Routledge, London.
- 2004, *A Guide to What's Wrong with Economics* Anthem, London.

- (ed.) 2009, *Ontology and Economics: Tony Lawson and His Critics*, Routledge, London.
- Fuller, J 2010, *Promoting Good Choices: Patterns of Habit and the Role of Government*, Per Capita, Melbourne.
- Fusfeld, D R 2002, *The Age of the Economist* Addison-Wesley, Boston.
- Galbraith, J K 1992, *The Great Crash, 1929* Penguin Books, Harmondsworth.
- Gardner, S H 1998, *Comparative Economics* Dryden Press, Forth Worth.
- Garnett, R F 2005, 'Whither Heterodoxy?', *post-autistic economics review*, vol. 34, issue. October, pp. 2-21.
- 2009a, 'Rethinking the Pluralist Agenda in Economics Education', *International Review of Economics Education*, vol. 8, issue. 2.
- 2009b, 'Rethinking the Pluralist Agenda in Economics Education', *International Journal of Economics Education*, vol. 8, issue. 2, pp. 59-71.
- Gerschenkron, A 1962, *Economic Backwardness in Historical Perspective* Belknap Press, Cambridge.
- Geuss, R 2009, *Getting Down to Reality* The Philosophers Zone, Radio National [online]
<http://www.abc.net.au/rn/philosopherszone/stories/2009/2536997.htm>
viewed 6 October 2011.
- Gilling, J 2010, 'Two Perspectives on a Long and Bitter Dispute', *Campus Review*, vol. 30, issue. March.
- Gintis, H 2004, 'Herbit Gintis', in D C Colander, J B Rosser & R P F Holt (eds), *The Changing Face of Economics: Conversations with Cutting Edge Economists*, University of Michigan Press, Ann Arbor, pp. 77-106.
- 2008, *Game Theory Evolving: A Problem-Centered Introduction to Modeling Strategic Interaction* Princeton University Press, Princeton.
- Gittins, R 2010, 'Gillard's Law of Economics Operates at a Crass Roots Level', *The Age*, Melbourne, August 11, p. 17.
- 2011, 'It's a Load of Hot Air: The Coal Lobby Is Mining for Favourable Treatment', *The Age*, Melbourne, June 20, pp. 20-21.
- 2012, 'The Very Model of a Future Based on Guesswork ', *The Age*, February 4, pp. 3-4.
- Glenn, D 2009, 'Notre Dame Plans to Dissolve the 'Heterodox' Side of Its Split Economics Department', *The Chronical of Higher Education*, Washington, September 16, pp. 22-23.
- Goldstein, J 1999, 'Emergence as a Construct: History and Issues', *Emergence: Complexity and Organization*, vol. 1, issue. 1, pp. 49-72.
- Goodwin, N R, Nelson, J A, Ackerman, F & Weisskopf, T 2004, *Microeconomics in Context* Houghton Mifflin, Boston.
- Goodwin, R M 1990, *Chaotic Economic Dynamics* Oxford University Press, New York.
- Gordon, S 1991, *The History and Philosophy of Science* Routledge, London.
- Gould, S J & Lewontin, R C 1979, 'The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme', *Proceedings Of The Royal Society Of London*, vol. 205, issue. 1161, pp. 581-93.
- Graybiel, A M 2008, 'Habits, Rituals, and the Evaluative Brain', *Annual Review of Neuroscience*, vol. 31, pp. 359-87.
- Grayling, A C 2001, *The Meaning of Things: Applying Philosophy to Life* Weidenfeld and Nicolson, London.
- Gresik, T A 2003, 'Economics Department Needs Reform', *The Observer*, Notre Dame, February 11.

- Groenewegen, P D 1979, 'Radical Economics', in F H Gruen (ed.), *Surveys of Australian Economics*, Allen & Unwin Australia, Sydney, pp. 171-224.
- 2009a, "The Book Cannot Stand on Its Own as an Accurate Portrait", *Agenda: A Journal of Policy Analysis and Reform*, vol. 16, issue. 4, p. 83.
- 2009b, *Educating for Business, Public Service and the Social Sciences, a History of the Faculty of Economics at the University of Sydney 1920–1999* Sydney University Press, Sydney.
- Groenewegen, P D & Lodewijks, J 2008, 'Dave Clark (1946-2008): Economist, Larrikin, 'Critical Drinker' and Friend', *Agenda: A Journal of Policy Analysis and Reform*, vol. 15, issue. 3, pp. 101-04.
- Groenewegen, P D & McFarlane, B J 1990, *A History of Australian Economic Thought* Routledge, London.
- Groenewegen, P D 1987, "Political Economy' and 'Economics'", in J Eatwell, M Milgate & P Newman (eds), *The New Palgrave: A Dictionary of Economics*, vol. 3, pp. 905-06.
- Guest, R 2012, 'Towards Learning Standards in Undergraduate Economics in Australia', paper presented to Australian Conference of Economists, Melbourne, 5- 7 July.
- Guest, R & Duhs, A 2002, 'Economics Teaching in Australian Universities: Rewards and Outcomes', *Economic Record*, vol. 78, issue. 241, pp. 147-61.
- Hahn, F 1991, 'The Next Hundred Years', *Economic Journal*, vol. 101, issue. January, pp. 47-50.
- 1994, 'An Intellectual Retrospect.', *Banca Nazionale del Lavoro Quarterly Review*, vol. 48, issue. 190, pp. 245-58.
- Haldane, J B S 1963, 'Book Review - the Truth About Death', *Journal of Genetics*, vol. 58, issue. 3, pp. 463-64.
- Halevi, J 2002, 'High Priests and Run-of-the-Mill Practitioners', *post-autistic economics review*, vol. 14, issue. June
- Hamilton, W 1932, 'Institutions', in E R Seligman & A Johnson (eds), *Encyclopedia of the Social Sciences*, Macmillan, New York, vol. 8, pp. 84-89.
- Hands, D W 1998, 'Sociology of Scientific Knowledge', in J B Davis, D W Hands & U Mäki (eds), *The Handbook of Economic Methodology*, Edward Elgar, Lyme, pp. 474-77.
- 2001a, 'Economic Methodology Is Dead - Long Live Economic Methodology: Thirteen Theses on the New Economic Methodology', *Journal of Economic Methodology*, vol. 8, issue. 1, pp. 49 - 63.
- 2001b, *Reflection without Rules: Economic Methodology and Contemporary Science Theory* Cambridge University Press, Cambridge.
- Hannan, M T & Freeman, J 1977, 'The Population Ecology of Organizations', *American Journal of Sociology*, vol. 82, issue. 5, pp. 929-64.
- Hannan, M T & Freeman, J 1989, *Organizational Ecology* Harvard University Press, Cambridge, MA.
- Hansen, W L, Salemi, M K & Siegfried, J J 2002, 'Promoting Economic Literacy in the Introductory Economics Course', *American Economic Review*, vol. 92, issue. May, pp. 463-72.
- Harcourt, G C 1972, *Some Cambridge Controversies in the Theory of Capital* Cambridge University Press, London.
- Harcourt, G C 1979, 'The Social Science Imperialists', *Politics*, vol. 14, issue. 2, pp. 243-51.

- 1998, 'Foundations of Research in Economics: How Do Economists Do Economics?', in W J Samuels & S G Medema (eds), *Advances in Economic Methodology*, Pbk. edn, Edward Elgar, Cheltenham, pp. 93-102.
- 2001, '40 Years of Teaching Post-Keynesian Themes in Adelaide and Cambridge', *History of Economics Review*, vol. 25, pp. 95-109.
- 2006, *The Structure of Post-Keynesian Economics: The Core Contributions of the Pioneers* Cambridge University Press, Cambridge.
- Harcourt, G C & Kerr, P 1982, *The Social Science Imperialists: Selected Essays of G.C. Harcourt* Routledge, London.
- Harding, D 2011, 'An Economic Analysis of Era and Its Implications ', paper presented to Australian Conference of Economists 2011, Canberra, 11-14 July.
- Hargreaves-Heap, S P & Varoufakis, Y 2004, *Game Theory: A Critical Introduction* Routledge, London.
- Harley, D, Krzys Acord, S, Earl-Novell, S, Lawrence, S & Judson, K C 2010, *Assessing the Future Landscape of Scholarly Communication: An Exploration of Faculty Values and Needs in Seven Disciplines*, Center for Studies in Higher Education, University of California Berkeley.
- Hawkins, J 2009, "By the End of the Book I Was None the Wiser", *Agenda: A Journal of Policy Analysis and Reform*, vol. 16, issue. 4, p. 101.
- Hayes, C 2007, 'Hip Heterodoxy', *The Nation*, New York, June 11.
- Heath, C & Heath, D 2006, 'The Curse of Knowledge', *Harvard Business Review*, vol. December, pp. 1-4.
- Heilbroner, R L 1999, *The Worldly Philosophers: The Lives, Times, and Ideas of the Great Economic Thinkers* Simon and Schuster, New York.
- Hellier, P, Keneley, M, Carr, R & Lynch, B 2004, 'Towards a Market Oriented Approach: Employer Requirements and Implications for Undergraduate Economics Programs', *Economic Papers*, vol. 23, issue. 3, pp. 213-21.
- Hettne, B 1995, *Development Theory and the Three Worlds: Towards an International Political Economy of Development* Longman, Essex.
- Hodgson, G M 1988, *Economics and Institutions: A Manifesto for a Modern Institutional Economics* University of Pennsylvania Press, Philadelphia.
- 1993a, 'Cognition', in G M Hodgson, W J Samuels & M R Tool (eds), *The Elgar Companion to Institutional and Evolutionary Economics*, Edward Elgar, Aldershot, pp. 58-63.
- 1993b, *The Economics of Institutions* Edward Elgar, Aldershot.
- 1993c, 'Evolution and Optimisation', in G M Hodgson, W J Samuels & M R Tool (eds), *The Elgar Companion to Institutional and Evolutionary Economics*, Edward Elgar, Aldershot, pp. 207-12.
- 1993d, 'Habits', in G M Hodgson, W J Samuels & M R Tool (eds), *The Elgar Companion to Institutional and Evolutionary Economics*, Edward Elgar, Aldershot, pp. 302-05.
- 1994, 'Optimisation and Evolution: Winter's Critique of Friedman Revisited', *Cambridge Journal of Economics*, vol. 18, issue. 4, p. 413.
- 1998, 'The Approach of Institutional Economics', *Journal of Economic Literature*, vol. 36, issue. 1, pp. 166-93.
- 1999, *Evolution and Institutions: On Evolutionary Economics and the Evolution of Economics* Edward Elgar, Cheltenham.
- 2000a, 'From Micro to Macro: The Concept of Emergence and the Role of Institutions', in L Burlamaqui, A C Caastro & H-J Chang (eds), *Institutions and the Role of the State*, Edward Elgar, Cheltenham, pp. 103-26.

- 2000b, *Review Comments on the New Evolutionary Microeconomics by Jason Potts*, Website of Edward Elgar Publishing [online] http://www.e-elgar.co.uk/bookentry_main.lasso?id=2258 viewed 27th May 2012.
- 2001, *How Economics Forgot History: The Problem of Historical Specificity in Social Science* Routledge, New York.
- 2004a, *The Evolution of Institutional Economics: Agency, Structure, and Darwinism in American Institutionalism* Routledge, New York.
- 2004b, 'Is It All in Keynes's General Theory?', *post-autistic economics review*, vol. 25, issue. May, pp. 21-24.
- 2006a, *Economics in the Shadows of Darwin and Marx: Essays on Institutional and Evolutionary Themes* Edward Elgar, Cheltenham.
- 2006b, 'Review of Microeconomics: Behavior, Institutions, and Evolution', *Economics and Philosophy*, vol. 22, issue. 01, pp. 166-71.
- 2006c, 'Why We Need a Generalized Darwinism: And Why a Generalized Darwinism Is Not Enough', *Journal of Economic Behavior and Organization*, vol. 61, issue. 1, pp. 1-19.
- 2007, 'Evolutionary and Institutional Economics as the New Mainstream?', *Evolutionary and Institutional Economics Review*, vol. 4, issue. 1, pp. 7-25.
- 2008, 'How Veblen Generalized Darwin', *Journal of Economic Issues*, vol. 42, issue. 2, pp. 399-406.
- 2010, 'Choice, Habit and Evolution', *Journal of Evolutionary Economics*, vol. 20, issue. 1, pp. 1-18.
- Hodgson, G M & Knudsen, T 2010, *Darwin's Conjecture the Search for General Principles of Social and Economic Evolution* The University of Chicago Press, Chicago.
- Hodgson, G M, Maki, U & McCloskey, D 1992, 'A Plea for a Rigorous and Pluralistic Economics', *American Economic Review*, vol. 82, issue. 2, p. xxv (back matter).
- Hogan, W P 1974, *A Statement by Professor Warren P Hogan* University of Sydney Archives, University of Sydney.
- 2007, 'Colin Simkin', in J E King (ed.), *A Biographical Dictionary of Australian and New Zealand Economists*, Edward Elgar, Cheltenham.
- Hrady, S B 1999, *Mother Nature: A History of Mothers, Infants, and Natural Selection* Pantheon Books, New York.
- Hunt, E F & Colander, D C 2011, *Social Science: An Introduction to the Study of Society* Pearson Education, Boston.
- Hutchison, T W 1960, *The Significance and Basic Postulates of Economic Theory* A.M. Kelley, New York.
- Institute for New Economic Thinking 2011, *Institute for New Economic Thinking* [online] <http://ineteconomics.org/research-programs/curriculum-committee> viewed 29 May 2012.
- Jain, A 2006, 'Students' Perceptions of Workshop Based Introductory Macroeconomics Tutorials: A Survey', *Economic Papers*, vol. 25, issue. 3, pp. 235-52.
- James, W 1950, *The Principles of Psychology* Cosimo, New York.
- Jennings, A 1999, 'Instincts', in P A O'Hara (ed.), *Encyclopedia of Political Economy*, Routledge, New York, pp. 518-20.
- Jennings, R C 1988, 'Review Article: Leviathan and the Air-Pump', *The British Journal for the Philosophy of Science*, vol. 39, issue. 3 September, pp. 403-10.
- Jones, A 2010, 'Doctoral Program Adds Fourth Year', *The Weekend Australian*, Sydney, p. 38.

- Jones, E 1976, 'Methodology in Economics: An Introduction', in F J B Stilwell & E L Wheelwright (eds), *Readings in Political Economy: Volume One*, Australia and New Zealand Book Company, Sydney, pp. 275-79.
- Jones, E & Stilwell, F J B 1986, 'Political Economy at the University of Sydney', in B Martin, C M A Baker, M Clyde & C Pugh (eds), *Intellectual Suppression: Australian Case Histories, Analysis and Responses* Angus & Robertson, Sydney, pp. 24-38.
- Jost, J T & Amodio, D M 2012, 'Political Ideology as Motivated Social Cognition: Behavioral and Neuroscientific Evidence', *Motivation and Emotion*, vol. 36, pp. 55-64.
- Jost, J T, Federico, C M & Napier, J L 2009, 'Political Ideology: Its Structure, Functions, and Elective Affinities', *Annual Review of Psychology*, vol. 60, pp. 307-37.
- Jost, J T, Glaser, J, Kruglanski, A W & Sulloway, F J 2003, 'Political Conservatism as Motivated Social Cognition', *Psychological Bulletin*, vol. 129 issue. 3, pp. 339-75.
- Kalecki, M 1937, 'A Theory of the Business Cycle', *Review of Economic Studies*, vol. 4, issue. 2, pp. 77-97.
- Kauffman, S 1995, *At Home in the Universe: The Search for Laws of Self-Organization and Complexity* Oxford University Press, New York.
- Kaufmann, W 1954, *The Portable Nietzsche* Viking Press, New York.
- Keen, S 1997, 'Economic Growth and Financial Instability', PhD thesis, University of New South Wales.
- 2001a, *Debunking Economics: The Naked Emperor of the Social Sciences* Pluto Press, Annandale.
- 2001b, 'Economists Have No Ears', *post-autistic economics review*, vol. 7, issue. July pp. 7-9.
- 2001c, *More Bunk from Economists*, Debunking Economics [online] http://www.debunkingeconomics.com/Reviews/More_Bunk_from_Economists.htm viewed 5th December 2007.
- 2009, 'Mathematics for Pluralist Economists', in J Reardon (ed.), *The Handbook of Pluralist Economics Education*, Routledge, London, pp. 150-68.
- 2011, 'Madness in Their Method', in F J B Stilwell & G Argyrous (eds), *Economics as a Social Science: Readings in Political Economy*, Tilde University Press, Melbourne, pp. 135-37.
- 2012, 'A Fail Grade for Market Deregulation', *Business Spectator*, Melbourne, pp. 1-2.
- Keen, S & Lee, F S 2004, 'The Incoherent Emperor: A Heterodox Critique of Neoclassical Microeconomic Theory', *Review of Social Economy*, vol. 62, issue. 2 June, pp. 169-99.
- Kelly, J 2010, 'Why Does Ppe Rule Britain?', *BBC News Magazine*, vol. 31 August, pp. 1-2.
- Keynes, J M 1933 [1963], *Essays in Biography* Norton, New York.
- 1936, *The General Theory of Employment, Interest and Money* Macmillan, London.
- Kim, J 1999, 'Making Sense of Emergence', *Philosophical Studies*, vol. 95, issue. 1/2, pp. 3-36.
- Kimball, R 1994, 'The Two Cultures' Today: On the C. P. Snow–F. R. Leavis Controversy', *The New Criterion*, vol. 12 February, p. 10.

- King, J E 1995, *The First Post Keynesian: Joan Robinson's Essays in the Theory of Employment (1937)*, Discussion Paper, School of Economics and Commerce, La Trobe University, Bundoora.
- 2002, *A History of Post-Keynesian Economics since 1936* Edward Elgar, Cheltenham.
- 2011, 'Arguments for Pluralism in Economics', in *Readings in Political Economy: Economics as a Social Science*, Tilde University Press, Melbourne, pp. 54-56.
- 2012a, *The Microfoundations Delusion: Metaphor and Dogma in the History of Macroeconomics* Edward Elgar, Cheltenham.
- 2012b, 'Post Keynesians and Others', *Review of Political Economy*, vol. 24, issue. 2, pp. 305-19.
- King, J E & Millmow, A 2003, 'Death of a Revolutionary Textbook', *History of Political Economy*, vol. 35, issue. 1, pp. 105-34.
- King, S 2012c, 'Are Graduate Economists Still Fit for Employment?', *Core Economics*, [online]
http://economics.com.au/?p=9033&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+com%2FJUIM+%28CoreEcon%29
viewed November 3 2012.
- Kirzner, I M 1987, 'The Austrian School of Economics', in J Eatwell, M Milgate & P Newman (eds), *The New Palgrave: A Dictionary of Economics*, Macmillan, London, pp. 145-51.
- Klein, N 2007, *The Shock Doctrine: The Rise of Disaster Capitalism* Allen Lane, Camberwell.
- Knight, F H 1921, *Risk, Uncertainty and Profit* Hart, Schaffner & Marx, Boston.
- Knorr-Cetina, K 1981, *The Manufacture of Knowledge: An Essay on the Constructivist and Contextual Nature of Science* Pergamon, Oxford.
- Kotz, D M, McDonough, T & Reich, M 1994, *Social Structures of Accumulation: The Political Economy of Growth and Crisis* Cambridge University Press, Cambridge.
- Krueger, A O 1991, 'Report of the Commission on Graduate Education in Economics', *Journal of Economic Literature*, vol. 29, issue. 3, pp. 1035-53.
- Krugman, P R 1997, 'New-Age Market Theory Is Bio-Babble: Pseudo-Economics Meets Pseudo Evolution', *Ottawa Citizen*, Ottawa.
- Kuhn, R 2009, 'Recollections of Emergent Radicalism', in G Butler, E Jones & F J B Stilwell (eds), *Political Economy Now! The Struggle for Alternative Economics at the University of Sydney*, Darlington Press, Sydney, pp. 178-80.
- Kuhn, T S 1962, *The Structure of Scientific Revolutions* University of Chicago Press, Chicago.
- 1977, *The Essential Tension: Selected Studies in Scientific Tradition and Change* University of Chicago Press, Chicago.
- Lafferty, G & Fleming, J 2000, 'The Restructuring of Academic Work in Australia: Power, Management and Gender', *British Journal of Sociology of Education*, vol. 21, issue. 2, pp. 257-67.
- Lally, P, van Jaarsveld, C.H.M., Potts, H.W.W. & Wardle, J. 2009, 'How Are Habits Formed: Modelling Habit Formation in the Real World', *European Journal of Social Psychology*, vol. 40, issue. 6, pp. 998-1009.
- Lamm, D S 1993, 'Economics and the Common Reader', in *The Spread of Economic Ideas*, Cambridge University Press, Cambridge, pp. 95-106.

- Lavoie, M 2009a, 'After the Crisis: Perspectives for Post Keynesian Economics', paper presented to Encontro Internacional de Associação Keynesiana Brasileiro, Porto Alegre, September.
- Lavoie, M 2009b, *An Introduction to Post-Keynesian Economics*, Palgrave Macmillan, Basingstoke.
- Lavoie, M 2010, 'Are We All Keynesians?', *Brazilian Journal of Political Economy*, vol. 30, issue. 2, pp. 189-200.
- Lawson, T 1997, *Economics and Reality* Routledge, London.
- 2001, 'Back to Reality', *post-autistic economics review*, vol. 6, issue. May.
- 2003, *Reorienting Economics* Routledge, London
- Lazear, E P 2000, 'Economic Imperialism ', *Quarterly Journal of Economics*, vol. 115, issue. 1 February, pp. 99-146.
- Lee, F S 2009, *A History of Heterodox Economics: Challenging the Mainstream in the Twentieth Century* Routledge, London.
- 2012, 'Heterodox Economics and Its Critics', *Review of Political Economy*, vol. 24, issue. 2, pp. 337-51
- Lee, F S, Cronin, B C, McConnell, S & Dean, E 2010, 'Research Quality Rankings of Heterodox Economic Journals in a Contested Discipline', *American Journal of Economics and Sociology*, vol. 69, issue. 5, pp. 1409-52.
- Leff, A 1974, *Economic Analysis of Law: Some Realism About Nominalism*, Yale University Faculty Scholarship Series 2820, Yale University.
- Leijonhufvud, A 1973, 'Life among the Econ', *Economic Inquiry*, vol. 11, issue. 3 September, pp. 327-37.
- Leombruni, R & Richiardi, M 2005, 'Why Are Economists Sceptical About Agent-Based Simulations?', *Physica A*, vol. 355, pp. 103-09.
- Levitt, S D & Dubner, S J 2009, *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything* Harper Perennial, New York.
- Lewis, P & Norris, K 1997, 'Recent Changes in Economics Enrolments', *Economic Papers*, vol. 16, issue. 1, pp. 1-13.
- Linder, M & Sensat, J 1977, *The Anti-Samuelson* Urizen Books, New York.
- Lindsey, G & Norton, A 1996, 'The Cis at Twenty', *Policy*, vol. Winter, pp. 16-21.
- Loasby, B J 1991, *Equilibrium and Evolution: An Exploration of Connecting Principles in Economics* Manchester University Press, Manchester England.
- Lodewijks, J K 2001, 'Educating Australian Economists', *Journal of Economic and Social Policy*, vol. 5, issue. 2, pp. 1-10.
- 2002a, 'Economics: The Doctoring of Economics', *Journal of Australian Studies*, pp. 73-92.
- 2002b, 'The History of Economic Thought in Australia and New Zealand ', *History of Political Economy*, vol. 34, issue. Annual Supplement, pp. 154-64.
- 2007, 'A Conversation with Warren Hogan', *Economic Record*, vol. 83, pp. 446-60.
- 2011, 'Economics at the University of Western Sydney', paper presented to Society of Heterodox Economists 10th Annual Conference, Coogee.
- Louçã, F & Perlman, M 2000, 'Bounded Rationality, Institutionalism and the Diversity of Economic Institutions', in *Is Economics an Evolutionary Science? The Legacy of Thorstein Veblen*, Edward Elgar, Cheltenham, pp. 95-113.
- Lucas, R E, Jr. 1993, 'Making a Miracle', *Econometrica*, vol. 61, issue. 2, pp. 251-72.

- Machiavelli, N 1532 [2003], *The Prince* Dante University Press, Boston.
- Macintyre, S 2010, *The Poor Relation* Melbourne University Publishing, Carlton.
- Mandler, M 1999, *Dilemmas in Economic Theory: Persisting Foundational Problems of Microeconomics* Oxford University Press, Oxford.
- Mankiw, N G, Gans, J & King, S 2009, *Principles of Microeconomics* Cengage Learning Australia, South Melbourne.
- Mantel, R 1974, 'On the Characterization of Aggregate Excess Demand', *Journal of Economic Theory*, vol. 7, pp. 348–53.
- Marginson, S 2009, 'The Clever Country Slips Away', *The Age*, Melbourne, May 4, 11.
- Marx, K 1946, *Capital: A Critical Analysis of Capitalist Production* Allen & Unwin, London.
- Matchett, S 2009, 'Dismal Science of Economics Faces Dilemma', *The Australian*, Sydney, 25th March.
- 2011, 'Bundoora's Dreaming Spires', *The Common Room: Ideas, Arguments and Furphies*, [online] http://blogs.theaustralian.news.com.au/thecommonroom/index.php/theaustralian/comments/bundooras_dreaming_spires/ viewed 2nd February 2012.
- Maxwell, P 1999, 'The Economics Principles Text: Its Evolution and Influence in Australia', *Journal of Economic and Social Policy*, vol. 3, issue. 2.
- Mayr, E 1974, 'Teleological and Teleonomic: A New Analysis', *Boston Studies in the Philosophy of Science*, vol. 14, pp. 91–117.
- McCalman, J, Muir, L & Soeterboek, C 2008, *Adventures with Breadth a Story of Interdisciplinary Innovation*, Centre for the study of higher education, Melbourne University, Melbourne.
- McCloskey, D N 2003, 'Notre Dame Loses', *Eastern Economic Journal*, vol. 29, issue. 2, pp. 309-15
- McTaggart, D, Findlay, C & Parkin, M 2010, *Economics* Pearson, Frenchs Forest.
- Mearman, A 2010, What Is This Thing Called 'Heterodox Economics'?, Working Paper No. 1006, Department of Economics, University of West England, Bristol.
- 2011, 'Who Do Heterodox Economists Think They Are?', *American Journal of Economics and Sociology*, vol. 70, issue. 2, pp. 480-510.
- Millmow, A 2000, 'The State We're In : University Economics 1989/1999', *Economic Papers*, vol. 19, issue. 4, pp. 43-51.
- 2002, 'The Quiet Death of Australian Economics.', *Arena Magazine*, vol. 16, issue. 2, pp. 16-18.
- 2004, 'A Brief Note on Australian Economics Degree Enrolments in the 21st Century', *Economic Papers - Economic Society of Australia*, vol. 23, issue. 3, pp. 211-13.
- 2009, 'The Boom We Didn't Really Have: Australian Economics Degree Enrolments, 1990 - 2007', *Economic Papers*, vol. 28, issue. 1, pp. 56-62.
- 2011a, 'Economists All Dressed up with Nowhere to Go', *Australian Financial Review*, Sydney, 28 Feb, p. 29.
- 2011b, 'The Green and Gold Revolution', *Economic Papers*, vol. 30, issue. 4, pp. 546-56.
- Millmow, A & Kates, S 2008, 'The History Wars of Economics: The Classification Struggle in the History of Economic Thought', *History of Economics Review*, vol. 47, issue. Winter, pp. 110-24.
- Millmow, A & Tuck, J 2011, 'Did the Global Financial Crisis Have Any Impact on Economics Degree Enrolments?*', *Economic Papers*, vol. 30, issue. 4, pp. 557-67.

- Mixon, F G & Cebula, R J 2009, *Expanding Teaching and Learning Horizons in Economic Education* Nova Science Publishers, New York.
- Monash University 2012, *Graduate Diploma in Economic Studies*, Monash University [online]
<http://www.monash.edu.au/study/coursefinder/course/0172/> viewed 3 March 2010.
- Myrdal, G 1970, *Objectivity in Social Research* Gerald Duckworth, London.
- 1976, 'Crises and Cycles in the Development of Economics', in E L Wheelwright & F J B Stilwell (eds), *Readings in Political Economy*, Australia and New Zealand Book Company, Sydney, pp. 222-28.
- National Science Board 2002, *Science and Engineering Indicators* National Science Board, Arlington.
- Neale, W C 1993, 'Institutions', in G M Hodgson, W J Samuels & M R Tool (eds), *Elgar Companion to Institutional and Evolutionary Economics*, Edward Elgar, Aldershot, pp. 402-06.
- Needham, D 1982, 'Improving Faculty Evaluation and Reward Systems', *Journal of Economic Education*, vol. 13, issue. 1, pp. 6-18.
- Negru, I 2009, 'Reflections on Pluralism in Economics', *International Journal of Pluralism and Economics*, vol. 1, issue. 1 and 2 pp. 7-21.
- Nelson, J A 1995a, 'Feminism and Economics', *Journal of Economic Perspectives*, vol. 9, issue. 2 Spring, pp. 131-48.
- 2001, 'Why the P.A.E. Movement Needs Feminism', *post-autistic economics review*, vol. 9, issue. October.
- 2002, 'What Should Be Retained from Standard Microeconomics?', *post-autistic economics review*, vol. 14, issue. June.
- 2009, 'The Principles Course', in J Reardon (ed.), *The Handbook of Pluralist Economics Education* Routledge, London, pp. 57-68.
- Nelson, R R 1993, 'Theory of the Firm (2)', in *The Elgar Companion to Institutional and Evolutionary Economics*, Edward Elgar, Aldershot, pp. 241-46.
- 1995b, 'Recent Evolutionary Theorizing About Economic Change', *Journal of Economic Literature*, vol. March.
- 2003, Physical and Social Technologies and Their Evolution, Working Paper No. 9, Laboratory of Economics and Management, Sant'Anna School of Advanced Studies, Piazza Martiri della Liberta.
- Nelson, R R & Winter, S G 1982, *An Evolutionary Theory of Economic Change* Belknap Press of Harvard University Press, Cambridge, MA.
- Nightingale, P 2003, 'If Nelson and Winter and Are Half Right About Tacit Knowledge, Which Half? A Searlean Critique of 'Codification' ', *Industrial and Corporate Change*, vol. 12, issue. 2, pp. 149-83.
- North, D C 2005, *Understanding the Process of Economic Change* Princeton University Press, Princeton.
- Norton , A 2012, *Mapping Australian Higher Education* Grattan Institute, Melbourne.
- Nowell, C 2007, 'The Impact of Relative Grade Expectations on Student Evaluation of Teaching', *International Review of Economics Education*, vol. 6, issue. 2, pp. 42-56.
- O'Donnell, R 2002, What Kind of Economics Graduates Do We Want? A Constructive Critique of Hansen's Proficiencies Approach, Working Paper, Department of Economics, Macquarie University Sydney.
- 2007, 'Teaching Economic Pluralism: Adding Value to Students, Economies and Societies', paper presented to Second International Conference for

- International Confederation of Associations for Pluralism in Economics, University of Utah, 1-3 June.
- 2009, 'The Permanent Need for Political Economy', *Agenda: A Journal of Policy Analysis and Reform*, vol. 16, issue. 4, p. 89.
- 2010, 'Economic Pluralism and Skill Formation: Adding Value to Students, Economies, and Societies', in R Garnett, E K Olsen & M Starr (eds), *Economic Pluralism* Routledge, New York, pp. 262-77.
- O'Hara, P A 2000, *Marx, Veblen, and Contemporary Institutional Political Economy : Principles and Unstable Dynamics of Capitalism* Edward Elgar, Cheltenham.
- 2002, 'The Contemporary Relevance of Thorstein Veblen's Institutional-Evolutionary Political Economy', *History of Economics Review*, vol. 35, issue. Winter, pp. 78-103.
- Ormerod, P 2003, 'Turning the Tide: Bringing Economics Teaching into the Twenty First Century', *International Review of Economics Education*, vol. 1, issue. 1, pp. 71-79.
- Panhans, M 2009, 'The Homeless Heterodox', *Open Economics: economic encounters of the plural kind*, [online] <http://openeconomicsnd.wordpress.com/2009/10/10/the-homeless-heterodox/> viewed 6 June 2010.
- Perry, W G 1970, *Forms of Ethical and Intellectual Development in the College Years: A Scheme* Holt, Rinehart and Winston, New York.
- Pheby, J 1987, *Methodology and Economics: A Critical Introduction* Macmillan, Basingstoke.
- Pierce, C S 1878, 'How to Make Our Ideas Clear', *Popular Science Monthly*, vol. 12, issue. January
- 1992, *The Essential Pierce: Selected Philosophical Writings* Indiana University Press, Bloomington.
- Popper, K R 1966, *The Open Society and Its Enemies* Routledge & Kegan Paul, London.
- Porteous, P 2009, 'Developing Skills for Social Change', in F J B Stilwell, E Jones & G Butler (eds), *Political Economy Now! The Struggle for an Alternative Economics at the University of Sydney*, Darlington Press, Sydney, pp. 71-75.
- Potts, J 2000, *The New Evolutionary Microeconomics: Complexity, Competence, and Adaptive Behaviour* Edward Elgar, Cheltenham.
- 2007a, 'Clarence Ayers Memorial Lecture', *Journal of Economic Issues*, vol. 41, issue. 2, pp. 341-50.
- 2007b, *Complexity and Creative Industries*, Centre for creative industries, Queensland University of Technology Brisbane.
- Potts, J & Nightingale, J 2001, 'An Alternative Framework for Economics', *post-autistic economics review*, vol. 10, issue. December.
- Price, L (ed.) 2001, *Dialogues of Alfred North Whitehead*, David R. Godine, Boston.
- Proust, M 2006, *In Search of Lost Time: Volume Two* Wordsworth, Herfordshire.
- Pullen, J 1997, 'The Teaching of Economics: The Art of Paradigm Protection and Suppression', *Journal of Economic and Social Policy*, vol. 2, issue. 1, pp. 28-40.
- Pusey, M 1991, *Economic Rationalism in Canberra: A Nation Building State Changes Its Mind* Cambridge University Press, Cambridge, England.
- Rakowski, J J 2010, 'Letter to the Editor: Dissolution of Economics and Policy Studies', *The Observer*, Notre Dame, January 20.

- Robbins, L 1932, *An Essay on the Nature and Significance of Economic Science* Macmillan, London.
- Robertson, D 1993, *The Penguin Dictionary of Politics* Penguin, London.
- Robinson, J 1955, *Marx, Marshall, and Keynes* Delhi School of Economics, University of Delhi, Delhi.
- 1980, *Collected Economic Papers* MIT Press, Cambridge MA.
- 1981, *What Are the Questions? And Other Essays: Further Contributions to Modern Economics* M. E. Sharpe, Armonk.
- Robinson, J & Eatwell, J 1973, *An Introduction to Modern Economics* McGraw-Hill, London.
- Rodrigo, D 2009, 'Keeping the Political Economy Movement Flourishing', in G Butler, E Jones & F J B Stilwell (eds), *Political Economy Now! The Struggle for Alternative Economics at the University of Sydney*, Darlington Press, Sydney, pp. 156-58.
- Rothschild, K W 1971, *Power in Economics: Selected Readings* Penguin, Harmondsworth.
- Round, D K & Shanahan, M P 2010, 'The Economics Degree in Australia: Down but Not Out?', *The Journal of Economic Education*, vol. 41, issue. 4, pp. 425-35.
- Ruccio, D 2003, 'Call for Respectful Economics Debate', *The Observer*, vol. 92, issue. 12, pp. 1-3.
- 2010, 'The Department of Economics and Policy Studies at the University of Notre Dame Has Been Officially Dissolved.', *Real World Economics Review Blog*, [online] <http://rwer.wordpress.com/2010/03/08/the-department-of-economics-and-policy-studies-at-the-university-of-notre-dame-has-been-officially-dissolved/> viewed March 8 2011.
- Rutherford, M 1994, *Institutions in Economics: The Old and the New Institutionalism* Cambridge University Press, Cambridge.
- Salzano, M & Colander, D C 2007, *Complexity Hints for Economic Policy* Springer, New York.
- Samuels, W J 1989, 'In Praise of Joan Robinson: Economics as Social Control', *Society*, vol. 26, issue. 2, pp. 73-76.
- 1992, 'Machlup on Knowledge: Science, Subjectivism and the Social Nature of Knowledge', in *Essays on Methodology and Discourse in Economics*, Macmillan, Houndsmills.
- Samuels, W J & Medema, S G 1998, *Foundations of Research in Economics: How Do Economists Do Economics?* Edward Elgar, Cheltenham.
- Samuels, W J & Tool, M R 1988, *The Economy as a System of Power* Transaction Books, New Brunswick.
- Samuelson, P A 1967, *Economics* McGraw-Hill, New York.
- 1970, 'Classical and Neoclassical Theory', in R W Clower (ed.), *Monetary Theory*, Penguin Books, Baltimore.
- 1992, 'My Life Philosophy: Policy Credos and Working Ways', in M Szenberg (ed.), *Eminent Economists: Their Life Philosophies*, Cambridge University Press, New York, pp. 236-47.
- Schmid, A A 1999, 'Circular and Cumulative Causation', in P A O'Hara (ed.), *Encyclopedia of Political Economy*, Routledge, New York, pp. 87-90.
- 2003, 'Review of the New Evolutionary Microeconomics by Jason Potts', *Economic Record*, vol. March.
- Schumpeter, J A 1954, *History of Economic Analysis* Allen & Unwin, London.
- Searle, J R 2005, 'What Is an Institution?', *Journal of Institutional Economics*, vol. 1, issue. 1, pp. 1-22.

- 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.
- Shackle, G L S 1967, *The Years of High Theory: Invention and Tradition in Economic Thought, 1926-1939* Cambridge University Press, Cambridge.
- Shapin, S & Schaffer, S 1985, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life: Including a Translation of Thomas Hobbes, Dialogus Physicus De Natura Aeris by Simon Schaffer* Princeton University Press, Princeton.
- Sherman, H J & Hunt, E K 2008, *Economics: An Introduction to Traditional and Progressive Views* M.E. Sharpe, Armonk.
- Simkin, C (ed.) 1975, *Political Economy Vs Economics at the University of Sydney*, Sydney University Archives, Sydney University.
- Simon, H A 1957, *Models of Man: Social and Rational - Mathematical Essays on Rational Human Behavior in a Social Setting* Wiley, New York.
- Skinner, A S 1986, 'Adam Smith: Then and Now', in R D C Black (ed.), *Ideas in Economics*, Macmillan, Basingstoke, pp. 16-42.
- Skousen, M 1997, 'The Perseverance of Paul Samuelson's Economics', *The Journal of Economic Perspectives*, vol. 11, issue. 2, pp. 137-52.
- Smith, A 1776 [1982], *The Wealth of Nations* Penguin, Harmondsworth.
- 1795 [1982], 'Essays on Philosophical Subjects', in W P D Wightman, J C Bryce, I S Ross & D Stewart (eds), *The Glasgow Edition of the Works and Correspondence of Adam Smith*, Liberty Classics, Indianapolis.
- 1800 [2005], *Essays, Philosophical and Literary* Kessinger, Whitefish.
- Snow, C P 1964, *The Two Cultures, and a Second Look: An Expanded Version of the Two Cultures and the Scientific Revolution* University Press, Cambridge.
- Solow, R M 1965, in F Hahn & F P R Brechling (eds), *The Theory of Interest Rates: Proceedings of a Conference Held by the International Economic Association*, Macmillan, London.
- Sonnenschein, H 1972, 'Market Excess Demand Functions', *Econometrica*, vol. 40, issue. 3, pp. 549-63.
- Soskice, D W & Hall, P A 2001, *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* Oxford University Press, Oxford.
- Sraffa, P 1926, 'The Laws of Returns under Competitive Conditions', *The Economic Journal*, vol. 36, issue. 144 December, pp. 535-50.
- 1975, *Production of Commodities by Means of Commodities: Prelude to a Critique of Economic Theory* Cambridge University Press, Cambridge.
- Stanford, J 2003, 'Confessions of a Recovering Economist', *post-autistic economics review*, vol. 21 issue. September.
- Steinmo, S 2008, 'Historical Institutionalism', in D Della Porta & M Keating (eds), *Approaches and Methodologies in the Social Sciences: A Pluralist Perspective*, Cambridge University Press, Cambridge, UK, pp. 118-38.
- Stilwell, F J B 1975, *Normative Economics: An Introduction to Microeconomic Theory and Radical Critiques* Pergamon Press, Rushcutters Bay.
- 1988, 'Contemporary Political Economy: Common and Contested Terrain', *The Economic Record*, vol. 64, issue. 184, pp. 14-25.
- 2002, *Political Economy: The Contest of Economic Ideas* Oxford University Press, South Melbourne.
- 2006a, *Political Economy: The Contest of Economic Ideas* Oxford University Press, South Melbourne.

- 2006b, 'The Struggle for Political Economy at the University of Sydney', *Review of Radical Political Economics*, vol. 30, issue. Fall, pp. 539-50.
- 2011a, *Political Economy: The Contest of Economic Ideas* Oxford University Press, South Melbourne.
- 2011b, 'Teaching a Pluralist Course in Economics: The University of Sydney Experience', *International Journal of Pluralism and Economics Education*, vol. 2, issue. 1, pp. 39-56.
- 2012, 'Teaching Political Economy: Making a Difference?', *Studies in Political Economy*, vol. 89, issue. Spring, pp. 147-63.
- Stilwell, F J B & Argyrous, G 2011, *Economics as a Social Science: Readings in Political Economy* Tilde University Press, Melbourne.
- Stilwell, F J B & Wheelwright, E L 1976, *Readings in Political Economy: Volume 1* Australia and New Zealand Book Company, Sydney.
- Stinchcombe, A L 1965, 'Handbook of Organizations', in J G March & D Cartwright (eds), *Rand McNally Sociology Series*, Rand McNally, Chicago, pp. xvi, 1247 p.
- Stretton, H 1969, *The Political Sciences: General Principles of Selection in Social Science and History* Basic Books, New York.
- 1996, 'After Samuelson?', *World Development*, vol. 24, issue. 10, pp. 1561-78
- 1999, *Economics: A New Introduction* UNSW Press, Sydney.
- Strong, G 2010, 'Working Class Boganism Stealing Our Best and Brightest ', *The Age*, Melbourne.
- Sugden, R 2005, 'Samuel Bowles' Microeconomics - Review Article', *Journal of Economic Methodology*, vol. 12, issue. 2, pp. 331-36.
- Tabb, W K 1999, *Reconstructing Political Economy: The Great Divide in Economic Thought* Routledge, London.
- Taylor, J B & Frost, L E 2009, *Economics* John Wiley & Sons, Milton.
- Thornton, T B 2008, *Telephone Interview with Professor Frank Stilwell*, 29 September.
- 2009a, *Email Correspondence with Professor Julie Nelson*, 17th December.
- 2009b, *Email Correspondence with Professor Samuel Bowles*, 14 December.
- 2010a, *Email Correspondence with Professor Frank Stilwell*, 3 July.
- 2010b, *Interview with Economic Honours Student*, Melbourne, 15 January.
- 2010c, *Telephone Interview with Assoc Prof Peter Kriesler* 17th of May.
- 2010d, *Telephone Interview with Professor John Lodewijks*, 14th April.
- 2011a, *Email Correspondence with Assoc Prof Brian Pinkstone*, 30 December.
- 2011b, *Email Correspondence with Dr Joseph Halevi*, 30 November.
- 2011c, *Email Correspondence with Professor Frank Stilwell*, 3 August.
- 2011d, *Email Correspondence with Professor Geoffrey Harcourt*, 5 August.
- 2011e, *Email Correspondence with Professor Peter Groenewegen*, 7 Feb.
- 2011f, *Interview with Dr Stuart Rosewarne*, Sydney University, 7 December.
- 2011g, *Interview with Dr. Wayne Geerling* La Trobe University Bundoora, 2 September.
- 2011h, *Interview with Professor Belinda Probert*, Fitzroy, 14 September.
- 2011i, *Interview with Professor Paul Redding*, Sydney University, 7 December.
- 2011j, *Interview with Professor Rod O'donnell*, Sydney, 5 December.
- 2011k, *Interview with Professor Tony Aspromourgos*, Coogee, 5 December.

- 2011l, *Survey on the Perception and Understanding of the Terms Heterodox Economics and Political Economy*, La Trobe University.
- 2012a, 'The Economics Curriculum in Australian Universities 1980 to 2011', *Economic Papers*, vol. 31, issue. 1, pp. 103-13.
- 2012b, *Email Correspondence with Dr. Miriam Bankovsky* 27th of April
- 2012c, *Email Correspondence with Mr Chris Mouratidis*, 17 December.
- 2012d, *Email Correspondence with Professor David F Ruccio*, 11 December.
- 2012e, *Email Correspondence with Professor Gary Magee*, 24 December.
- 2012f, *Email Correspondence with Professor John Lodewijks*, 31st January.
- Thornton, T B & Millmow, A 2008, *Interview with Assoc Prof Ian Ward* La Trobe University, 23 May.
- Tierney, J 2010, 'Branch of Econ Dept. To Be Dissolved', *The Observer*, Notre Dame, 19th January.
- Titmuss, R M 1971, *The Gift Relationship: From Human Blood to Social Policy* Pantheon Books, New York.
- Turner, G W 1987, *The Australian Concise Oxford Dictionary* Oxford University Press, Melbourne.
- University of Sydney 2011, *Strategic Review of the School of Social and Political Sciences Discussion Paper*, Faculty of Arts and Social Sciences, University of Sydney.
- University of Western Sydney 2011a, *Academic Staff Profile: Professor John Lodewijks*, Penrith, UWS [online] http://www.uws.edu.au/economics_finance/sef/academic_profiles/professor_john_lodewijks2 viewed 19 December 2011.
- 2011b, *University of Western Sydney School of Economics and Finance*, Penrith, UWS [online] http://www.uws.edu.au/economics_finance/sef viewed 20 July 2011.
- 2012, *School of Economics and Finance 2011 Annual Report* UWS, Penrith.
- Varian, H 1997, 'What Use Is Economic Theory?', in A d'Autume & J Cartelier (eds), *Is Economics Becoming a Hard Science?*, Edward Elgar, Cheltenham, pp. 108-19.
- Varoufakis, Y 1998, *Foundations of Economics: A Beginner's Companion* Routledge, London.
- 2007, 'A Most Peculiar Success: Constructing Uadphilecon - a Doctoral Program in Economics at the University of Athens', paper presented to International Confederation of Associations for Pluralism in Economics, University of Utah, Salt Lake City, 1-3 June.
- 2009, 'Where the Customers Are Always Wrong: Some Thoughts on the Societal Impact of a Non-Pluralist Economic Education', *International Journal of Pluralism and Economics Education*, vol. 1, issue. 1/2, pp. 46-57.
- 2010, 'A Most Peculiar Success: Constructing Uadphilecon - a Doctoral Program in Economics at the University of Athens', in R Garnett, E K Olsen & M Starr (eds), *Economic Pluralism*, Routledge, New York, pp. 278-92.
- Varoufakis, Y & Arnsperger, C 2009, *A Most Peculiar Failure: On the Dynamic Mechanism by Which the Inescapable Theoretical Failures of Neoclassical Economics Reinforce Its Dominance*, Working Paper, Department of Economics, University of Athens, Athens.
- Varoufakis, Y, Halevi, J & Theocarakis, N 2011, *Modern Political Economics: Making Sense of the Post-2008 World* Routledge, London.

- Veblen, T 1898, 'Why Is Economics Not an Evolutionary Science?', *Quarterly Journal of Economics*, vol. 12, pp. 373-97.
- Vernengo, M 2010, 'Conversation or Monologue? On Advising Heterodox Economists', *Journal of Post Keynesian Economics*, vol. 32, issue. 3, pp. 389-96.
- Vromen, J J 2004, 'Taking Evolution Seriously: What Difference Does It Make for Economics?', in J B Davis & A Marciano (eds), *The Elgar Companion to Economics and Philosophy*, Edward Elgar, Northampton, pp. 102-31.
- Ward, I 2001, 'Can Hugh Stretton's New Introduction Turn the Tide for Economics?', *Overland*, vol. 164, pp. 84-87.
- Ward, I, Crosling, G & Marangos, J 2000, 'Encouraging Positive Perceptions of Economics: The Effectiveness of the Orientation Tutorial', *Economic Papers*, vol. 19, issue. 3 September, pp. 76-86
- Whewell, W 1840, *The Philosophy of the Inductive Science* John W Parker, Cambridge.
- Whitehead, A N 1920, *The Concept of Nature: The Turner Lectures Delivered in Trinity College, November 1919* University Press, Cambridge.
- Wilkinson, N 2008, *An Introduction to Behavioral Economics* Palgrave Macmillan, Basingstoke.
- Williams, B R 1943, *The Socialist Order and Freedom* Reed and Harris, Melbourne.
- 1953, 'Economic Science and Public Policy', *Sociological Review*, vol. July, pp. 87-109.
- 2005, *Making and Breaking Universities: Memoirs of Academic Life in Australia and Britain 1936-2004* Macleay Press, Sydney.
- 2006, *Liberal Education and Useful Knowledge, a Brief History of the University of Sydney 1850–2000* University of Sydney, Sydney.
- Williams, R 2007, *Ranking Australian Universities: Controlling for Scope*, The Melbourne Institute of Applied Economic and Social Research, Melbourne.
- Witt, U 2008, 'What Is Specific About Evolutionary Economics?', *Journal of Evolutionary Economics*, vol. 18, issue. 5 October, pp. 547-75.
- Wittgenstein, L 1980, *Vermischte Bemerkungen - Culture and Value* Blackwell, Oxford.

Appendices

Appendix 1. Units in economics offered at Australian Universities in 1980 and 2011. pp.1-86.

Appendix 2. Transcript of telephone interview between Tim Thornton and Professor Frank Stilwell 29th of September 2008. pp.1-7.

Appendix 1. Units in economics offered at Australian Universities in 1980 and 2011

Subject Name	Code	Level	Area	University	Year
Applied Econometrics	ECON304	3	NEE	ACU	2011
Business Economics	ECON104	1	NE	ACU	2011
Development Economics	ECON204	2	DE	ACU	2011
Economic Policy Analysis	ECON205	2	NE	ACU	2011
Economic Systems	ECON206	2	CES	ACU	2011
Economics for Business	ECON105	1	NE	ACU	2011
Ethics, Capitalism and Globalisation	PHIL615	pgrad	HE	ACU	2011
International Business Economics	ECON201	2	NE	ACU	2011
Labour Economics	ECON210	2	NE	ACU	2011
Macroeconomics 2	ECON203	2	NE	ACU	2011
Macroeconomics I	ECON103	1	NE	ACU	2011
Managerial Economics in a Global Environment	ECON600	pgrad	NE	ACU	2011
Microeconomics 1	ECON102	1	NE	ACU	2011
Microeconomics 2	ECON202	2	NE	ACU	2011
The Evolution of Economic Thought	ECON207	2	HET	ACU	2011
The Global Economy	ECON209	2	NE	ACU	2011
Agricultural Economics IIIH.	EE4H	3	NE	ADL	1980
Econometrics IIIH.	EE8H	3	NEE	ADL	1980
Economic Development III.	EE13	3	DE	ADL	1980
Economic Geography IUH.	AJ9H	3	DE	ADL	1980
Economic History IH.	EE4F	1	EH	ADL	1980
Economic History IIH(A).	EE6F	2	EH	ADL	1980
Economic History IIH(B).	EE7F	2	EH	ADL	1980
Economic History IIIH.	EE8G	3	EH	ADL	1980
Economic Institutions and Policy	EE5F	1	HE	ADL	1980
Economic Statistics II.	EE22	2	NEE	ADL	1980
Economic Statistics IIA.	EE32	2	NEE	ADL	1980
Economic Theory IIH.	EE8F	3	NE	ADL	1980
Economics	EC16	pgrad	HE	ADL	1980
Economics IIIA.	EE33	3	NE	ADL	1980

Subject Name	Code	Level	Area	University	Year
Economics of Labour IIH.	EE3H	3	NE	ADL	1980
Economics of Natural Resource Use	EE43	ugrad	NE	ADL	1980
Farm Management	EE53	ugrad	NE	ADL	1980
Farm Prices and Policy	EE63	ugrad	NE	ADL	1980
Government and Administration	EC27	pgrad	HE	ADL	1980
Industrial Sociology III	EC23	ugrad	HE	ADL	1980
Macroeconomics IH.	EEIG	1	NE	ADL	1980
Macroeconomics IIH.	EE3G	2	NE	ADL	1980
Management Decision Analysis	EC2G	ugrad	NEM	ADL	1980
Managerial Economics IIH.	EE7H	3	NE	ADL	1980
Mathematical Economics DH.	EE3F	2	NEM	ADL	1980
Mathematical Economics IH	EE2F	1	NEM	ADL	1980
Mathematical Economics IIH	EE3F	ugrad	NEM	ADL	1980
Mathematical Economics IIH.	EE9H	3	NEM	ADL	1980
Mathematics for Economists IH.	EEIF	1	NEM	ADL	1980
Microeconomics IH.	EE2G	1	NE	ADL	1980
Microeconomics IIH.	EE4G	2	NE	ADL	1980
Social Economics I	EE71	ugrad	ECL	ADL	1980
Advanced Econometrics	ECON 7202	pgrad	NEE	ADL	2011
Advanced Macroeconomics	ECON 7086	pgrad	NE	ADL	2011
Advanced Mathematical Economics IV	ECON 7110	pgrad	NEM	ADL	2011
Advanced Microeconomic Theory	ECON 7087	pgrad	NE	ADL	2011
Australia & the Global Economy I	ECON 1002	1	NE	ADL	2011
Business & Economic Statistical Theory II	ECON 2510	2	NEM	ADL	2011
Business & Economic Statistical Theory IID	ECON 7216	pgrad	NEE	ADL	2011
Business and Economic Statistics I	ECON 1008	1	NEE	ADL	2011
Challenges Facing Economic Policy Makers	ECON 7220	pgrad	NE	ADL	2011
Development Economics III	ECON 3501	3	DE	ADL	2011
Development Economics IIID	ECON 7058	pgrad	DE	ADL	2011
East Asian Economies II	ECON 2502	2	EH	ADL	2011

Subject Name	Code	Level	Area	University	Year
East Asian Economies IID	ECON 7052	pgrad	EH	ADL	2011
Econometric Theory III	ECON 3507	3	NEE	ADL	2011
Econometric Theory IIID	ECON 7022	pgrad	NEE	ADL	2011
Econometrics IV	ECON 7204	pgrad	NEE	ADL	2011
Economic Development	ECON 7067	pgrad	DE	ADL	2011
Economic Principles (M)	ECON 7200	pgrad	NE	ADL	2011
Environmental Economics E III	ECON 3018	3	NE	ADL	2011
Financial Economics II	ECON 2508	2	NE	ADL	2011
Honours Economics (Two Year) Continuing	ECON 4004A	4	OPEN	ADL	2011
Honours Economics (Two Year) Final	ECON 4004B	4	OPEN	ADL	2011
Honours Economics Part 1	ECON 4003A	4	OPEN	ADL	2011
Honours Economics Part 2	ECON 4003B	4	OPEN	ADL	2011
Industrial Organisation III	ECON 3516	3	NE	ADL	2011
Intermediate Econometrics II	ECON 2504	2	NEM	ADL	2011
Intermediate Econometrics IID	ECON 7051	pgrad	NEE	ADL	2011
Intermediate Macroeconomics II	ECON 2507	2	NE	ADL	2011
Intermediate Macroeconomics IID	ECON 7071	pgrad	NE	ADL	2011
Intermediate Microeconomics II	ECON 2506	2	NE	ADL	2011
Intermediate Microeconomics IID	ECON 7011	pgrad	NE	ADL	2011
International Economic History III	ECON 3509	3	EH	ADL	2011
International Economic History IIID	ECON 7050	pgrad	EH	ADL	2011
International Trade & Investment Policy II	ECON 2500	2	NE	ADL	2011
International Trade III	ECON 3506	3	NE	ADL	2011
International Trade IV	ECON 7102	7	NE	ADL	2011
Introductory Mathematical Economics	ECON 1010	1	NEM	ADL	2011
Labour EconomicsIII	ECON 3017	3	NE	ADL	2011
Labour Economics III	ECON 3504	3	NE	ADL	2011
Labour Economics IIID	ECON 7070	pgrad	NE	ADL	2011
M. Applied Economics (International) Dissertation	ECON 7208	pgrad	OPEN	ADL	2011
Macroeconomics III	ECON 3514	3	NE	ADL	2011

Subject Name	Code	Level	Area	University	Year
Macroeconomics III D	ECON 7219	pgrad	NE	ADL	2011
Macroeconomics IV	ECON 7122	pgrad	NE	ADL	2011
Managerial Economics III	ECON 3517	3	NE	ADL	2011
Master of Applied Economics Dissertation	ECON 7084	pgrad	OPEN	ADL	2011
Master of Applied Economics Dissertation	ECON 7209	pgrad	OPEN	ADL	2011
Master of Economics Research Project A	ECON 7108	pgrad	OPEN	ADL	2011
Master of Economics Research Project B	ECON 7109	pgrad	OPEN	ADL	2011
Mathematical Economics II	ECON 2503	2	NEM	ADL	2011
Mathematical Economics IID	ECON 7075	pgrad	NEM	ADL	2011
Mathematics for Economists I	ECON 1005	1	NE	ADL	2011
Microeconomic Theory IV	ECON 7121	pgrad	NE	ADL	2011
Money, Banking & Financial Markets III	ECON 3511	3	NE	ADL	2011
Principles of Macroeconomics I	ECON 1000	1	NE	ADL	2011
Principles of Microeconomics I	ECON 1004	1	NE	ADL	2011
Public Economics	ECON 7115	pgrad	NE	ADL	2011
Public Economics III	ECON 3508	3	NE	ADL	2011
Public Economics IIID	ECON 7032	pgrad	NE	ADL	2011
Res and Env Eco III	ECON 3003	3	NE	ADL	2011
Resource & Environmental Economics II	ECON 2501	2	NE	ADL	2011
Resource & Environmental Economics IIID	ECON 7016	pgrad	NE	ADL	2011
Resource and Environmental Economics III	ECON 3500	3	NE	ADL	2011
Special Topics in Economics	ECON 7123	pgrad	OPEN	ADL	2011
Strategic Thinking III	ECON 3503	3	NE	ADL	2011
The Economics of Climate Change	ECON 7221	pgrad	NE	ADL	2011
Time Series Econometrics III	ECON 3515	3	NEE	ADL	2011
Time Series Econometrics IIID	ECON 7215	pgrad	NEE	ADL	2011
Topics in Applied Econometrics	ECON 3013	3	NEE	ADL	2011
Topics in Applied Econometrics III	ECON 3502	3	NEE	ADL	2011
Topics in Applied Econometrics IIID	ECON 7001	pgrad	NEE	ADL	2011
Topics in Microeconomics II	ECON 2509	2	NE	ADL	2011

Subject Name	Code	Level	Area	University	Year
Topics in Microeconomics IID	ECON 7217	pgrad	NE	ADL	2011
Agricultural Economics		ugrad	NE	ANU	1980
Applied General Equilibrium Analysis		5	NE	ANU	1980
Applied Macroeconomics		ugrad	NE	ANU	1980
Case Studies in Applied Econometrics		5	NEE	ANU	1980
Comparative Economic Systems		4	EH	ANU	1980
Development Economics		ugrad	DE	ANU	1980
Econometric Theory and Method		5	NEE	ANU	1980
Economic Analysis of History		ugrad	EH	ANU	1980
Economic Development of Modern Japan		ugrad	EH	ANU	1980
Economic Development of Modern Japan		4	EH	ANU	1980
Economic Experience of Modern India		4	EH	ANU	1980
Economic Experience of Modern India		ugrad	EH	ANU	1980
Economic Geography		ugrad	ECL	ANU	1980
Economic History I		ugrad	EH	ANU	1980
Economic History II		ugrad	EH	ANU	1980
Economic History IV		4	EH	ANU	1980
Economic Measurement		ugrad	NEE	ANU	1980
Economic Policy Issues		5	NE	ANU	1980
Economics I		ugrad	NE	ANU	1980
Economics II		ugrad	NE	ANU	1980
Economics II (Honours)		4	NE	ANU	1980
Economics III		ugrad	NE	ANU	1980
Economics I (Honours)		4	NE	ANU	1980
Economics III (Honours)		4	NE	ANU	1980
Economics IV (Honours)		4	NE	ANU	1980
Elementary Econometric Theory		5	NEE	ANU	1980
Environmental Economics		ugrad	NE	ANU	1980
Growth Theory		5	NE	ANU	1980
History of Economic Thought		4	HET	ANU	1980

Subject Name	Code	Level	Area	University	Year
History of Economic Thought		ugrad	HET	ANU	1980
Industrial Organisation		ugrad	NE	ANU	1980
International Economics		ugrad	NE	ANU	1980
International Trade Theory		5	NE	ANU	1980
Introduction to Computer Data Processing		ugrad	NEE	ANU	1980
Japanese Economy and Policy		ugrad	EH	ANU	1980
Labour Economics		ugrad	NE	ANU	1980
Macroeconomic Theory		5	NE	ANU	1980
Macroeconomics		ugrad	NE	ANU	1980
Mathematical Economics 1A		ugrad	NEE	ANU	1980
Mathematical Economics 1B		ugrad	NEE	ANU	1980
Mathematical Economics IA (Honours)		4	NEM	ANU	1980
Mathematics for Economics		ugrad	NEE	ANU	1980
Mathematical Economics IB (Honours)		4	NEM	ANU	1980
Microeconomic Theory A		5	NE	ANU	1980
Microeconomic Theory B		5	NE	ANU	1980
Monetary Economics		5	NE	ANU	1980
Monetary Economics		ugrad	NE	ANU	1980
Optimal Control Theory		5	NE	ANU	1980
Optimal Control Theory		ugrad	NE	ANU	1980
Problems of Economic Development in Asia		5	DE	ANU	1980
Public Economics A		ugrad	NE	ANU	1980
Public Economics B		ugrad	NE	ANU	1980
Public Expenditure Theory		5	NE	ANU	1980
Public Economics D		ugrad	NE	ANU	1980
Public Economics C		ugrad	NE	ANU	1980
Recent Economic Expertise in Europe and North America		4	EH	ANU	1980
Recent Economic Expertise in Europe and North America		ugrad	EH	ANU	1980
Resource Economics		ugrad	NE	ANU	1980
Russian Economic History		4	EH	ANU	1980

Subject Name	Code	Level	Area	University	Year
Russian Economic History		ugrad	EH	ANU	1980
Statistics C02		ugrad	NEE	ANU	1980
Special Topics in Econometrics.		5	NEE	ANU	1980
Statistics A02		ugrad	NEE	ANU	1980
Statistics B01		ugrad	NEE	ANU	1980
Statistics B01 (Honours)		4	NEE	ANU	1980
Statistics B02		ugrad	NEE	ANU	1980
Statistics B03		ugrad	NEE	ANU	1980
Statistics B04		ugrad	NEE	ANU	1980
Statistics C02 (Honours)		4	NEE	ANU	1980
Statistics C04		ugrad	NEE	ANU	1980
Statistics C04 (Honours)		4	NEE	ANU	1980
Statistics C06		ugrad	NEE	ANU	1980
Statistics C07		ugrad	NEE	ANU	1980
Statistics COB		ugrad	NEE	ANU	1980
Statistics A01		ugrad	NEE	ANU	1980
Statistics C03		ugrad	NEE	ANU	1980
Statistics C05		ugrad	NEE	ANU	1980
Statistics 803 (Honours)		4	NEE	ANU	1980
Statistics A03		ugrad	NEE	ANU	1980
Statistics C01 (Honours)		4	NEE	ANU	1980
Statistics C05 (Honours)		4	NEE	ANU	1980
Statistics CO1		ugrad	NEE	ANU	1980
Statistics CO6 (Honours)		4	NEE	ANU	1980
Transport Economics		ugrad	NE	ANU	1980
Urban Economics		5	NE	ANU	1980
Advanced Topics in Poverty, Public Policy and Development	ECHI8007	pgrad	EH	ANU	2011
Agricultural Economics and Resource Policy	IDEC8018	pgrad	NE	ANU	2011
Aid and Development Policy	IDEC8007	pgrad	DE	ANU	2011
Applied Economics IV Honours (S)	ECON4021F	4	NE	ANU	2011

Subject Name	Code	Level	Area	University	Year
Applied Economics IV Honours (S)	ECON4021P	4	NE	ANU	2011
Applied Economics: Cost/Benefit Analysis	IDEC8001	pgrad	NE	ANU	2011
Applied Economics: Cost/Benefit Analysis	IDEC8088	pgrad	NE	ANU	2011
Applied Health Econometrics	ECON8073	pgrad	NE	ANU	2011
Applied Macro and Financial Econometrics	EMET3008	3	NEE	ANU	2011
Applied Micro-econometrics	EMET3006	3	NEE	ANU	2011
Applied Welfare Economics	ECON8002	pgrad	NE	ANU	2011
Asian Giants: India, China and Japan; Alternate Paths to Prosperity(H)	ECHI2119	2	EH	ANU	2011
Asian Giants: India, China and Japan; Alternate Paths to Prosperity(P)	ECHI2109	2	EH	ANU	2011
Australian Economic History(H)	ECHI2112	2	EH	ANU	2011
Australian Economic History(P)	ECHI2102	2	EH	ANU	2011
Australian Economy	ECHI1006	1	EH	ANU	2011
Banking, Finance and Monetary Policy in the Asia Pacific Region	IDEC8014	pgrad	NE	ANU	2011
Behavioural Economics: Psychology and Economics	ECON2013	2	MPN	ANU	2011
Business and Economic Forecasting	EMET3007	3	NEE	ANU	2011
Business Economics	ECON8069	pgrad	NE	ANU	2011
Case Studies in Economic Policy	CRWF8004	pgrad	NE	ANU	2011
Classic Works of Economic Theory	ECHI8011	pgrad	HET	ANU	2011
Classical Marxism	POLS2061	2	HE	ANU	2011
Climate Change Policy Economics	CRWF8006	pgrad	NE	ANU	2011
Competition Policy and the Economics of Regulation	ECON8055	pgrad	NE	ANU	2011
Competition Policy and the Economics of Regulation (H)	ECON3155	3	NE	ANU	2011
Competition Policy and the Economics of Regulation (P)	ECON3055	3	NE	ANU	2011
Cost-benefit Analysis	ECON2133	2	NE	ANU	2011
Cost-Benefit Analysis	ECON8018	pgrad	NE	ANU	2011
Development Poverty and Famine(H)	ECHI2013	2	DE	ANU	2011
Development Poverty and Famine(P)	ECHI2003	2	DE	ANU	2011
Diploma Macroeconomics	ECON8026	pgrad	NE	ANU	2011
Diploma Microeconomics	ECON8025	pgrad	NE	ANU	2011
Econometric Techniques	IDEC8017	pgrad	NEE	ANU	2011

Subject Name	Code	Level	Area	University	Year
Econometrics I: Econometric Methods	EMET2007	2	NEE	ANU	2011
Econometrics II: Econometric Modelling	EMET2008	2	NEE	ANU	2011
Econometrics III: Advanced Econometric Methods	EMET3011	3	NEE	ANU	2011
Economic Development	IDEC8022	pgrad	DE	ANU	2011
Economic Evaluation of Health Programs	ECON8075	pgrad	NE	ANU	2011
Economic Globalisation and the Environment	CRWF8001	pgrad	NE	ANU	2011
Economic Growth	ECON8050	pgrad	NE	ANU	2011
Economic History IV Honours (S)	ECHI4004F	4	EH	ANU	2011
Economic History IV Honours (S)	ECHI4004P	4	EH	ANU	2011
Economic Policy Issues	ECON8003	pgrad	NE	ANU	2011
Economics 3 (H)	ECON3100	3	NE	ANU	2011
Economics I (H)	ECON1100	1	NE	ANU	2011
Economics IV Honours (S)	ECON4004F	4	NE	ANU	2011
Economics IV Honours (S)	ECON4004P	4	NE	ANU	2011
Economics of Health Insurance and Financing	ECON8074	pgrad	NE	ANU	2011
Economics/Econometrics IV Honours (S)	ECON4006F	4	NEE	ANU	2011
Economics/Econometrics IV Honours (S)	ECON4006P	4	NEE	ANU	2011
Environmental Economics	IDEC8053	pgrad	NE	ANU	2011
Foundations of Economic and Financial Models	EMET1001	1	NEM	ANU	2011
Globalisation and Regionalisation in the World Economy (H)	ECHI2016	2	EH	ANU	2011
Globalisation and Regionalisation in the World Economy (P)	ECHI2006	2	EH	ANU	2011
Health Economics	ECON3004	3	NE	ANU	2011
Health Economics	ECON8039	pgrad	NE	ANU	2011
History of Economic Thought(H)	ECHI2015	2	HET	ANU	2011
History of Economic Thought(P)	ECHI2005	2	HET	ANU	2011
Industrial Organisation	ECON8038	pgrad	NE	ANU	2011
Industrial Organisation(H)	ECON3157	3	NE	ANU	2011
Industrial Organisation(P)	ECON3057	3	NE	ANU	2011
International Economics	ECON3103	3	NE	ANU	2011
International Economics	ECON8015	pgrad	NE	ANU	2011

Subject Name	Code	Level	Area	University	Year
International Economics (H)	ECON3013	3	NE	ANU	2011
International Monetary Economics	ECON8009	pgrad	NE	ANU	2011
International Trade Theory	ECON8006	pgrad	NE	ANU	2011
Introduction to Analysis of Economic Models and Data	EMET7001	pgrad	NE	ANU	2011
Investment Decisions and Financial Systems	ENGN3211	3	NE	ANU	2011
Issues in Development Policy	IDEC8003	pgrad	DE	ANU	2011
Japanese Economy and Economic Policy	ECON2008	2	EH	ANU	2011
Japanese Economy and Economic Policy	ECON8008	pgrad	EH	ANU	2011
Labour Economics and Industrial Relations	ECON8041	pgrad	NE	ANU	2011
Labour Economics and Industrial Relations(H)	ECON2059	2	NE	ANU	2011
Labour Economics and Industrial Relations(P)	ECON2009	2	NE	ANU	2011
Law and Economics	ECON8047	pgrad	NE	ANU	2011
Law and Economics(H)	ECON2139	2	NE	ANU	2011
Law and Economics(P)	ECON2120	2	NE	ANU	2011
Macroeconomic Analysis and Policy	IDEC8002	pgrad	NE	ANU	2011
Macroeconomic Principles for Economic Policy	ECON7074	pgrad	NE	ANU	2011
Macroeconomics 1	ECON1102	1	NE	ANU	2011
Macroeconomics 2(H)	ECON2112	2	NE	ANU	2011
Macroeconomics 2(P)	ECON2102	2	NE	ANU	2011
Macroeconomics 3	ECON3102	3	NE	ANU	2011
Managerial Economics	ECON2014	2	NE	ANU	2011
Managerial Economics	ECON6014	pgrad	NE	ANU	2011
Masters Microeconomics	IDEC8064	pgrad	NE	ANU	2011
Mathematical Economics	ECON3121	3	NEM	ANU	2011
Mathematical Methods in Applied Economics	IDEC8015	pgrad	NEM	ANU	2011
Mathematics for Economists A	ECON2125	2	NEM	ANU	2011
Mathematics for Economists B	ECON2127	2	NEM	ANU	2011
Microeconomic Analysis and Policy	IDEC8016	pgrad	NE	ANU	2011
Microeconomic Principles for Economic Policy	ECON7073	pgrad	NE	ANU	2011
Microeconomics 1	ECON1101	1	NE	ANU	2011

Subject Name	Code	Level	Area	University	Year
Microeconomics 2(H)	ECON2111	2	NE	ANU	2011
Microeconomics 2(P)	ECON2101	2	NE	ANU	2011
Microeconomics 3	ECON3101	3	NE	ANU	2011
Modelling the Open Economy	ECON3054	3	NE	ANU	2011
Modelling the Open Economy	ECON8071	pgrad	NE	ANU	2011
Monetary Policy and Central Banking in the Asia Pacific	IDEC8012	pgrad	NE	ANU	2011
Money and Banking	ECON2026	2	NE	ANU	2011
Money, Power, War	POLS1004	1	HE	ANU	2011
Open Economy Macroeconomics, Finance, and Development	IDEC8008	pgrad	NE	ANU	2011
Optimisation Techniques for Economists	ECON2015	2	NEM	ANU	2011
Optimisation Techniques for Economists	ECON6015	pgrad	NEM	ANU	2011
Political Economy of Macroeconomic Policy	ECON3053	3	NE	ANU	2011
Principles of Public Economics	ECON8034	pgrad	NE	ANU	2011
Public Economics	ECON8010	pgrad	NE	ANU	2011
Public Economics - Theory (P)	ECON2131	2	NE	ANU	2011
Public Economics - Theory(H)	ECON2132	2	NE	ANU	2011
Quantitative International Economics	IDEC8010	pgrad	NE	ANU	2011
Resource & Environmental Economics	ECON8040	pgrad	NE	ANU	2011
Resource and Environmental Economics (H)	ECON2129	2	NE	ANU	2011
Resource and Environmental Economics (P)	ECON2128	2	NE	ANU	2011
Role of Financial Mkts & Instruments for Eco Mngt & Development	IDEC8083	pgrad	NE	ANU	2011
Southeast Asian Economic Policy and Development	ECON8049	pgrad	EH	ANU	2011
Southeast Asian Economic Policy and Development(H)	ECON3019	3	EH	ANU	2011
Southeast Asian Economic Policy and Development(P)	ECON3009	3	EH	ANU	2011
Special Topics in Economics	ECON3020	3	OPEN	ANU	2011
Strategic Thinking: An Introduction to Game Theory (H)	ECON2142	2	NE	ANU	2011
Strategic Thinking: An Introduction to Game Theory (P)	ECON2141	2	NE	ANU	2011
Sustainability and Ecological Economics	IDEC8004	pgrad	HE	ANU	2011
The Chinese Economy	IDEC8021	pgrad	EH	ANU	2011
The Economics of Incentives and Institutions	IDEC8081	pgrad	NE	ANU	2011

Subject Name	Code	Level	Area	University	Year
The Global Trading System	CRWF8011	pgrad	NE	ANU	2011
Topics in Economic Dynamics	ECON8001	pgrad	NE	ANU	2011
Trade, Development and the Asia Pacific Economy	IDEC8009	pgrad	NE	ANU	2011
Water Economics and Governance	CRWF8013	pgrad	NE	ANU	2011
Business Conditions Analysis	ECON13-302	3	NE	BND	2011
Business Maths	STAT11-100	1	NEM	BND	2011
Business Statistics	STAT11-111	1	NEE	BND	2011
Contemporary Issues in Economics	ECON70-042	pgrad	NE	BND	2011
Contemporary Macroeconomics Issues	ECON12-202	2	NE	BND	2011
Econometrics	ECON12-200	2	NEE	BND	2011
Economics for Business	ECON71-600	pgrad	NE	BND	2011
Elementary Maths	STAT10-100	1	NEM	BND	2011
Forecasting Techniques in Business	ECON70-041	pgrad	NEE	BND	2011
Game Theory and Decision Making	ECON70-040	pgrad	NE	BND	2011
Game Theory and Strategic Decision Making	ECON13-301	3	NE	BND	2011
Managerial Economics	ECON71-104	pgrad	NE	BND	2011
Markets and Corporate Behaviour	ECON12-201	2	NE	BND	2011
Money and Monetary Policy	ECON13-305	3	NE	BND	2011
Principles of Economics	ECON11-100	1	NE	BND	2011
Understanding the Economy	ECON10-100	1	NE	BND	2011
Industrial Relations	BUHRM 2602	2	NE	BRT	2011
Business Macroeconomics	BUECO 1508	1	NE	BRT	2011
Business Microeconomics	BUECO 1507	1	NE	BRT	2011
Comparative Economic Systems	BUECO 2617	2	CES	BRT	2011
Economic Policy in Australia	BUECO 3703	3	HE	BRT	2011
Economics Project	BUECO 3791	3	OPEN	BRT	2011
Innovation in Society Seminar	BUENT 1531	1	HE	BRT	2011
Research Dissertation (Honours Only)	BUHON 4001	4	OPEN	BRT	2011
Advanced Economics	ECO304	3	NE	CDU	2011
Chinese Political Economy and Business	L-PAC241	2	EH	CDU	2011

Subject Name	Code	Level	Area	University	Year
Economic Development Project	L-ECO320	3	DE	CDU	2011
Economic Policy in Society	L-ECO30	3	NE	CDU	2011
Economic Statistics	PRBE003	pgrad	NEE	CDU	2011
Economics Contemporary Issues 1	ECO210	2	OPEN	CDU	2011
Economics Contemporary Issues 2	ECO310	3	OPEN	CDU	2011
Economics for Managers	PRBE001	pgrad	NE	CDU	2011
Environmental Economics	L-ECO22	2	NE	CDU	2011
Government Finance and Economics	PRBG003	pgrad	NE	CDU	2011
Intermediate Macroeconomics	ECO202	2	NE	CDU	2011
Intermediate Microeconomics	ECO201	2	NE	CDU	2011
International Economics	L-ECO31	3	NE	CDU	2011
Introduction to Asia	L-PAC10	1	EH	CDU	2011
Introduction to Macroeconomics	ECO102	1	NE	CDU	2011
Introduction to Microeconomics	ECO103	1	NE	CDU	2011
Macroeconomics 1	L-ECO12	1	NE	CDU	2011
Managerial Economics and Strategy	L-ECO21	2	NE	CDU	2011
Microeconomics 1	L-ECO11	1	NE	CDU	2011
Public Health Decision Making	PHM554	pgrad	NE	CDU	2011
The Business Environment	CMA100	1	NE	CDU	2011
The Political Economy of East Asia	L-PAC12	1	DE	CDU	2011
Transport Economics	L-LGM260	2	NE	CDU	2011
Economics for Business	ECON20023	2	NE	CQU	2011
Economics of Electronic Commerce	ECON19035	1	NE	CQU	2011
Environmental Economics	ECON19031	1	NE	CQU	2011
Introduction to Economics	ECON11029	1	NE	CQU	2011
Macroeconomics	ECON19033	1	NE	CQU	2011
Principles of Economics	ECON11026	1	NE	CQU	2011
Property Economics	ECON19036	1	NE	CQU	2011
Business & the Macroeconomy	ECO125	1	NE	CSU	2011
Business Economics	ECO126	1	NE	CSU	2011

Subject Name	Code	Level	Area	University	Year
Business Economics	ECO130	1	NE	CSU	2011
Business Economics	ECO501	pgrad	NE	CSU	2011
Business Forecasting	ECO518	pgrad	NEE	CSU	2011
Contemporary Economic Issues	ECO355	3	NE	CSU	2011
Current Issues in Macroeconomics	ECO620	pgrad	NE	CSU	2011
Current Issues in Microeconomics	ECO610	pgrad	NE	CSU	2011
Economic Evaluation	ECO360	pgrad	NE	CSU	2011
Economic Evaluation	ECO517	pgrad	NE	CSU	2011
Economics for Business	ECO511	pgrad	NE	CSU	2011
Environmental Economics	ECO356	3	NE	CSU	2011
Forecasting for Business	ECO240	2	NEE	CSU	2011
Health Economics	ECO500	pgrad	NE	CSU	2011
Health Economics 1	ECO291	2	NE	CSU	2011
Information Economics and Globalisation	ECO520	pgrad	ECL	CSU	2011
International Economics	ECO320	3	NE	CSU	2011
International Economics	ECO503	pgrad	NE	CSU	2011
Labour Economics	ECO210	2	NE	CSU	2011
Macroeconomic Analysis	ECO220	2	NE	CSU	2011
Macroeconomics	ECO120	1	NE	CSU	2011
Managerial Economics	ECO515	pgrad	NE	CSU	2011
Managerial Economics for Business Strategy	ECO215	2	NE	CSU	2011
Microeconomics	ECO110	1	NE	CSU	2011
Public Sector Economics	ECO516	pgrad	NE	CSU	2011
Regional Sustainable Development	ECO330	3	ECL	CSU	2011
Building Cost and Construction 200	13323	2	NE	CTN	2011
Digital Business 349	307523	3	NE	CTN	2011
Econometrics (Introductory) 511	13503	pgrad	NEE	CTN	2011
Econometrics 200	10836	2	NEE	CTN	2011
Econometrics 300	11000	3	NEE	CTN	2011
Econometrics 513	13508	pgrad	NEE	CTN	2011

Subject Name	Code	Level	Area	University	Year
Economic Policy 302	9766	3	NE	CTN	2011
Economic Techniques 201	10815	2	NE	CTN	2011
Economic Theory 300	10540	3	NE	CTN	2011
Economics (Asian Development) 302	11998	3	DE	CTN	2011
Economics (Asian Development) 507	13510	pgrad	EH	CTN	2011
Economics (Growth and Fluctuations) 502	13504	pgrad	NE	CTN	2011
Economics (International) 569	10979	pgrad	NE	CTN	2011
Economics (Labour) 570	12460	pgrad	NE	CTN	2011
Economics (Macro) 571	12461	pgrad	NE	CTN	2011
Economics (Markets) 503	13506	pgrad	NE	CTN	2011
Economics (Micro) 566	10976	pgrad	NE	CTN	2011
Economics (Principles) 515	307795	pgrad	NE	CTN	2011
Economics (Public Finance) 568	10978	pgrad	NE	CTN	2011
Economics 100	1234	1	NE	CTN	2011
Economics 401	10517	4	NE	CTN	2011
Economics 402	10506	4	NE	CTN	2011
Economics 403	10816	4	NE	CTN	2011
Economics 404	10817	4	NE	CTN	2011
Economics 405	10818	4	NE	CTN	2011
Economics 406	10819	4	NE	CTN	2011
Environmental Economics 201	305408	2	NE	CTN	2011
Environmental Economics for Business 501	305580	pgrad	NE	CTN	2011
Global Money and Capital Markets 200	4561	2	HE	CTN	2011
International Economics 311	3414	3	NE	CTN	2011
International Financial Economics 302	10541	3	NE	CTN	2011
International Trade 501	13314	pgrad	NE	CTN	2011
International Trade and Banking 305	11039	3	NE	CTN	2011
Macroeconomics 200	11001	2	NE	CTN	2011
Macroeconomics 300	9792	3	NE	CTN	2011
Mathematical Economics 301	6966	3	NEM	CTN	2011

Subject Name	Code	Level	Area	University	Year
Mathematical Economics 501	13507	pgrad	NEM	CTN	2011
Microeconomics 200	8931	2	NE	CTN	2011
Property Economics 200	13322	2	NE	CTN	2011
Property Economics 550	6882	pgrad	NE	CTN	2011
Property Market Analysis 200	10858	2	NE	CTN	2011
Public Economics 312	3415	3	NE	CTN	2011
Strategic Games 201	305291	2	NE	CTN	2011
Tourism Economics 202	12600	2	NE	CTN	2011
Tourism Economics 502	13311	pgrad	NE	CTN	2011
Advanced Issues in Economics	MAE403	4	NE	DKN	2011
Analysis of Markets	MAE720	pgrad	NE	DKN	2011
Analytical Methods in Economics and Finance	MAF356	pgrad	NEE	DKN	2011
Applied Econometrics for Economics and Finance	MAE306	3	NEE	DKN	2011
Building Economics	SRE270	2	NE	DKN	2011
Competition and Industry	MAE201	2	NE	DKN	2011
Economic Principles	MAE101	1	NE	DKN	2011
Economic Strategy for Business	MAE314	3	NE	DKN	2011
Economics for Managers	MPE781	pgrad	NE	DKN	2011
Economics for Managers	MPE981	pgrad	NE	DKN	2011
Health Economics 1	HS717	pgrad	NE	DKN	2011
International Banking and Finance	MPE707	pgrad	NE	DKN	2011
International Banking and Finance	MPE907	pgrad	NE	DKN	2011
International Business Economics	MAE317	3	NE	DKN	2011
International Industry Policy	MAE207	2	NE	DKN	2011
International Trade	MAE303	3	NE	DKN	2011
International Trade and Policy	MAE704	pgrad	NE	DKN	2011
Labour Economics	MAE304	3	NE	DKN	2011
Macroeconomic Theory and Policy	MAE413	4	NE	DKN	2011
Macroeconomics of Open Economies	MAE302	3	NE	DKN	2011
Microeconomic Theory and Policy	MAE301	3	NE	DKN	2011

Subject Name	Code	Level	Area	University	Year
Money, Business and the Economy	MAE722	pgrad	NE	DKN	2011
National Economic Policy	MAE202	2	NE	DKN	2011
Scheme Assessment and Economics	MPM741	pgrad	NE	DKN	2011
Strategic Management Accounting	MAA744	pgrad	NE	DKN	2011
The Economics of the Environment	MAE322	3	NE	DKN	2011
The Global Economy	MAE102	1	NE	DKN	2011
Business Economics	MBA5717	pgrad	NE	ECU	2011
Business Economics	MBA5718	pgrad	NE	ECU	2011
Business Economics II	ECF2380	ugrad	NE	ECU	2011
Econometrics	ECF5161	pgrad	NEE	ECU	2011
Economics for Planning and Development	ECF3602	ugrad	NE	ECU	2011
Economics I	ECF1110	ugrad	NE	ECU	2011
Economics of Business Consulting	ECF3601	ugrad	NE	ECU	2011
Economics of Work and Pay	ECF3600	ugrad	NE	ECU	2011
Economics, Accounting and Finance	HST5503	pgrad	NE	ECU	2011
Environmental Economics	ECF3603	ugrad	NE	ECU	2011
Environmental Economics	SCI5119	pgrad	NE	ECU	2011
Finance for Business Decisions	MBA5600	pgrad	NE	ECU	2011
Finance for Business Decisions	MBA5716	pgrad	NE	ECU	2011
International Economics and Finance	ECF5324	pgrad	NE	ECU	2011
International Economics and Finance III	ECF3221	ugrad	NE	ECU	2011
Principles of Economics	ECF5600	pgrad	NE	ECU	2011
Quantitative Studies	ECF5661	pgrad	NEM	ECU	2011
Sport and Leisure Economics and Finance II	SPM2114	ugrad	NE	ECU	2011
Advanced Macro-Economics	30401	4	NE	FLS	1980
Advanced Micro-Economics	30402	4	NE	FLS	1980
Alternative Approaches In Economics: Marxian, Radical New Left And Other	30312	3	HE	FLS	1980
American ECORomic Development-(6 units) First half-year	31302	3	EH	FLS	1980
Australian Economic Development-(6 units) Second half-year	31301	3	EH	FLS	1980
Comparative Economic Systems	30308	3	CES	FLS	1980

Subject Name	Code	Level	Area	University	Year
Econometrics	30309	3	NEE	FLS	1980
Economic Development	30302	3	DE	FLS	1980
Economic Growth in Western Europe-Second half-year	31401	4	EH	FLS	1980
Economic Statistics A	30203	2	NEE	FLS	1980
Economic Statistics B	30204	2	NEE	FLS	1980
Economics 1	30110	1	ECL	FLS	1980
Honours Economics Special Sequence	30411	4	Open	FLS	1980
Honours Economics Special Topics	30406	4	Open	FLS	1980
Industrial Organisation	30304	3	NE	FLS	1980
International Economics	30301	3	NE	FLS	1980
Japanese Economic Development-(6 units) Second half-year	31205	2	EH	FLS	1980
Labour Theory and History-Second half-year	31404	4	EH	FLS	1980
Macro-Economics	30201	2	NE	FLS	1980
Mathematical Economics	30311	3	NEM	FLS	1980
Micro-economic History-Second half-year	31402	4	EH	FLS	1980
Micro-Economics	30202	2	NE	FLS	1980
Reading Seminar	30409	4	Open	FLS	1980
The Economics Of Labour	30303	3	NE	FLS	1980
The Origins of Economic Development: the British Case-(6 units) 31205	31202	2	EH	FLS	1980
Thesis Of Not More Than 15 000 Words	30430	4	Open	FLS	1980
Business Forecasting	BUSN2031	2	NEE	FLS	2011
Economics for Business	BUSN1013	1	NE	FLS	2011
Economics for Business	BUSN9017	pgrad	NE	FLS	2011
Economics for Business	BUSN9116	pgrad	NE	FLS	2011
Economics for Business	BUSN9230	pgrad	NE	FLS	2011
Environmental Economics	BUSN3057	3	NE	FLS	2011
Foundation: Quantitative Methods	BUSN1016	1	NEM	FLS	2011
Import-Export Theory and Practice	BUSN3037	3	NE	FLS	2011
Introductory Macroeconomics	BUSN1008	1	NE	FLS	2011
Macroeconomics	BUSN2040	2	NE	FLS	2011

Subject Name	Code	Level	Area	University	Year
Managerial Economics	BUSN2043	2	NE	FLS	2011
Quantitative Methods	BUSN1009	1	NEM	FLS	2011
Quantitative Methods	BUSN9115	pgrad	NEM	FLS	2011
Sustainable Resource Management	BUSN2024	2	NE	FLS	2011
Economic Problems And Analysis	A1235	1	NE	GRH	1980
Economics	A1242	1	HET	GRH	1980
Economy And Society In Capitalist Development	H1219	1	EH	GRH	1980
Introduction To Economics And International Relations In Asia	A1113	1	EH	GRH	1980
Macro-Economic Policy Evaluation	E1212	1	NE	GRH	1980
Micro-Economic Policy	E2126	2	NE	GRH	1980
Pre-Industrial Economy And Society	H1309	3	EH	GRH	1980
Resource Allocation	E1210	1	NE	GRH	1980
The Indonesian Economy In Its Sociopolitical Environment 1	A1291	1	EH	GRH	1980
The Indonesian Economy In Its Sociopolitical Environment 11	A1292	1	EH	GRH	1980
The Japanese Economy In Its Socio-Political Environment I	A1271	1	EH	GRH	1980
Theories Of The Economy	H1310	3	HE	GRH	1980
Topics In Asian Economic Development	A2142	2	DE	GRH	1980
Advanced Macroeconomics	6304AFE	pgrad	NE	GRH	2011
Advanced Microeconomics	6305AFE	pgrad	NE	GRH	2011
Applied Econometrics	3305AFE	3	NEE	GRH	2011
Aviation Economics	7503BPS	pgrad	NE	GRH	2011
Business Economics	7902AFE	pgrad	NE	GRH	2011
Chinese Polit Econ & Business	2001IBA	2	EH	GRH	2011
Climate C & E R Strategy	2307AFE	2	NE	GRH	2011
Ecological Economics	3351ENV	3	HE	GRH	2011
Econometric Methods	7310AFE	pgrad	NEE	GRH	2011
Economic Analysis & Policy	2003IBA	2	NE	GRH	2011
Economics	7303AFE	pgrad	NE	GRH	2011
Economics & Natural Resources	2281ENV	2	NE	GRH	2011
Economics for Dec Making	1303AFE	1	NE	GRH	2011

Subject Name	Code	Level	Area	University	Year
Economics for Dec Making 2	2303AFE	2	NE	GRH	2011
Economics in Action	1002IBA	1	NE	GRH	2011
Economics Internship	3301AFE	3	OPEN	GRH	2011
Economics within Airlines	3513BPS	3	NE	GRH	2011
Environmental Economics	7401ENV	pgrad	NE	GRH	2011
Environmental Economics & Pol	1161ENV	1	NE	GRH	2011
Financial Economics	3306AFE	3	NE	GRH	2011
Globalisation Asia-Pac & Aust	1003IBA	1	EH	GRH	2011
Health Economics	3308AFE	3	NE	GRH	2011
Health Economics	7307PBH	pgrad	NE	GRH	2011
Intermediate Macroeconomics	2304AFE	2	NE	GRH	2011
Intermediate Microeconomics	2305AFE	2	NE	GRH	2011
International Economics	3307AFE	3	NE	GRH	2011
Microecon of Business Strategy	2002IBA	2	NE	GRH	2011
Monetary Economics	3302AFE	3	NE	GRH	2011
Public Economics	3303AFE	3	NE	GRH	2011
Trade Invest&Econ Pol in Asia	7004IBA	pgrad	NE	GRH	2011
Urban/Regional Economics	7217ENV	pgrad	NE	GRH	2011
Water Resource Economics	3352ENV	3	NE	GRH	2011
Applied Econometrics	EC351:090	3	NEE	JCU	1980
Applied Social Statistics	EC151:045	1	NEM	JCU	1980
Applied Statistical Methods	EC253:060	2	NEE	JCU	1980
Comparative Economics A	EC130:045	1	CES	JCU	1980
Comparative Economics B	EC230:060	2	CES	JCU	1980
Comparative Economics C	EC330:090	3	CES	JCU	1980
Economic Analysis & Public Policy	EC321:090	3	ECL	JCU	1980
Economic Theory A	EC490:060	4	NE	JCU	1980
Economic Theory B	EC491:060	4	NE	JCU	1980
Economic Theory C	EC492:060	4	NE	JCU	1980
Economics and Resources	EC261:060	2	NE	JCU	1980

Subject Name	Code	Level	Area	University	Year
Economics and Social Choice	EC430:045	4	NE	JCU	1980
Economics and the Environment	EC260:060	2	NE	JCU	1980
Economics for Engineers	EC420:030	4	NE	JCU	1980
Fiscal Federalism	EC320:090	3	NE	JCU	1980
Government and the Economy	EC120:045	1	ECL	JCU	1980
International Trade and Payments	EC212:060	2	NE	JCU	1980
Macroeconomic Policy	EC310:090	3	NE	JCU	1980
Macroeconomics A	EC110:045	1	NE	JCU	1980
Macroeconomics B	EC210:060	2	NE	JCU	1980
Methods of Social Statistics	EC150:045	1	NEM	JCU	1980
Microeconomics A	EC 100: 045	1	NE	JCU	1980
Microeconomics B	EC200:060	2	NE	JCU	1980
Microeconomics C	EC300: 090	3	NE	JCU	1980
Modern Public Economics	EC220:060	2	NE	JCU	1980
Quantitative Economics	EC493:060	4	NEM	JCU	1980
Regional Economics and Policy	EC363:090	3	NE	JCU	1980
Resources Planning and Policy	EC362:090	3	NE	JCU	1980
Statistics and Econometrics	EC251:060	2	NEE	JCU	1980
Thesis for Honours in Economics	EC494: 180	4	OPEN	JCU	1980
Business Economics	EC5103:03	pgrad	NE	JCU	2011
Case Studies in Applied Economics and Finance	EC5214:03	ugrad	NE	JCU	2011
Contemporary Economic Policy and Social Welfare	BX3024:03	ugrad	NE	JCU	2011
Econometrics	BX3022:03	ugrad	NEE	JCU	2011
Economic Decision-Making in the Hospitality Industry	TO5202:03	pgrad	NE	JCU	2011
Economic Growth and Labour Market	EC5205:03	pgrad	NE	JCU	2011
Economic Growth and Regional Development	BX3023:03	ugrad	NE	JCU	2011
Economics for Business	BU1003:03	ugrad	NE	JCU	2011
Economics for Managers	LB5003:03	pgrad	NE	JCU	2011
Engineering Economics	EG4000:03	ugrad	NE	JCU	2011
Environmental Economics	EV5003:03	pgrad	NE	JCU	2011

Subject Name	Code	Level	Area	University	Year
Introduction to Environmental Economics	EV2003:03	ugrad	NE	JCU	2011
Macroeconomic Policy	BX2022:03	pgrad	NE	JCU	2011
Macroeconomic Policy	EC5206:03	pgrad	NE	JCU	2011
Managerial Economics	BX2021:03	ugrad	NE	JCU	2011
Managerial Economics	EC5204:03	pgrad	NE	JCU	2011
Microeconomic Policy	EC5207:03	pgrad	NE	JCU	2011
Personnel Economics	BX3053:03	ugrad	NE	JCU	2011
Public Health Economics	TM5526:03	pgrad	NE	JCU	2011
Introduction to econometrics	ECONOMETRICS I IE	1	NEE	LTU	1980
advanced economic theory	ECONOMICS IV AT	4	NE	LTU	1980
applied microeconomics	ECONOMICS IV AM	4	NE	LTU	1980
case studies in development	ECONOMICS II DS	2	DE	LTU	1980
comparative economic history of US and USSR	ECONOMIC HISTORY II EH	2	EH	LTU	1980
Comparative Economic Systems	ECONOMICS III CS	3	CES	LTU	1980
econometric models and stabilisation	ECONOMETRICS IV EK	4	NEE	LTU	1980
econometrics	ECONOMETRICS 111 EK	3	NEE	LTU	1980
econometrics	ECONOMETRICS III LT	3	NEE	LTU	1980
econometrics	ECONOMETRICS V AE	5	NEE	LTU	1980
economic and Information systems	ECONOMICS II IS	2	NE	LTU	1980
economic change In the very long-term	ECONOMIC HISTORY IV AH	4	EH	LTU	1980
economic development	ECONOMICS II ED	2	DE	LTU	1980
economic development	ECONOMICS IV ED	4	DE	LTU	1980
economic history	ECONOMIC HISTORY III AH	3	EH	LTU	1980
economic policy	ECONOMICS V EP	5	NE	LTU	1980
economic principles and policy	ECONOMICS IV PP	4	NE	LTU	1980
economic statistics	ECONOMETRICS II ES	2	NEE	LTU	1980
economic systems simulation	ECONOMICS II SS/III SS	2	NE	LTU	1980
economic theories of the firm	ECONOMICS III TF	3	NE	LTU	1980
environmental economics	ECONOMICS II EE/III EE	2	NE	LTU	1980
history of economic theory	ECONOMICS IV TE	4	HET	LTU	1980

Subject Name	Code	Level	Area	University	Year
history of economic thought	ECONOMICS III HT	3	HET	LTU	1980
industrial econometrics	ECONOMETRICS 111 IE	3	NEE	LTU	1980
industrial economics	ECONOMICS II IE	2	NE	LTU	1980
Industrial relations	ECONOMICS II IR	2	NE	LTU	1980
Inflation and the labour market	ECONOMICS III IL	3	NE	LTU	1980
International monetary economics	ECONOMICS III IM	3	NE	LTU	1980
introduction to macroeconomic theory	ECONOMICS I MA	1	NE	LTU	1980
introduction to microeconomic theory	ECONOMICS I MI	1	NE	LTU	1980
introductory mathematics for economists	ECONOMICS II IM	2	NEM	LTU	1980
labour market economics	ECONOMICS III LE	3	NE	LTU	1980
late pre-industrial economies	ECONOMIC HISTORY III PH	3	EH	LTU	1980
location and transport economics	ECONOMICS II LT/III LT	2	NE	LTU	1980
macroeconomic theory	ECONOMICS III MAH	3	NE	LTU	1980
macroeconomics	ECONOMICS II MA	2	NE	LTU	1980
macroeconomics	ECONOMICS III MA	3	NE	LTU	1980
macrotheory and macroplanning	ECONOMICS V TP	5	NE	LTU	1980
managerial economics and accounting	ECONOMICS II EM	2	NE	LTU	1980
Marxian economics	ECONOMICS III MX	3	HE	LTU	1980
mathematical economics	ECONOMETRICS II ME	2	NEM	LTU	1980
mathematical economics	ECONOMETRICS III ME	3	NEM	LTU	1980
mathematical economics	ECONOMETRICS IV ME	4	NEM	LTU	1980
microeconomic theory	ECONOMICS 11 MI	2	NE	LTU	1980
microeconomic theory	ECONOMICS 111 MIH	3	NE	LTU	1980
microeconomics	ECONOMICS III MI	3	NE	LTU	1980
operations research	ECONOMETRICS 111 OR	3	NEM	LTU	1980
planning techniques and methods	ECONOMICS V TM	5	NE	LTU	1980
Population & Labour force growth and structure Aus, Canada and the US from 1800	ECONOMICS III PC	3	EH	LTU	1980
pure theory of trade	ECONOMICS III PT	3	NE	LTU	1980
Quantative Decisiion Making	ECONOMICS II BD	2	NEM	LTU	1980
quantitative methods	ECONOMICS I QM	1	NEM	LTU	1980

Subject Name	Code	Level	Area	University	Year
the Chinese economy and its modernisation	ECONOMICS III CE	3	EH	LTU	1980
the economic development of Europe, 1780-1914	ECONOMIC HISTORY III EH	3	EH	LTU	1980
the economic history of Australia since 1788	ECONOMIC HISTORY II AH	2	EH	LTU	1980
the origins of industrialism	ECONOMICS V EH	5	EH	LTU	1980
the origins of modern Industrial society	ECONOMIC HISTORY I EH	1	EH	LTU	1980
the theory of social choice	ECONOMICS III SC	3	NE	LTU	1980
theories of economic growth	ECONOMICS V EG	5	NE	LTU	1980
theories of income distribution	ECONOMICS III ID	3	NE	LTU	1980
urban economics	ECONOMICS II UE/III UE	2	NE	LTU	1980
Advanc Time-Series Econom	ECO4ATE	4	NEE	LTU	2011
Advanc Time-Series Econometrics	ECO3ATE	3	NEE	LTU	2011
Advanced Quantitative Ana	ECO4AQA	4	NEM	LTU	2011
Advanced Quantitative Analysis	ECO3AQA	3	NEE	LTU	2011
Agricultural Business Man	ECO2ABM	2	NE	LTU	2011
App Economic Analysis 3	ECO3AEA	3	NE	LTU	2011
App Microeco Analysis 3	ECO3AMA	3	NE	LTU	2011
Applied Forecasting	ECO2AFE	2	NEE	LTU	2011
Asia In The World Economy	ECO3AWE	3	NE	LTU	2011
Asian-Aust Trade Issues	ECO3ATI	3	NE	LTU	2011
Busins Analysis And Simul	ECO3BAS	3	NEM	LTU	2011
Central Banks & Monetary	ECO3CBP	3	NE	LTU	2011
Comp Approaches In Contem	ECO3CAE	3	HE	LTU	2011
Comp Approaches In Contem	ECO4CAE	4	HE	LTU	2011
Comp Economic Systems	ECO3CES	3	CES	LTU	2011
Cost-Benefit Analysis	ECO3CBA	3	NE	LTU	2011
Decisn Analys With Spread	ECO3DAS	3	NEM	LTU	2011
Directed Readings	ECO3DRE	3	OPEN	LTU	2011
Directed Readings	ECO4DRE	4	OPEN	LTU	2011
Econometric Methods	ECO2EME	2	NEE	LTU	2011
Economic Analysis Of Law	ECO2ILE	2	NE	LTU	2011

Subject Name	Code	Level	Area	University	Year
Economic Growth And Devel	ECO2EGD	2	DE	LTU	2011
Economic Policy	ECO4ECP	4	NE	LTU	2011
Economics Of Everyday Life	ECO2EEL	2	NE	LTU	2011
Economics Of Human Resour	ECO2EHR	2	NE	LTU	2011
Env. & Resource Economics	ECO2ERE	2	NE	LTU	2011
Envir &Res. Econ	ECO3ERE	3	NE	LTU	2011
Global Environmental Issu	ECO2GEI	2	NE	LTU	2011
Globalisation	ECO2GLO	2	NE	LTU	2011
Gov't & The Economy	ECO2GE	2	NE	LTU	2011
Growth And Decline	ECO3GDE	3	EH	LTU	2011
Growth And Decline In The Global Economy	ECO4GDE	4	EH	LTU	2011
Health Economics	ECO3HEC	3	NE	LTU	2011
History Of Globalisation	ECO1HOG	1	EH	LTU	2011
Industrial Economics 2	ECO2IE2	2	NE	LTU	2011
Industrial Organisation	ECO3IND	3	NE	LTU	2011
Industrial Organisation	ECO4ITA	4	NE	LTU	2011
Industrial Relations	ECO3IRE	3	HE	LTU	2011
Intermd Statistics For Bu	ECO2ISB	2	NEE	LTU	2011
Intermediate Eco Theory 2	ECO2IET	2	NE	LTU	2011
Intermediate Micro	ECO2IM	2	NE	LTU	2011
Internat. Busines Environ	ECO3IBC	3	NE	LTU	2011
International Eco	ECO3IE	3	NE	LTU	2011
International Monetary Econ	ECO3IME	3	NE	LTU	2011
International Trade	ECO3ITR	3	NE	LTU	2011
International Trade	ECO4ITR	4	NE	LTU	2011
Internatnal Busines Envir	ECO2IBE	2	NE	LTU	2011
Internatnal Monetary Ec	ECO4IME	4	NE	LTU	2011
Intro To Bus Stats 1	ECO1IBS	1	NEE	LTU	2011
Intro To Quantitative Analysis	ECO2IQA	2	NEM	LTU	2011
Intro To Time-Series Econ	ECO3ITE	3	NEE	LTU	2011

Subject Name	Code	Level	Area	University	Year
Intro. Statistics For Bus	ECO1ISB	1	NEE	LTU	2011
Macroeconomic Analysis	ECO3MAA	3	NE	LTU	2011
Macroeconomic Theory	ECO2MAT	2	NE	LTU	2011
Macroeconomics	ECO1IMA	1	NE	LTU	2011
Macroeconomics	ECO4MAE	4	NE	LTU	2011
Managerial Economics	ECO2MEC	2	NE	LTU	2011
Marketing Economics	ECO3MKE	3	NE	LTU	2011
Microeconometrics	ECO3MES	3	NEE	LTU	2011
Microeconometrics	ECO4MES	4	NE	LTU	2011
Microeconomic Analysis	ECO3MIA	3	NE	LTU	2011
Microeconomic Theory	ECO2MIT	2	NE	LTU	2011
Microeconomics	ECO1IMI	1	NE	LTU	2011
Microeconomics	ECO4MIE	4	NE	LTU	2011
Model Austn Macroeconomic	ECO3MAM	3	NE	LTU	2011
Model Austn Macroeconomic	ECO4MAM	4	NE	LTU	2011
Modern World Economy	ECO2MWE	2	EH	LTU	2011
Monetary Economics	ECO3MNE	3	NE	LTU	2011
Monetary Economics	ECO4MNE	4	NE	LTU	2011
Money And Banking	ECO3MB	3	NE	LTU	2011
Org, Economics And Incent	ECO3OEI	3	NE	LTU	2011
Org, Economics And Incent	ECO4OEI	4	NE	LTU	2011
Pg Dip Eco Thesis Pt B	ECO4PGB	4	NE	LTU	2011
Politics And The Economy	POL2PAE	2	HE	LTU	2011
Politics And The Economy	POL3PAE	3	HE	LTU	2011
Principles Of Economics	ECO5POE	pgrad	NE	LTU	2011
Public Economics	ECO3PUB	3	NE	LTU	2011
Public Policy	ECO4PPO	4	NE	LTU	2011
Public Policy And Its Imp	ECO3PPI	3	NE	LTU	2011
Public Policy And Its Imp	ECO4PPI	4	NE	LTU	2011
Sports Economics	ECO3EOS	3	NE	LTU	2011

Subject Name	Code	Level	Area	University	Year
Statists For Busines & Fi	ECO5SBF	pgrad	NEE	LTU	2011
Stratgic Behavr In Bus &	ECO2SBE	2	NE	LTU	2011
Sustain. Growth & Dev	ECO3SGD	3	NE	LTU	2011
Sustainability In Global Business	ECO1SGB	1	NE	LTU	2011
The Rise Of The American Economy	ECO3RAE	3	EH	LTU	2011
Advanced Econometrics	316-472	4	NEE	MELB	1980
Advanced Urban Economic Studies	321-461.	4	NE	MELB	1980
Advanced Urban Economic Studies	321-480	4	NE	MELB	1980
Australian Economic History	326-201.	2	EH	MELB	1980
Comparative Economic Systems		3	CES	MELB	1980
Development Of The United States	326-302	3	EH	MELB	1980
Econometrics	316-322.	3	NEE	MELB	1980
Economic Development In Latin America	326-303	3	EH	MELB	1980
Economic Principles	316-261.	2	NE	MELB	1980
Economic Principles	316-480.	4	NE	MELB	1980
Economics A	316-101	1	NE	MELB	1980
Economics B	316-201	2	NE	MELB	1980
Economics C1 International Economics	316-301.	3	NE	MELB	1980
Economics C11 Marxian Economics	316-311	3	HE	MELB	1980
Economics C12 Macroeconomics	316-312	3	NE	MELB	1980
Economics C13 Microeconomics	316-313.	3	NE	MELB	1980
Economics C14 International Economics	316-314.	3	NE	MELB	1980
Economics C15 Capital And Distribution Theory	316-315.	3	NE	MELB	1980
Economics C16 Quantitative Methods	316-316.	3	NEM	MELB	1980
Economics C2 Economic Development	316-302.	3	DE	MELB	1980
Economics C3 Industrial Economics	316-303.	3	NE	MELB	1980
Economics C4 Social Economics	316-304	3	NE	MELB	1980
Economics C7 Labour Economics	316-307.	3	NE	MELB	1980
Economics C9 Agricultural Economics	316-309.	3	NE	MELB	1980
Economics D2 Public Economics And Welfare	316-462.	4	NE	MELB	1980

Subject Name	Code	Level	Area	University	Year
Economics D3 Development Economics	316-463.	4	DE	MELB	1980
Economics D4 Marxian Economics	316-464.	4	HE	MELB	1980
Economics D5 Labour Studies	316-465.	4	NE	MELB	1980
Economics D6 Monetary Economics	316-466	4	NE	MELB	1980
Economics D7 Microeconomic Analysis And Policy	316-467	4	NE	MELB	1980
Economics Planning D1 Economic Policy And Planning	316-461.	4	NE	MELB	1980
Economics Research Essay	316-475.	4	OPEN	MELB	1980
Economy And Society	326-101.	1	EH	MELB	1980
History Of Economic Thought	326-304	3	EH	MELB	1980
Mathematical Economics	316-323	3	NEM	MELB	1980
Methodology Of Economic History	326-470.	4	EH	MELB	1980
Regional Development In Asia	321-202.	2	DE	MELB	1980
Research Methods In Economics	316-481.	4	NE	MELB	1980
Special Topics In Economic History	326-480	4	EH	MELB	1980
Statistical Method	316-202	2	NEE	MELB	1980
Tradition And Development In Asia	326-301	3	EH	MELB	1980
Advanced Econometric Techniques	ECOM90005	Masters	NEE	MELB	2011
Advanced Econometric Techniques 2	ECOM90014	Masters	NEE	MELB	2011
Advanced Macroeconomics	ECON40002	4	NE	MELB	2011
Advanced Microeconomics	ECON40001	4	NE	MELB	2011
Advanced Policy Analysis	ECON90051	Masters	NE	MELB	2011
Applied Microeconometric Modelling	ECOM30003/90003	3	NEE	MELB	2011
Australian Economic History	ECON20008	2	EH	MELB	2011
Basic Econometrics	ECOM30001	3	NEE	MELB	2011
Basic Econometrics	ECOM90001	Masters	NEE	MELB	2011
Bayesian Econometrics	ECOM40002/90010	Masters	NEE	MELB	2011
Behavioural Economics	ECON30019	3	MPN	MELB	2011
Business Economics & e-Commerce	ECON20006	2	NE	MELB	2011
Competition and Strategy	ECON20005	2	NE	MELB	2011
Econometric Techniques	ECOM40006/90013	4	NEE	MELB	2011

Subject Name	Code	Level	Area	University	Year
Econometrics	ECOM30002	3	NEE	MELB	2011
Econometrics	ECOM90002	Masters	NEE	MELB	2011
Economic Design	ECON40006/90028	Masters	NE	MELB	2011
Economic Development	ECON30002	3	DE	MELB	2011
Economics for Public Policy	ECON90029	Masters	NE	MELB	2011
Economics of Finance	ECON90034	Masters	NE	MELB	2011
Economics of Financial Markets	ECON30024	3	NE	MELB	2011
Economics of Food	ECON30007 / AGRI40015	3	DE	MELB	2011
Economics of the Law	ECON30018	3	NE	MELB	2011
Economics Research Essay	ECON40016	Masters	OPEN	MELB	2011
Economics Research Report	ECON90007	Masters	OPEN	MELB	2011
Economics Thesis Workshop	ECON90030	PhD	OPEN	MELB	2011
Economics Thesis Workshop	ECON90059	Masters	OPEN	MELB	2011
Environmental Economics	ECON30011	3	NE	MELB	2011
Environmental Economics & Strategy	ECON90016	Masters	NE	MELB	2011
Experimental Economics	ECON30022	3	MPN	MELB	2011
Foundations of Managerial Economics	ECON90015	Masters	NE	MELB	2011
Game Theory	ECON40010/90022	Masters	NE	MELB	2011
Globalisation & the World Economy	ECON20007	2	EH	MELB	2011
Government & International Business	ECON90025	Masters	NE	MELB	2011
Health Economics	ECON30023	3	NE	MELB	2011
History of Economic Thought	ECON30008	3	HET	MELB	2011
Industrial Economics	ECON30003	3	NE	MELB	2011
Intermediate Macroeconomics	ECON20001	2	NE	MELB	2011
Intermediate Microeconomics	ECON20002	2	NE	MELB	2011
International Trade	ECON40003/90019	Masters	NE	MELB	2011
International Trade Policy	ECON30001	3	NE	MELB	2011
Introductory Econometrics	ECOM20001	2	NEE	MELB	2011
Introductory Macroeconomics	ECON10003	1	NE	MELB	2011
Introductory Microeconomics	ECON10004	1	NE	MELB	2011

Subject Name	Code	Level	Area	University	Year
Labour Economics	ECON40008/90013	Masters	NE	MELB	2011
Macroeconomic Techniques	ECON40005/90021	Masters	NE	MELB	2011
Macroeconomics	ECON30009	3	NE	MELB	2011
Macroeconomics	ECON90003	Masters	NE	MELB	2011
Macroeconomics 2	ECON90047	Masters	NE	MELB	2011
Macroeconomics 3	ECON90048	Masters	NE	MELB	2011
Macroeconomics for Managers	ECON90032	Masters	NE	MELB	2011
Macroeconomics II	ECON90014	Masters	NE	MELB	2011
Mathematical Economics	ECON30020	3	NEM	MELB	2011
Mathematics for Economists	ECON40017/90053	Masters	NEM	MELB	2011
Microeconometrics	ECOM40001/90008	Masters	NEE	MELB	2011
Microeconomics	ECON30010	3	NE	MELB	2011
Microeconomics	ECON90002	Masters	NE	MELB	2011
Microeconomics 2	ECON90045	Masters	NE	MELB	2011
Microeconomics 3	ECON90046	Masters	NE	MELB	2011
Microeconomics II	ECON90012	Masters	NE	MELB	2011
Monetary Economics	ECON40013/90011	Masters	NE	MELB	2011
Money and Banking	ECON30005	3	NE	MELB	2011
Organisations Economics and Incentive	ECON30017	3	NE	MELB	2011
Philosophy, Politics and Economics	MULT10008	1	HE	MELB	2011
Political Economy	POLS20031	2	HE	MELB	2011
Quantitative Decision Making 2	ECON90049	Masters	NEM	MELB	2011
Quantitative Decision Making 3	ECON90050	Masters	NEM	MELB	2011
Quantitative Methods 1	ECON10005	1	NEM	MELB	2011
Quantitative Methods 2	ECON20003	2	NEM	MELB	2011
Quantitative Methods for Business	ECOM90009	Masters	NEM	MELB	2011
Seminar in Economics and Commerce A	ECON10002	1	NE	MELB	2011
Special Topics in Advanced Econometrics	ECOM90006	Masters	NEE	MELB	2011
The Economics of Taxation	ECON30016	3	NE	MELB	2011
Time Series Analysis and Forecasting	ECOM30004/90004	3	NEE	MELB	2011

Subject Name	Code	Level	Area	University	Year
Linear Programming	E0250	2	NEE	MON	1980
Agricultural Economic Development	EC474	4	DE	MON	1980
Agricultural Economics	EC274	2	NE	MON	1980
Agricultural Marketing	EC375	3	NE	MON	1980
Agricultural Policy	EC374	3	NE	MON	1980
Applied Econometric Modelling	E0343	3	NEE	MON	1980
Applied Econometrics	E0341	3	NEE	MON	1980
Applied Urban Analysis	EC478	4	NE	MON	1980
Aspects of Tax Policy	EC481	4	NE	MON	1980
Australian Economic History in the 19th Century	EH256	2	EH	MON	1980
Benefit-Cost Analysis	EC579	5	NE	MON	1980
British and Australian Labour History	EH335	3	EH	MON	1980
Capital and Growth	EC568	5	NE	MON	1980
Capitalism: Contrasting Views	EC282	2	HE	MON	1980
Comparative Economic Systems	EC382	3	CES	MON	1980
Comparative Labour Policy	EC472	4	CES	MON	1980
Competition and Regulation	EC383	3	NE	MON	1980
Computer Methods	E0251	2	NEE	MON	1980
Contemporary Socialist Systems	EC482	4	CES	MON	1980
Econometric Theory	E0340	3	NEE	MON	1980
Economic and Social Issues	EC288	2	NE	MON	1980
Economic Growth	EC268	2	NE	MON	1980
Economic Growth	EC368	3	HE	MON	1980
Economic History	EH101	1	EH	MON	1980
Economic History	EH402	4	EH	MON	1980
Economic History (honours)	EH360	4	EH	MON	1980
Economic History of Nazi Germany	EH358	3	EH	MON	1980
Economic Statistics	EC402	4	NEE	MON	1980
Economic Statistics	EC101	1	NEE	MON	1980
Economic Statistics (Honours)	E0347	4	NEE	MON	1980

Subject Name	Code	Level	Area	University	Year
Economics	EC101	1	NE	MON	1980
Economics	EC109	1	NE	MON	1980
Economics	EC201	2	NE	MON	1980
Economics Honours	EC385	3	OPEN	MON	1980
Economics of Developing Countries	EC367	3	DE	MON	1980
Economy and Society in Australia 1900-78	EH259	2	EH	MON	1980
Education and Manpower	EC379	3	NE	MON	1980
Elementary Econometrics	E0240	2	NEE	MON	1980
Hedging and Uncertainty	EC582	5	NE	MON	1980
History of Economic Doctrine	EC480	4	HET	MON	1980
History of Economic Thought	EC380	3	HET	MON	1980
Income Distribution	EC272	2	HE	MON	1980
Income Distribution	EC372	3	NE	MON	1980
Income Distribution Theory	EC571	5	NE	MON	1980
Industry and Government	EC370	3	NE	MON	1980
Inflation and Incomes Policy	EC471	4	NE	MON	1980
International Economics	EC369	3	NE	MON	1980
International Economics and Development	EC469	4	DE	MON	1980
Introduction to Quantitative Economics	E0244	2	NEE	MON	1980
Introduction to quantitative economics	E0344	3	NEM	MON	1980
Labour Economics	EC371	3	NE	MON	1980
Macroeconomic theory	EC466	4	NE	MON	1980
Macroeconomic Policy and Research in Australia	EC386	3	NE	MON	1980
Mathematical Economic Theory	EC485	4	NEM	MON	1980
Microeconomic theory	EC465	4	NE	MON	1980
Modern Capitalism: Crisis and Maturity	EH359	3	EH	MON	1980
Operations Research Case Studies	E0351	3	NEE	MON	1980
Operations Research Methods	E0350	3	NEE	MON	1980
Quantitative Economic Policy	EC443	4	NE	MON	1980
Regional Economics	EC377	3	NE	MON	1980

Subject Name	Code	Level	Area	University	Year
Restrictive Trade Practices	EC470	4	NE	MON	1980
Spatial Economic Theory	EC586	5	NE	MON	1980
Statistical Inference	E0246	2	NEE	MON	1980
Topics in Econometric Theory	E0342	3	NEE	MON	1980
Trade and Welfare	EC584	5	NE	MON	1980
Transport Economics	EC376	3	NE	MON	1980
Urban Studies	EC37B	3	NE	MON	1980
Welfare Economics	EC583	5	NE	MON	1980
Actuarial statistics	ETC2430	2	NEE	MON	2011
Advanced applied general equilibrium analysis	ECC5730	5	NE	MON	2011
Advanced health economics	ECC5870	5	NE	MON	2011
Applied business modelling	ETC2470	2	NEE	MON	2011
Applied econometrics	ECC3410	3	NEE	MON	2011
Applied econometrics	ETC3410	3	NEE	MON	2011
Applied econometrics	ETC4341	4	NEE	MON	2011
Applied econometrics	ETF3200	3	NEE	MON	2011
Applied econometrics 2	ETC4410	4	NEE	MON	2011
Applied economics research paper	ECC4860	4	OPEN	MON	2011
Applied economics research paper	ECX5486	5	NE	MON	2011
Applied forecasting for business and economics	ETC2450	2	NEE	MON	2011
Applied general equilibrium economics	ECC3650	3	NE	MON	2011
Australian political economy	PLT2910	2	HE	MON	2011
Bayesian modelling and risk analysis	ETC3420	3	NEE	MON	2011
Behaviour, rationality and organisation	ECC2600	2	MPN	MON	2011
Business and economic statistics	ETC1000	1	NEE	MON	2011
Business data modelling	ETX2111	2	NEE	MON	2011
Business economics	ECF3900	3	NE	MON	2011
Business forecasting	ETX3231	3	NEE	MON	2011
Business in Asia	ECX2550	2	EH	MON	2011
Business in Asia	ECX3550	2	EH	MON	2011

Subject Name	Code	Level	Area	University	Year
Business modelling	ETF2480	2	NEE	MON	2011
Business modelling methods	ETC2480	2	NEE	MON	2011
Business simulation	ETC3490	3	NEE	MON	2011
Business statistics	ETX1100	1	NEE	MON	2011
Competition and regulation	ECC3830	3	NE	MON	2011
Competition and regulation	ECW3830	3	NE	MON	2011
Competition, regulation and policy	ECC4700	4	NE	MON	2011
Competition, regulation and policy	ECX5470	5	NE	MON	2011
Consumer economics	ECF3120	3	NE	MON	2011
Contingencies in insurance and pensions	ETC3530	3	NEE	MON	2011
Current issues in applied microeconomics	ECC2400	2	NE	MON	2011
Current issues in macroeconomic policy	ECC2300	2	NE	MON	2011
Data analysis in business	ETX2121	2	NEE	MON	2011
Data modelling and computing	ETC1010	1	NEE	MON	2011
Econometric theory	ETC4400	4	NEE	MON	2011
Econometrics pre-honours	ETC3470	3	NEE	MON	2011
Economic and statistical decision making	PMM2020	2	NEE	MON	2011
Economic development	ECC4670	4	DE	MON	2011
Economic development of East Asia	ECC2890	3	DE	MON	2011
Economic evaluation of health services	ECC4990	4	NE	MON	2011
Economic issues in health and health care	ECC2700	2	NE	MON	2011
Economic policy	ECG9101	5	NE	MON	2011
Economics	ECF9530	5	NE	MON	2011
Economics for managers	MBA9003	5	NE	MON	2011
Economics of climate change	ECC3640	3	NE	MON	2011
Economics of developing countries	ECC3670	3	DE	MON	2011
Economics of information technology and electronic commerce	ECX2123	2	NE	MON	2011
Economics of international trade and finance	ECW3121	3	NE	MON	2011
Economics of money and banking	ECW3143	3	NE	MON	2011
Economics Seminar	ECC5800	5	OPEN	MON	2011

Subject Name	Code	Level	Area	University	Year
Environmental economics	ECC2360	2	NE	MON	2011
Financial econometrics	ETC3460	3	NEE	MON	2011
Financial econometrics	ETC4346	4	NEE	MON	2011
Financial econometrics 2	ETC4460	4	NEE	MON	2011
Financial economics	ECC4750	4	NE	MON	2011
Financial economics	ECX5475	5	NE	MON	2011
Health economics	ECC4870	4	NE	MON	2011
History of economic thought	ECC3800	3	HET	MON	2011
Industrial organisation	ECC4840	4	NE	MON	2011
Industrial organisation	ECX5484	5	NE	MON	2011
Information, incentives and games	ECC5840	5	MPN	MON	2011
Integrated economic modelling	ECC3860	3	MPN	MON	2011
Intermediate macroeconomics	ECC2010	2	NE	MON	2011
Intermediate microeconomics	ECC2000	2	NE	MON	2011
International economics	ECC3690	3	NE	MON	2011
International trade	ECC4690	4	NE	MON	2011
Introduction to health economics	ECX9700	5	NE	MON	2011
Introduction to international economics	ECF9210	5	NE	MON	2011
Introduction to macroeconomic theory and policy	ECG9102	5	NE	MON	2011
Introduction to microeconomic theory and policy	ECX9120	5	NE	MON	2011
Introductory econometrics	ECC2410	2	NEE	MON	2011
Introductory econometrics	ETC2410 (ETC3440)	2	NEE	MON	2011
Introductory econometrics	ETC3440 (ETC2410)	3	NEE	MON	2011
Introductory econometrics	ETC4344	4	NEE	MON	2011
Introductory macroeconomics	ECW1102	1	NE	MON	2011
Introductory microeconomics	ECW1101	1	NE	MON	2011
Issues seminar	ETC4860	4	NEE	MON	2011
Labour economics	ECC3710	3	NE	MON	2011
Labour economics	ECW2141	2	NE	MON	2011
Law and economics	ECC4720	4	NE	MON	2011

Subject Name	Code	Level	Area	University	Year
Law and economics	ECX5472	5	NE	MON	2011
Macroeconomic Policy	ECW2730	2	NE	MON	2011
Macroeconomic theory	ECC5660	5	NE	MON	2011
Macroeconomics	ECC4660	4	NE	MON	2011
Macroeconomics	ECC9010	5	NE	MON	2011
Macroeconomics	ECF1200	1	NE	MON	2011
Macroeconomics	ECX5466	5	NE	MON	2011
Managerial economics	ECF3731	3	NE	MON	2011
Managerial economics	ECW2731	2	NE	MON	2011
Marketing research analysis	ETC2500	2	NEE	MON	2011
Mathematical economic theory	ECC5850	5	NE	MON	2011
Mathematical economics	ECC3840	3	NEM	MON	2011
Mathematics for business	ETF2700	2	NEE	MON	2011
Mathematics for economics and business	ECC2440	2	NE	MON	2011
Mathematics for economics and business	ETC2440	2	NEE	MON	2011
Microeconometrics	ETC4420	4	NEE	MON	2011
Microeconomic theory	ECC5650	5	NE	MON	2011
Microeconomics	ECC4650	4	NE	MON	2011
Microeconomics	ECC9000	5	NE	MON	2011
Microeconomics	ECF1100	1	NE	MON	2011
Microeconomics	ECX5465	5	NE	MON	2011
Modelling in finance and insurance	ETC3510	3	NEE	MON	2011
Modelling in finance and insurance	ETC4351	4	NEE	MON	2011
Monetary economics	ECC3660	3	NE	MON	2011
Monetary theory and policy	ECF2331	2	NE	MON	2011
Natural resources and environment	ECW3150	3	NE	MON	2011
Optimisation for managers	ETF3480	3	NEE	MON	2011
Optimization for management	ETC4480	4	NEE	MON	2011
Post-Keynesian economics	ECC4710	4	HE	MON	2011
Principles of econometrics	ETC3400	3	NEE	MON	2011

Subject Name	Code	Level	Area	University	Year
Principles of econometrics	ETC4340	4	NEE	MON	2011
Principles of macroeconomics	ECC1100	1	NE	MON	2011
Principles of microeconomics	ECC1000	1	NE	MON	2011
Probability and statistical inference for economics and business	ETC2520	2	NEE	MON	2011
Project evaluation	ECC4790	4	NE	MON	2011
Project evaluation	ECX5479	5	NE	MON	2011
Prosperity, poverty and sustainability in a global world	ECC2800	2	EH	MON	2011
Public economics	ECC4810	4	NE	MON	2011
Public economics	ECC5810	5	NE	MON	2011
Quantitative economic policy	ETC4430	4	NEE	MON	2011
Quantitative methods for financial markets	ETF3300	3	NEE	MON	2011
Quantitative methods for risk analysis	ETX2011	2	NEE	MON	2011
Quantitative models for business research	ETF3600	3	NEE	MON	2011
Regional development and policy	ECW3146	3	NE	MON	2011
Research topics in advanced macroeconomics	ECC6660	6	NE	MON	2011
Research topics in advanced microeconomics	ECC6650	6	NE	MON	2011
Research topics in open economy	ECC6690	6	NE	MON	2011
Special reading unit in econometrics honours	ETC4010	4	NEE	MON	2011
Special topics in econometrics	ETC4541	4	NEE	MON	2011
Sports economics	ECC2450	2	NE	MON	2011
Sports economics	ECF2450	2	NE	MON	2011
Survey data analysis	ETC3500	3	NEE	MON	2011
Survey data analysis	ETC4350	4	NEE	MON	2011
Survey data analysis	ETF3500	3	NEE	MON	2011
Theories in international and development economics	ECC5690	5	DE	MON	2011
Time series analysis for business and economics	ETC3450	3	NEE	MON	2011
Time series analysis for business and economics	ETC4345	4	NEE	MON	2011
Tourism economics	ECW2600	2	NE	MON	2011
Trade finance and foreign exchange	ECF2721	2	NE	MON	2011
Trade, finance and foreign exchange	ECW2721	2	NE	MON	2011

Subject Name	Code	Level	Area	University	Year
Welfare economics	ECC4830	4	NE	MON	2011
Applied Econometrics	ECON430	4	NEE	MQU	1980
Comparative Economic Systems A	ECON342	3	CES	MQU	1980
Comparative Economic Systems B	ECON343	3	CES	MQU	1980
Distribution of Income and Wealth	ECON440	4	NE	MQU	1980
Econometrics	ECON330	3	NEE	MQU	1980
Economic Development	ECON235	2	DE	MQU	1980
Economic Development of China and Japan	ECON351	3	EH	MQU	1980
Economic Statistics	ECON140	1	NEE	MQU	1980
Economics and Contemporary Society	ECON250	2	NE	MQU	1980
Environmental Economics	ECON359	3	NE	MQU	1980
Government and the Economy A	ECON305	3	NE	MQU	1980
Government and the Economy B	ECON306	3	NE	MQU	1980
History of Economic Thought	ECON356	3	HET	MQU	1980
Industry Economics A	ECON340	3	NE	MQU	1980
International Economics A	ECON303	3	NE	MQU	1980
International Economics B	ECON304	3	NE	MQU	1980
Introduction to Econometrics	ECON223	2	NEE	MQU	1980
Labour Economics A	ECON344	3	NE	MQU	1980
Labour Economics B	ECON34S	3	NE	MQU	1980
Macro-Economic Analysis	ECON201	2	NE	MQU	1980
Marxian Economics	ECON358	3	HE	MQU	1980
Mathematical Economics	ECON331	3	NEM	MQU	1980
Micro-Economic Analysis	ECON200	2	NE	MQU	1980
Principles of Economics I	ECONI03	1	NE	MQU	1980
Principles of Economics II	ECON104	1	NE	MQU	1980
South-east Asian Economies	ECON349	3	DE	MQU	1980
Survey of Economics A	ECONIOI	1	NE	MQU	1980
Survey of Economics B	ECONI02	1	NE	MQU	1980
Urban Economics	ECON352	3	NE	MQU	1980

Subject Name	Code	Level	Area	University	Year
Advanced Microeconomics	ECON860	pgrad	NE	MQU	2011
International Trade	ECON847	pgrad	NE	MQU	2011
Advanced Macroeconomics	ECON861	pgrad	NE	MQU	2011
Advanced Microeconomics/Advanced Macroeconomics	ECON490	4	NE	MQU	2011
Applied Econometrics I	ECON840	pgrad	NEE	MQU	2011
Applied Econometrics II	ECON835	pgrad	NEE	MQU	2011
Applied Game Theory	ECON884	pgrad	NE	MQU	2011
Applied Time Series Analysis	ECON896	pgrad	NEE	MQU	2011
Asian Business Environments	BBA320	3	ECL	MQU	2011
Econometric Methods	ECON333	3	NEE	MQU	2011
Econometric Models	ECON332	3	NEE	MQU	2011
Econometric Principles	ECON232	2	NEE	MQU	2011
Economic and Business Forecasting	ECON361	3	NEE	MQU	2011
Economic Development	ECON336	3	DE	MQU	2011
Economic Development and World Economic Order	ECON857	pgrad	EH	MQU	2011
Economics of Public Issues	ECON853	pgrad	NE	MQU	2011
Economy and Society	SOC 182	1	HE	MQU	2011
Environmental Economics	ECON359	3	NE	MQU	2011
Ethical Perspectives on Economics	ECON883	pgrad	HE	MQU	2011
European Union Economics	ECON396	3	EH	MQU	2011
Evolution of Economic Ideas	ECON356	3	HET	MQU	2011
Evolution of Economic Ideas	ECON898	pgrad	HET	MQU	2011
Health Economics	ECON312	3	NE	MQU	2011
Industrial Organisation	ECON309	3	NE	MQU	2011
Industry Policy and Business Management	BBA204/ECON215	2	NE	MQU	2011
International Monetary Policy	ECON846	pgrad	NE	MQU	2011
Introductory Econometrics	ECON241	2	NEE	MQU	2011
Labour Market Economics	ECON314	3	NE	MQU	2011
Macro-Economic Problems	ECON802	pgrad	NE	MQU	2011
Macroeconomic Analysis	ECON204	2	NE	MQU	2011

Subject Name	Code	Level	Area	University	Year
Macroeconomic Policy	ECON311	3	NE	MQU	2011
Macroeconomic Policy and Business	BBA214/ECON214	2	NE	MQU	2011
Macroeconomic Principles	ECON110	1	NE	MQU	2011
Macroeconomics	ECON823	pgrad	NE	MQU	2011
Mathematical Economics	ECON864	pgrad	NEM	MQU	2011
Micro-Economic Problems	ECON801	pgrad	NE	MQU	2011
Microeconomic Analysis	ECON203	2	NE	MQU	2011
Microeconomic Principles	ECON111	1	NE	MQU	2011
Microeconomics	ECON822	pgrad	NE	MQU	2011
Monetary and Financial Policies	ECON844	pgrad	NE	MQU	2011
Political Economy for Social Policy and Research	SOC 865	pgrad	HE	MQU	2011
Public Economics	ECON210	2	NE	MQU	2011
Quantitative Methods in Economics, Business and Finance	ECON131	1	NEM	MQU	2011
Research Project	ECON859	pgrad	OPEN	MQU	2011
Research Project B - Part A	ECON904	pgrad	OPEN	MQU	2011
Research Project B - Part B	ECON905	pgrad	OPEN	MQU	2011
Research Project B---Part A	ECON881	pgrad	OPEN	MQU	2011
Research Project B---Part B	ECON882	pgrad	OPEN	MQU	2011
Southeast and East Asian Economies	ECON249	2	EH	MQU	2011
The Japanese Economy	ECON394	3	EH	MQU	2011
The New Spirit of Capitalism	SOC 346	1	HE	MQU	2011
Advanced Economic Analysis: Honours	BUS425	4	NE	MRD	2011
Australian Business and the Economy	BUS162	1	NE	MRD	2011
Australian Economic Policies and Problems - Honours	BUS463	4	Open	MRD	2011
Changing Economies of Asia	BUS272	2	EH	MRD	2011
Chinese Economy	BUS234	2	EH	MRD	2011
Contemporary China	BUS241	2	EH	MRD	2011
Econometrics	BUS294	2	NEE	MRD	2011
Economics and Business Strategy	MBS666	pgrad	NE	MRD	2011
Economics for Sustainability	STP205	2	HE	MRD	2011

Subject Name	Code	Level	Area	University	Year
Economics of Globalisation	MBS531	pgrad	NE	MRD	2011
Energy Economics	PEC393	3	NE	MRD	2011
Human Resource Economics	BUS375	3	NE	MRD	2011
Introduction to Economics	BUS161	1	NE	MRD	2011
Macroeconomics A	BUS260	2	NE	MRD	2011
Macroeconomics B	BUS360	3	HE	MRD	2011
Microeconomics A	BUS261	2	NE	MRD	2011
Power System Economics and Electricity Markets	ENG561	pgrad	NE	MRD	2011
Quantitative Methods for Business and Economics	BUS208	2	NEM	MRD	2011
Special Topics in Business: Islamic Banking and Finance	MBS6991	pgrad	ECL	MRD	2011
Special Topics in Economics	BUS2001	2	Open	MRD	2011
Special Topics in Economics: Economic Thought and Controversy	BUS200	2	HE	MRD	2011
Special Topics in Economics: Economics of Health Care and Social Policy	BUS2001	2	NE	MRD	2011
Special Topics in Economics: Indigenous Economic Development	BUS200	2	ECL	MRD	2011
Special Topics in Extractive Metallurgy: Process Economics	EXM226	2	NE	MRD	2011
The Economics of Global Climate Change	BUS250	2	NE	MRD	2011
Australian Economic History	S265		EH	MRH	1980
Australian Economic Institutions	S264		EH	MRH	1980
Australian Monetary And Fiscal Policy	S270		NE	MRH	1980
Economic Development I	S263		DE	MRH	1980
Economic History Of Southeast Asia Since 1500	S291		EH	MRH	1980
Economics Ic	S262		NE	MRH	1980
Introduction To Economics,	S161		NE	MRH	1980
Macro-Economic Theory And Policy	S260		NE	MRH	1980
Marxist Social And Economic Theory	S272		HE	MRH	1980
Political Economy Of Australia	S228		HE	MRH	1980
Regional And Urban Economics I	S266		NE	MRH	1980
Resource And Environmental Economics	S267		NE	MRH	1980
Society And Economy In Pre-Industrial Europe	S294		EH	MRH	1980
Special Topics In Economics	S269		Open	MRH	1980

Subject Name	Code	Level	Area	University	Year
The Political Economy Of Social Welfare In Australia,	S132		HE	MRH	1980
Comparative Economic Systems	422206	2	CES	NEW	1980
Contemporary Issues in Industrial Relations	425156	5	NE	NEW	1980
Dissertation	425159	5	Open	NEW	1980
Econometrics I	423208	3	NEE	NEW	1980
Econometrics II	424111	4	NEE	NEW	1980
Econometrics II	425109	5	NEE	NEW	1980
Economic Development	424107	4	DE	NEW	1980
Economic Development	425105	5	DE	NEW	1980
Economic History I	421105	1	EH	NEW	1980
Economic History II	422108	2	EH	NEW	1980
Economic History III	423106	3	EH	NEW	1980
Economic Planning	424106	4	NE	NEW	1980
Economic Planning	425104	5	NE	NEW	1980
Economic Statistics II	422105	2	NEM	NEW	1980
Economics & Politics	422207	2	HE	NEW	1980
Economics Honours Seminar I	422109	4	NE	NEW	1980
Economics Honours Seminar II	423105	4	Open	NEW	1980
Economics I	421100	1	NE	NEW	1980
Economics II	422203	2	NE	NEW	1980
Economics IV	424100	4	NE	NEW	1980
Environmental Economics	424113	4	NE	NEW	1980
Environmental Economics	425111	5	NE	NEW	1980
Growth & Development	423104	3	DE	NEW	1980
History of Economic Thought	423203	3	CES	NEW	1980
History of Modern Economic Thought	424108	4	HET	NEW	1980
History of Modern Economic Thought	425106	5	HET	NEW	1980
Industrial Relations	420103	1	NE	NEW	1980
Industrial Relations II	422110	2	NE	NEW	1980
Industrial Relations III	423210	3	NE	NEW	1980

Subject Name	Code	Level	Area	University	Year
Industrial Structure & Market Behaviour	425153	5	NE	NEW	1980
Industry Economics	422201	2	NE	NEW	1980
International Economics	423102	3	NE	NEW	1980
International Monetary Economics	425163	5	NE	NEW	1980
International Trade	425162	5	NE	NEW	1980
Introductory Quantitative Methods	421107	1	NEM	NEW	1980
Issues in Australian Economic History	425114	5	EH	NEW	1980
Issues in Australian Economic Theory	424116	4	Open	NEW	1980
Labour Economics	422202	2	NE	NEW	1980
Macroeconomic Theory	424114	4	NE	NEW	1980
Macroeconomic Theory	425112	5	NE	NEW	1980
Macroeconomics & Policy	420102	1	NE	NEW	1980
Managerial Economics	425151	5	NE	NEW	1980
Mathematical Economics	423204	3	NEM	NEW	1980
Microeconomic Theory	424103	4	NE	NEW	1980
Microeconomic Theory	425102	5	NE	NEW	1980
Microeconomics & Business Decisions	420101	1	NE	NEW	1980
Microeconomics of Technological Change	425152	5	NE	NEW	1980
Problems in Applied Econometrics	425158	5	NEE	NEW	1980
Problems of Industrialisation in Developing Countries	425155	5	DE	NEW	1980
Public Economics	423103	3	NE	NEW	1980
Public Policy in Relation to Business	425157	5	NE	NEW	1980
Regional Economics	424109	4	NE	NEW	1980
Regional Economics	425107	5	NE	NEW	1980
Selected Topics in Monetary Economics	424118	4	NE	NEW	1980
Selected Topics in Monetary Economics	425164	5	NE	NEW	1980
Special Topic	425199	5	Open	NEW	1980
Statistical Analysis	422106	2	NEM	NEW	1980
Theory of Economic Policy	423207	3	NE	NEW	1980
Transport Economics	424112	4	NE	NEW	1980

Subject Name	Code	Level	Area	University	Year
Transport Economics	425110	5	NE	NEW	1980
Urban Economics	424110	4	NE	NEW	1980
Urban Economics	425108	5	NE	NEW	1980
Welfare Economics	424105	4	NE	NEW	1980
Welfare Economics	425103	5	NE	NEW	1980
Advanced Topics in Applied Economics I	ECON4004	4	NE	NEW	2011
Advanced Topics in Applied Economics II	ECON4005	4	NE	NEW	2011
Applied Policy Analysis	ECON6450	pgrad	NE	NEW	2011
Asian Business Development	ECON2330	2	EH	NEW	2011
Asian Business Development	ECON3330	3	EH	NEW	2011
Australian Business History	ECON2360	2	EH	NEW	2011
Australian Business History	ECON3360	3	EH	NEW	2011
Basic Econometrics and Quantitative Analysis II	ECON2450	2	NEE	NEW	2011
Basic Econometrics and Quantitative Modelling	ECON1130	1	NEE	NEW	2011
Business Economics	ECON2390	2	NE	NEW	2011
Business Forecasting	ECON3365	3	NEE	NEW	2011
Econometric Modelling	ECON3450	3	NEE	NEW	2011
Econometrics IV	ECON6210	pgrad	NEE	NEW	2011
Economic Development	ECON3002	3	DE	NEW	2011
Economic Planning and Project Evaluation	ECON6440	pgrad	NE	NEW	2011
Economics for Business	ECOS1920	pgrad	NE	NEW	2011
Economics of Competitive Advantage	GECO6410	pgrad	NE	NEW	2011
Environmental Economics	ECON3320	3	NE	NEW	2011
Global Trade and Finance	ECON3003	3	NE	NEW	2011
International Business and Finance	ECON3060	3	NE	NEW	2011
International Business Environment	ECON2470	2	HE	NEW	2011
International Business Environment	ECON3470	3	NE	NEW	2011
International Trade and Investment	GECO6420	pgrad	NE	NEW	2011
Intro Labour Economics	ECON2300	2	NE	NEW	2011
Introduction to International Trade and Finance	ECON2520	2	NE	NEW	2011

Subject Name	Code	Level	Area	University	Year
Issues in Developing Economies	ECON6430	pgrad	DE	NEW	2011
Labour Economics	ECON3300	3	NE	NEW	2011
Macroeconomic Analysis	ECON6150	pgrad	NE	NEW	2011
Macroeconomic Policy in the Asia-Pacific	GECO6400	pgrad	NE	NEW	2011
Macroeconomics	ECON4003	4	NE	NEW	2011
Macroeconomics 1	ECON1110	1	NE	NEW	2011
Macroeconomics II	ECON2510	2	NE	NEW	2011
Macroeconomics III	ECON3610	3	NE	NEW	2011
Macroeconomics in the Global Economy	ECON1002	1	NE	NEW	2011
Markets, Regulation and Government Policy	ECON3001	3	NE	NEW	2011
Microeconomic Analysis	ECON6140	pgrad	NE	NEW	2011
Microeconomics	ECON4002	4	NE	NEW	2011
Microeconomics for Business Decisions	ECON1001	1	NE	NEW	2011
Microeconomics I	ECON1100	1	NE	NEW	2011
Microeconomics II	ECON2500	2	NE	NEW	2011
Microeconomics III	ECON3600	3	NE	NEW	2011
Money and Banking	ECON2540	2	NE	NEW	2011
Money and Banking	ECON3004	3	NE	NEW	2011
Money and Banking	GECO6470	pgrad	NE	NEW	2011
Research Essay	ECON6460	pgrad	OPEN	NEW	2011
Research Methodology	ECON4001	4	NE	NEW	2011
Research Thesis	ECON4006	4	NE	NEW	2011
Special Topic A	ECON6250	pgrad	OPEN	NEW	2011
Special Topic B	ECON6260	pgrad	OPEN	NEW	2011
Applied Behavioural Economics	EFB332	3	MPN	QUT	2011
Economics	BSB113	1	NE	QUT	2011
Economics 1	QCF121	1	NE	QUT	2011
Economics 2	EFB223	2	NE	QUT	2011
Economics 2	QCF221	2	NE	QUT	2011
Economics and Data Analysis	EFN422	pgrad	NE	QUT	2011

Subject Name	Code	Level	Area	University	Year
Economics and Finance Special Topic - C	EFB341	3	NE	QUT	2011
Economics in Business 1	GSN491	pgrad	NE	QUT	2011
Environmental Economics and Policy	EFB334	3	NE	QUT	2011
Health Care Finance and Economics	PUN211	2	NE	QUT	2011
Intermediate Macroeconomics	EFB330	3	NE	QUT	2011
Intermediate Microeconomics	EFB331	3	NE	QUT	2011
International Economics	EFB336	3	NE	QUT	2011
Managerial Economics	EFN405	pgrad	NE	QUT	2011
Property Economics	UDB243	2	NE	QUT	2011
Quantitative Methods for Economics and Finance	EFB222	2	NE	QUT	2011
Special Topic - Economics, Banking and Finance A	EFN408	pgrad	NE	QUT	2011
Urban Development Economics	UDB104	1	NE	QUT	2011
Workplace Experience in Economics and Finance	EFB342	3	OPEN	QUT	2011
Asian Economic Development	HUSO1081	1	NE	RMIT	2011
Basic Econometrics	ECON1066	1	NEE	RMIT	2011
Ecological Economics	ENVI1160	1	HE	RMIT	2011
Economics for the Social Sciences	HUSO2163	2	HE	RMIT	2011
Economics for the Social Sciences	POLI1050	1	HE	RMIT	2011
Environmental economics	ECON1060	1	NE	RMIT	2011
International Monetary Economics	ECON1082	1	NE	RMIT	2011
International Trade	ECON1086	1	NE	RMIT	2011
Introduction to Development Economics	HUSO2173	2	DE	RMIT	2011
Labour Economics	ECON1047	1	NE	RMIT	2011
Macroeconomics 1	ECON1010	1	NE	RMIT	2011
Macroeconomics 2	ECON1042	1	NE	RMIT	2011
Planning, Property and Economics	ARCH1064	1	NE	RMIT	2011
Price Theory	ECON1048	1	NE	RMIT	2011
Prices and Markets	ECON1020	1	NE	RMIT	2011
Property Economics	BUIL1449	1	NE	RMIT	2011
Quantitative Analysis	ECON1061	1	NEM	RMIT	2011

Subject Name	Code	Level	Area	University	Year
Applied Microeconomics	ECO00102	1	NE	SCU	2011
Ecological and Environmental Economics for Sustainable Development	ECO00202	2	NE	SCU	2011
Ecological and Environmental Economics for Sustainable Development	ECO003079	3	NE	SCU	2011
Economic Analysis for Tourism and Hospitality	ECO00424	4	NE	SCU	2011
Economic Policy	ECO00107	1	NE	SCU	2011
Economics	ECO10250	1	NE	SCU	2011
Economics for Management	ECO00720	pgrad	NE	SCU	2011
Economics Seminar I	ECO40001	4	NE	SCU	2011
Economics Seminar II	ECO40002	4	NE	SCU	2011
Economics Thesis (Part 1 of 3)	ECO40004	4	OPEN	SCU	2011
Economics Thesis (Part 2 of 3)	ECO40005	4	OPEN	SCU	2011
Economics Thesis (Part 3 of 3)	ECO40006	4	OPEN	SCU	2011
Environmental Economics	ECO00108	1	NE	SCU	2011
International Economics and Trade	ECO00150	1	NE	SCU	2011
Macroeconomics	ECO00101	1	NE	SCU	2011
Natural Resource Economics	ECO00201	2	NE	SCU	2011
Sport Economics and Finance	FIN00320	3	NE	SCU	2011
Ecological Economics – Economics of Sustainability	HES4722	ugrad	HE	SWIN	2011
Economic Activity and Objectives	0046T003F	ugrad	NE	SWIN	2011
Economic Policy in Society	LBE300	ugrad	NE	SWIN	2011
Economics	HBCO406	ugrad	NE	SWIN	2011
Economics	HBE613	ugrad	NE	SWIN	2011
Economics	HBCO406	pgrad	NE	SWIN	2011
Economics	HBE613	pgrad	NE	SWIN	2011
Economics for business	MBM523	ugrad	NE	SWIN	2011
Economics for Business	NAP722	ugrad	NE	SWIN	2011
Economics for business	MBM523	pgrad	NE	SWIN	2011
Economics for Engineers	VBG863	ugrad	NE	SWIN	2011
Economics for Justice Studies	VBK305	ugrad	NE	SWIN	2011
Economy and Society	VBM515	ugrad	NE	SWIN	2011

Subject Name	Code	Level	Area	University	Year
Environmental Economics	LBE203	ugrad	NE	SWIN	2011
European Union - Business Context	HBI561	pgrad	EH	SWIN	2011
Housing Economics and Finance	HAS488	ugrad	NE	SWIN	2011
Housing Economics and Finance	HAS488	pgrad	NE	SWIN	2011
International Trade and Finance	HBI451	ugrad	NE	SWIN	2011
International Trade and Finance	HBI451	pgrad	NE	SWIN	2011
Managerial Economics and Strategy	LBE201	ugrad	NE	SWIN	2011
Micro Economics	BUS2403	ugrad	NE	SWIN	2011
Microeconomics	HBE110N	ugrad	NE	SWIN	2011
Microeconomics	LBE100	ugrad	NE	SWIN	2011
Quantitative Analysis A	HMB110	ugrad	NEM	SWIN	2011
Quantitative Analysis B	HMB111	ugrad	NEM	SWIN	2011
Transport Planning, Modelling and Economics	HES6179	ugrad	NE	SWIN	2011
Transport Planning, Modelling and Economics	HES6179	pgrad	NE	SWIN	2011
American Economic History 1607 · 1865	ISH60	2	EH	SYD	1980
American Economic History 1865-1970	ISH61	2	EH	SYD	1980
Applied Economic Statistics II	INS11	2	NEE	SYD	1980
Early Australian Economic History	ISH63	2	EH	SYD	1980
Econometric Methods	INS06	2	NEE	SYD	1980
Economic And Social History Of Minority Groups	ISH57	2	EH	SYD	1980
Economic Development In Southeast Asia	ISH55	2	EH	SYD	1980
Economic Development Of Modern Japan	ISH54	2	EH	SYD	1980
Economic Fluctuations	ISH56	2	EH	SYD	1980
Economic History HI Advanced	SNHO3	3	EH	SYD	1980
Economic History I	JNHO1	1	EH	SYD	1980
Economic History II	IN H02	2	EH	SYD	1980
Economic History II Advanced	IAH32	2	EH	SYD	1980
Economic History III	SNHO3	3	EH	SYD	1980
Economic History III Additional	SNHO4	3	EH	SYD	1980
Economic Statistics I	JNS01	1	NEE	SYD	1980

Subject Name	Code	Level	Area	University	Year
Economic Statistics II	SNS03	2	NEE	SYD	1980
Economic Statistics III	INS02	3	NEE	SYD	1980
Economics I	JNE01	1	NE	SYD	1980
Economics I(P)	JNE11	1	HE	SYD	1980
Economics II (Advanced)	IAE32	2	NE	SYD	1980
Economics II (Normal)	INE02	2	NE	SYD	1980
Economics II (P)	IN EI2	2	HE	SYD	1980
Economics II Supplementary	ISE51	2	NE	SYD	1980
Economics III	SNE03	3	Open	SYD	1980
Economics III Additional	SNE04	3	NE	SYD	1980
Economics III Advanced	SAE33	3	NE	SYD	1980
Economics III Supplementary	ISE53	2	NE	SYD	1980
Economics Statistics II	JNS02	2	NEE	SYD	1980
Economics Statistics III Advanced	SAS33	3	NEE	SYD	1980
Elementary Econometrics	ISS53	1	NEE	SYD	1980
Elementary Operations Research	ISS56	1	NEE	SYD	1980
Introductory Economic Statistics	ISS51	1	NEE	SYD	1980
Latin America: Revolution And Development	ISH62	2	EH	SYD	1980
Modern Australian Economic History	ISH64	2	EH	SYD	1980
Operations Research	SNS04	3	NEE	SYD	1980
Operations Research Advanced	SAS34	3	NEE	SYD	1980
Social Aspects Of Industrialisation In The United States	ISH53	2	EH	SYD	1980
The Australian Economy	JNE06	1	NE	SYD	1980
The Historical Development Of The Chinese Economy	ISH59	2	EH	SYD	1980
UrbIm History	ISH58	2	EH	SYD	1980
Agricultural Economics	CEC314B	3	NE	TAS	1980
Applied Welfare Economics	CEC307R	3	NE	TAS	1980
Australian Political Economy	CEC100R	1	HE	TAS	1980
Commercial Data Processing	COM204A	2	NEM	TAS	1980
Comparative Economic Systems	CEC206X	2	CES	TAS	1980

Subject Name	Code	Level	Area	University	Year
Econometrics	CEC311V	3	NEE	TAS	1980
Economic Policy	CEC331S	3	NE	TAS	1980
Economics Of Industry	CEC205H	2	NE	TAS	1980
Economics Of Regulation	CEC330R	3	NE	TAS	1980
International Economics	CEC203F	2	NE	TAS	1980
Introduction To Econometrics	CEC211 N	2	NEE	TAS	1980
Introduction To Operations Research	CEC212Y	2	NEM	TAS	1980
Introductory Economic Statistics	CEC103U	1	NEE	TAS	1980
Labour economics And Industrial Relations	CEC306Z	3	NE	TAS	1980
Macroeconomic Theory	CEC301 L	3	NE	TAS	1980
Macroeconomics	CEC101 S	1	NE	TAS	1980
Mathematics For Commerce	CEC110E	1	NEM	TAS	1980
Microeconomics	CEC102T	1	NE	TAS	1980
Money And Banking	CEC201 D	2	NE	TAS	1980
Operations Research	CEC312W	3	NEM	TAS	1980
Quantitative Methods I	CEC104V	1	NEM	TAS	1980
Statistical Analysis	CEC210M	2	NEE	TAS	1980
Theory Of The Firm	CEC202E	2	NE	TAS	1980
Time Series Analysis	CEC313A	3	NEE	TAS	1980
Trade And Development	CEC302M	3	DE	TAS	1980
Data and Business Decision Making	BEA681	pgrad	NE	TAS	2011
Econometrics	BEA342	3	NEE	TAS	2011
Econometrics	BEA442	4	NEE	TAS	2011
Economics for Managers	BEA683	pgrad	NE	TAS	2011
Economics of Human Resources	BEA306	3	NE	TAS	2011
Economics, Management and Organisation	BEA204	2	NE	TAS	2011
Environmental and Resource Economics	BEA301	3	NE	TAS	2011
Evaluating Alternatives	BEA332	3	NE	TAS	2011
Industrial Organisation	BEA305	3	NE	TAS	2011
Intermediate Macroeconomics	BEA220	2	NE	TAS	2011

Subject Name	Code	Level	Area	University	Year
Intermediate Microeconomics	BEA200	2	NE	TAS	2011
International Economics	BEA202	2	NE	TAS	2011
International Trade	BEA703	pgrad	NE	TAS	2011
Introduction to Econometrics	BEA242	2	NEE	TAS	2011
Introduction to Quantitative Methods	BEA109	1	NEM	TAS	2011
Investment Analysis	BEA652	pgrad	NE	TAS	2011
Macroeconomic Theory and Policy	BEA320	3	NE	TAS	2011
Macroeconomics	BEA420	4	NE	TAS	2011
Microeconomic Theory and Policy	BEA300	3	NE	TAS	2011
Microeconomics	BEA400	4	NE	TAS	2011
Prices and Profits	BEA325	3	NE	TAS	2011
Principles of Economics 1	BEA111	1	NE	TAS	2011
Principles of Economics 2	BEA121	1	NE	TAS	2011
Quantitative Economic Analysis	BEA141	1	NE	TAS	2011
Quantitative Methods	BEA140	1	NEM	TAS	2011
Special Topics in Economics & Finance	BEA409	4	NE	TAS	2011
Thinking Strategically: The Competitive Edge	BEA235	2	NE	TAS	2011
Political Economy of Post-Reform China	HMC324	3	EH	TAS	2011
Business Economics	6394	2	NE	UCA	2011
Contemporary Issues in Macroeconomics	6400	3	NE	UCA	2011
Contemporary Issues in Microeconomics	6401	3	NE	UCA	2011
Economics for Managers G	6234	pgrad	NE	UCA	2011
Economics of the Public Sector	6404	2	NE	UCA	2011
Economics of the Public Sector G	7928	pgrad	NE	UCA	2011
Environmental and Resource Economics	6405	3	NE	UCA	2011
Environmental and Resource Economics G	7927	pgrad	NE	UCA	2011
Human Resource Economics	6385	2	NE	UCA	2011
Human Resource Economics G	7925	pgrad	NE	UCA	2011
Intermediate Macroeconomics	6383	2	NE	UCA	2011
Intermediate Microeconomics	6382	2	NE	UCA	2011

Subject Name	Code	Level	Area	University	Year
International Economics	6408	3	NE	UCA	2011
Introduction to Economics	6355	1	NE	UCA	2011
Managerial Economics	6376	1	NE	UCA	2011
Managerial Economics G	7926	pgrad	NE	UCA	2011
Advanced Economics	BS338	3	NE	UND	2011
Econometrics	BS339	3	NEE	UND	2011
Economics	BS100	1	NE	UND	2011
Economics for managers	BS500	pgrad	NE	UND	2011
Economics of Financial Crises (EH)	BS235	2	HE	UND	2011
Intermediate Mathematics for Economics and Finance	BS206	2	NEM	UND	2011
Macroeconomic Theory and Policy	BS202	2	NE	UND	2011
Microeconomic Theory and Policy	BS201	2	NE	UND	2011
The History of Austrian Economics	BS207	2	HE	UND	2011
Topics in Economics	BS208	2	HET	UND	2011
Advanced Economic Theory	401-2	4	NE	UNE	1980
Agricultural Marketing	402-1	4	NE	UNE	1980
Agricultural policy	302-1	3	NE	UNE	1980
Agricultural Production and Prices	208-1	2	NE	UNE	1980
Agricultural Production and Prices	308-1	3	NE	UNE	1980
Agricultural Trade and Commodity Policy	401-1	4	NE	UNE	1980
Agriculture and Economic Growth	209-1	2	NE	UNE	1980
Agriculture and Economic Growth	309-1	2	NE	UNE	1980
Agriculture in Developing Countries	403-1	4	DE	UNE	1980
American Economic History since 1919	241-1	2	EH	UNE	1980
American Economic History since 1919	341-1	3	EH	UNE	1980
Applied Agricultural Production and Price Analysis	305-1	3	NE	UNE	1980
Applied Econometrics	365-1	3	NEE	UNE	1980
Applied Regression Analysis	260-1	2	NEE	UNE	1980
Applied Regression Analysis	360-1	3	NEE	UNE	1980
Australian Economic Growth 1788-1890	220-1	2	EH	UNE	1980

Subject Name	Code	Level	Area	University	Year
Australian Economic Growth 1788-18908	320-1	3	EH	UNE	1980
Bayesian Econometrics	420-1	4	NEE	UNE	1980
Business and Economic Forecasting	345-1	3	NEE	UNE	1980
Comparative Economic Systems	371-1	3	CES	UNE	1980
Cost-benefit analysis	303-1	3	NE	UNE	1980
Demography	275-1	2	NEE	UNE	1980
Diploma Dissertation	497-2	4	NE	UNE	1980
Diploma Dissertation	497-2	4	NE	UNE	1980
Dynamic Programming and Control Theory	435-1	4	NEE	UNE	1980
Econometric Modelling and Estimation	460-1	4	NEE	UNE	1980
Econometrics A	305-1	3	NEE	UNE	1980
Econometrics B	310-1	3	NEE	UNE	1980
Economic and Business Statistics	100-2	1	NEE	UNE	1980
Economic Development in Asia and the Pacific	562-1	5	DE	UNE	1980
Economic history honours	400-6	4	EH	UNE	1980
Economic History of the U.S.S.R.	242-1	2	EH	UNE	1980
Economic History of the U.S.S.R.	342-1	3	EH	UNE	1980
Economic Statistcs	500-4	5	NEE	UNE	1980
Economic Statistcs A	497-2	4	NEE	UNE	1980
Economic Statistics Hononrs	400-6	4	NEE	UNE	1980
Economics	101-2	1	NE	UNE	1980
Economics Honours	400-6	4	NE	UNE	1980
Economics of Developing Countries	361-1	3	DE	UNE	1980
Growth and Development Theory	514-1	5	DE	UNE	1980
History of Economic Thought	381-1	3	HET	UNE	1980
Individual Reading Course	336-1	3	EH	UNE	1980
Industrialization and Development	563-1	5	NE	UNE	1980
Industry Behaviour	304-1	3	NE	UNE	1980
International Economics	332-1	3	NE	UNE	1980
International Economics of Development	534-1	5	DE	UNE	1980

Subject Name	Code	Level	Area	University	Year
Introduction to Marx and History	200-1	2	EH	UNE	1980
Labour Economics	372-1	3	NE	UNE	1980
M.Ec. Dissertation	500-4	5	OPEN	UNE	1980
Macroeconomics A	211-1	2	NE	UNE	1980
Macroeconomics B	212-1	2	NE	UNE	1980
Managerial Economics	203-1	2	NE	UNE	1980
Managerial Economics	303-1	3	NE	UNE	1980
Marx and Social Theory	300-2	3	EH	UNE	1980
Master's Dissertation	500-4	5	NE	UNE	1980
Mathematical Economics	342-1	3	NEM	UNE	1980
Microeconomics A	201-1	2	NE	UNE	1980
Microeconomics B	202-1	2	NE	UNE	1980
Modernization of the Japanese Economy since 1750	233-1	2	EH	UNE	1980
Modernization of the Japanese Economy since 1750	333-1	3	EH	UNE	1980
Money and Finance in Developing Countries	523-1	5	DE	UNE	1980
Natural Resource Economics	404-1	4	NE	UNE	1980
Nonlinear and Stochastic Programming	430-1	4	NEE	UNE	1980
Planning and Project Appraisal for Economic Development	564-1	5	NE	UNE	1980
Principles of Resource Economics	205-1	2	NE	UNE	1980
Research Methods/Special Topics	335-1	3	EH	UNE	1980
Research Seminar	334-1	3	EH	UNE	1980
Research Seminar	407-2	4	NEE	UNE	1980
Research Seminar	407-2	4	NE	UNE	1980
Research Seminar	407-2	4	NE	UNE	1980
Special Topics in Agricultural Marketing	410-1	4	NE	UNE	1980
Special Topics in Agriculture and Economic Development	406-1	4	NE	UNE	1980
Special Topics in Agricultural Economics	405-1	4	NE	UNE	1980
Special Topics in Decision Theory	520-1	5	NEE	UNE	1980
Special Topics in Econometrics	550-1	5	NEE	UNE	1980
Special Topics in Economics A	402-1	4	NE	UNE	1980

Subject Name	Code	Level	Area	University	Year
Special Topics in Economics IJ	404-1	4	NE	UNE	1980
Special Topics in Natural Resource Economics	408-1	4	NE	UNE	1980
Special Topics in Optimization Theory	530-1	5	NEE	UNE	1980
Special Topics in Production Economics	409-1	4	NE	UNE	1980
Special Topics in Social Statistics A	470-1	4	NEE	UNE	1980
Special Topics in Social Statistics B	475-1	4	NEE	UNE	1980
Statistical Decision Theory	220-1	2	NEE	UNE	1980
Statistical Theory of Econometric Systems	450-1	4	NEE	UNE	1980
Survey Design and Analysis	270-1	2	NEE	UNE	1980
Survey Design and Analysis	370-1	3	NEE	UNE	1980
The Development of Capitalism in England 1650-1850	232-1	2	EH	UNE	1980
The Development of Capitalism in England 1650-1850	332-1	3	EH	UNE	1980
The Growth of the North Atlantic Economy since 1500	100-2	1	EH	UNE	1980
The International Economy and Australia 1900-19705	221-1	2	EH	UNE	1980
The International Economy and Australia 1900-19705	321-1	3	EH	UNE	1980
Theory of Statistics A	301-1	3	NEE	UNE	1980
Theory of Statistics B	302-1	3	NEE	UNE	1980
Time Series Analysis	440-1	4	NEE	UNE	1980
Welfare and Inequality	373-1	3	NE	UNE	1980
Advanced Macroeconomics	ECON409	4	NE	UNE	2011
Advanced Microeconomics	ECON408	4	NE	UNE	2011
Applied Econometrics	ECON376	3	NEE	UNE	2011
Applied Econometrics	ECON476	4	NEE	UNE	2011
Australian Economic Institutions and Performance	ECON143	1	EH	UNE	2011
Australian Economic Institutions and Performance	ECON243	2	EH	UNE	2011
Australian Industrial Relations	ECON251	2	EH	UNE	2011
Australian Industrial Relations	ECON351	3	EH	UNE	2011
Australian Macroeconomic Issues	ECON311	3	NE	UNE	2011
Avoid Economic Deception: Study Political Economy	POLS306	3	HE	UNE	2011
Benefit-Cost Analysis	ECON226	2	NE	UNE	2011

Subject Name	Code	Level	Area	University	Year
Benefit-Cost Analysis	ECON326	3	NE	UNE	2011
Business Decision Making	QM265	2	NEE	UNE	2011
Business Decision Making	QM365	3	NEM	UNE	2011
Business Statistics 1	QM161	1	NEE	UNE	2011
Business Statistics 2	QM162	1	NEE	UNE	2011
Business Statistics 2	QM262	2	NEE	UNE	2011
Commodity Markets	ECON335	3	NE	UNE	2011
Commodity Markets	ECON435	4	NE	UNE	2011
Diploma Dissertation	ECON497	4	NE	UNE	2011
Econometric Analysis of Financial Markets	ECON474	4	NE	UNE	2011
Econometric Analysis of Financial Markets	ECON374	3	NEE	UNE	2011
Economics of Developing Countries	ECON314	3	DE	UNE	2011
Economics of Developing Countries	ECON414	4	DE	UNE	2011
Economy and Business in Modern Asia	ECON245	2	EH	UNE	2011
Economy and Business in Modern Asia	ECON345	3	EH	UNE	2011
Efficiency and Productivity Analysis	ECON377	3	NE	UNE	2011
Efficiency and Productivity Analysis	ECON477	4	NE	UNE	2011
Environment and Food: Economic Perspectives	ECON121	1	NE	UNE	2011
Environment and Food: Economic Perspectives	ECON221	2	NE	UNE	2011
Farm and Resource Management	ECON223	2	NE	UNE	2011
Global Business and Trade	ECON320	3	NE	UNE	2011
Global Business and Trade	ECON420	4	NE	UNE	2011
Honours Dissertation	ECON498	4	NE	UNE	2011
Honours Program	ECON HONS	5	NE	UNE	2011
Industrialisation and Development in Asia	ECON456	4	EH	UNE	2011
Industrialisation and Development in Asia	ECON556	5	EH	UNE	2011
Intermediate Macroeconomics	ECON202	2	NE	UNE	2011
Intermediate Microeconomics	ECON201	2	NE	UNE	2011
Intermediate Microeconomics	ECON301	3	NE	UNE	2011
International Trade and Payments	ECON317	3	NE	UNE	2011

Subject Name	Code	Level	Area	University	Year
International Trade and Payments	ECON417	4	NE	UNE	2011
Introduction to Bioeconomics	ECON331	3	HE	UNE	2011
Introduction to Bioeconomics	ECON431	4	HE	UNE	2011
Introduction to Business Forecasting (not offered in 2011)	QM264	2	NEE	UNE	2011
Introduction to Business Forecasting (not offered in 2011)	QM364	3	NEE	UNE	2011
Introductory Econometrics	ECON271	2	NEE	UNE	2011
Introductory Econometrics	ECON371	3	NEE	UNE	2011
Introductory Macroeconomics	ECON102	1	NE	UNE	2011
Introductory Microeconomics	ECON101	1	NE	UNE	2011
Master's Major Dissertation	ECON592	5	NE	UNE	2011
Master's Minor Dissertation	ECON591	5	NE	UNE	2011
Master's Thesis	ECON593	5	NE	UNE	2011
Microeconomic Policy Evaluation	ECON328	3	NE	UNE	2011
Microeconomic Policy Evaluation	ECON428	4	NE	UNE	2011
Natural Resource Economics	ECON329	3	NE	UNE	2011
Natural Resource Economics	ECON429	4	NE	UNE	2011
Research Seminar	ECON496	4	NE	UNE	2011
Southeast Asia: Economic and Social Change since 1850	ECON250	2	EH	UNE	2011
Southeast Asia: Economic and Social Change since 1850	ECON350	3	EH	UNE	2011
Special Topics A	ECON487	4	NE	UNE	2011
Special Topics A	ECON587	5	NE	UNE	2011
Special Topics B	ECON488	4	NE	UNE	2011
Survey Methods for Business and Economics	QM267	2	NEM	UNE	2011
Survey Methods for Business and Economics	QM367	3	NEM	UNE	2011
Technology and Economic Growth	ECON249	2	EH	UNE	2011
Technology and Economic Growth	ECON349	3	EH	UNE	2011
The Australian Economy since the 18th Century	ECON246	2	EH	UNE	2011
The Australian Economy since the 18th Century	ECON346	3	EH	UNE	2011
The International Economy	ECON144	1	NE	UNE	2011
The International Economy	ECON244	2	NE	UNE	2011

Subject Name	Code	Level	Area	University	Year
Welfare Economics for Policy	ECON224	2	NE	UNE	2011
Welfare Economics for Policy	ECON324	3	NE	UNE	2011
Econometrics B	15.423	ugrad	NEE	UNSW	1980
Introduction to Economic Statistics	15.402	ugrad	NEE	UNSW	1980
Introduction to Operations Research	15.476	ugrad	NEE	UNSW	1980
Linear Economics	15.432	ugrad	NEE	UNSW	1980
Mathematical Economics A	15.434	ugrad	NEE	UNSW	1980
Quantitative Methods 18	15.421	ugrad	NEE	UNSW	1980
Time Series Analysis	15.453	ugrad	NEE	UNSW	1980
Advanced Mathematical Economics A	15.438	ugrad	NEE	UNSW	1980
Advanced Mathematical Economics B	15.439	ugrad	NEE	UNSW	1980
Applied Demand Analysis	15.483	ugrad	NEE	UNSW	1980
Applied Econometrics	15.424	ugrad	NEE	UNSW	1980
Applied Multivariate Analysis	15.547	ugrad	NEE	UNSW	1980
Approaches to Economic and Social History	15.634G	pgrad	EH	UNSW	1980
Approaches to Economic and Social History	15.634	ugrad	EH	UNSW	1980
Aspects of Australian Economic History	15.684G	pgrad	EH	UNSW	1980
Aspects of British Economic and Social Change, 1740-1850	15.653	ugrad	EH	UNSW	1980
Australian Economic Development in the Nineteenth Century	15.714	ugrad	EH	UNSW	1980
Australian Economic Development in the Nineteenth Century	15.676	ugrad	EH	UNSW	1980
British Imperialism in the Nineteenth and Twentieth Centuries	15.643	ugrad	EH	UNSW	1980
British Imperialism in the Seventeenth and Eighteenth Centuries	15.655	ugrad	EH	UNSW	1980
Business History	15.64SG	pgrad	EH	UNSW	1980
Comparative Economic History	15.674G	pgrad	EH	UNSW	1980
Competition Policy	15.225G	pgrad	NE	UNSW	1980
Contemporary Economic Issues	15.245G	pgrad	NE	UNSW	1980
Decision Theory	15.433	ugrad	NEE	UNSW	1980
Econometrics A	15.413	ugrad	NEE	UNSW	1980
Econometrics A (Honours)	15.463	ugrad	NEE	UNSW	1980
Econometrics B (Honours)	15.473	ugrad	NEE	UNSW	1980

Subject Name	Code	Level	Area	University	Year
Economic and Social History of Modern Germany	15.665	ugrad	EH	UNSW	1980
Economic Change in Modern India 1750-1950	15.663	ugrad	EH	UNSW	1980
Economic Development	15.053	ugrad	DE	UNSW	1980
Economic History 110 - Economic & Social Change in the United States since the Civil War	15.662	ugrad	EH	UNSW	1980
Economic History 110 Honours—Economic Change in the United States since the Civil War	15.672	ugrad	EH	UNSW	1980
Economic History 1118 Honours	15.633	ugrad	EH	UNSW	1980
Economic History A	15.644G	pgrad	EH	UNSW	1980
Economic History B	1S.654G	pgrad	EH	UNSW	1980
Economic History IA - The Making of Modern Economic Society	15.601	ugrad	EH	UNSW	1980
Economic History IA (Arts) - European Economy and SOCIety to 1800	15.701	ugrad	EH	UNSW	1980
Economic History IB - Australian Economic Development in the Twentieth Century	15.611	ugrad	EH	UNSW	1980
Economic History IB (Arts) - European Industrialization in Nationalistic Framework	15.711	ugrad	EH	UNSW	1980
Economic History IIA - European Economy and Society to 1800	15.602	ugrad	EH	UNSW	1980
Economic History IIA Honours – European Economy and Society to 1800	15.612	ugrad	EH	UNSW	1980
Economic History IIC – European Industrialization In a Nationalistic Framework	15.642	ugrad	EH	UNSW	1980
Economic History IIC Honours – European Industrialization in a Nationalistic Framework	15.652	ugrad	EH	UNSW	1980
Economic History IIIB	15.623	ugrad	EH	UNSW	1980
Economic History iliA	15.603	ugrad	EH	UNSW	1980
Economic History iliA Honours	15.613	ugrad	EH	UNSW	1980
Economic History IVA	15.604	ugrad	EH	UNSW	1980
Economic History IVB	15.614	ugrad	EH	UNSW	1980
Economic History liB - American Economic and Social Development before the Civil War	15.622	ugrad	EH	UNSW	1980
Economic History liB Honours – American Economic Development before the Civil War	15.632	ugrad	EH	UNSW	1980
Economic Honours (Arts)	15.044	ugrad	OPEN	UNSW	1980
Economic Optimization and Dynamics	15.442	ugrad	NEE	UNSW	1980
Economic Planning	15.183	ugrad	NE	UNSW	1980
Economic Thought and Methodology	15.173	ugrad	HET	UNSW	1980
Economic Thought from Karl Marx toJohn Maynard Keynes	15.713	ugrad	HET	UNSW	1980
Economics A	15.114G	pgrad	NE	UNSW	1980
Economics B	15,125G	pgrad	NE	UNSW	1980

Subject Name	Code	Level	Area	University	Year
Economics for Town Planners	15.901	ugrad	NE	UNSW	1980
Economics IVA S1L6	15.004	ugrad	NE	UNSW	1980
Economics IVB	15.014	ugrad	NE	UNSW	1980
Economics IVD	15.034	ugrad	NE	UNSW	1980
Economics Ive	15.024	ugrad	NE	UNSW	1980
Economics liD	15.062	ugrad	NE	UNSW	1980
Economics liE	15.072	ugrad	NE	UNSW	1980
Economics Research Seminar	15.198G	pgrad	NE	UNSW	1980
Economy of China since 1949	15.675	ugrad	EH	UNSW	1980
Government and Economy In the Twentieth Century	15.745	ugrad	EH	UNSW	1980
Industrial Organization and Policy	15.163	ugrad	NE	UNSW	1980
International Economics	15.103	ugrad	NE	UNSW	1980
International Economics	15.204G	pgrad	NE	UNSW	1980
International Economics (Honours)	15.113	ugrad	NE	UNSW	1980
International Trade	15.214G	pgrad	NE	UNSW	1980
Introduction to Econometric History	15.685	ugrad	EH	UNSW	1980
Japanese Economic Planning	15.203	ugrad	EH	UNSW	1980
Japanese International Economic Relations	15.213	ugrad	EH	UNSW	1980
Labour Economics	15.082	ugrad	NE	UNSW	1980
Macroeconomic Analysis I	15.174G	pgrad	NE	UNSW	1980
Macroeconomic Analysis II	15.184G	pgrad	NE	UNSW	1980
Macroeconomics I	15.011	ugrad	NE	UNSW	1980
Macroeconomics II	15.042	ugrad	NE	UNSW	1980
Macroeconomics II (Honours)	15.052	ugrad	NE	UNSW	1980
Macroeconomics III (Honours) 51 L2T2	15.013	ugrad	NE	UNSW	1980
Macroeconomics III S1 L2T2	15.003	ugrad	NE	UNSW	1980
Mathematical Economics B	15.444	ugrad	NEE	UNSW	1980
Measurement of Income Inequality	15.467	ugrad	NEE	UNSW	1980
Microeconomics 1\1 (Honours)	15.153	ugrad	NE	UNSW	1980
Microeconomics I	15.001	ugrad	NE	UNSW	1980

Subject Name	Code	Level	Area	University	Year
Microeconomics II	15.002	ugrad	NE	UNSW	1980
Microeconomics II (Honours)	15.012	ugrad	NE	UNSW	1980
Microeconomics III	15.143	ugrad	NE	UNSW	1980
Microeconomic Analysis I	15.154G	pgrad	NE	UNSW	1980
Microeconomic Analysis II	15.155G	pgrad	NE	UNSW	1980
Monetary Theory and Policy	15.063	ugrad	NE	UNSW	1980
Monetary Theory and Policy	15.234G	pgrad	NE	UNSW	1980
Monte Carlo Methods and Simulation Techniques	15.477	ugrad	NEE	UNSW	1980
Natural and Environmental Resources Economics	15.073	ugrad	NE	UNSW	1980
Natural Resource Economics	15.244G	pgrad	NE	UNSW	1980
Peasant Societies in Transition	15.694G	pgrad	EH	UNSW	1980
Public Sector Economics	15.093	ugrad	NE	UNSW	1980
Public Sector Economics	15.224G	pgrad	NE	UNSW	1980
Quantitative Economic Policy and Forecasting	15.235G	pgrad	NE	UNSW	1980
Quantitative Economic Techniques 8	15.422	ugrad	NEE	UNSW	1980
Quantitative Economic Techniques A	15.412	ugrad	NEE	UNSW	1980
Quantitative Methods In Historical Analysis	15.695	ugrad	EH	UNSW	1980
Regional and Urban Economics	15.123	ugrad	NE	UNSW	1980
Report (Economics)	15.199G	pgrad	NE	UNSW	1980
Research Report	15.699G	pgrad	EH	UNSW	1980
Research Seminar	15.698G	pgrad	EH	UNSW	1980
Science, Society and Economic Development	15.753	ugrad	EH	UNSW	1980
Science, Society and Institutions	15.715G	pgrad	EH	UNSW	1980
Science, Technology and Economic Development	15.716G	pgrad	EH	UNSW	1980
Seminar in International Economics	15.255G	pgrad	NE	UNSW	1980
Seminar in Research Methods	15.624G	pgrad	EH	UNSW	1980
Seminar in Research Methods	15.624	ugrad	EH	UNSW	1980
Simultaneous Equation Techniques	15.414	ugrad	NEE	UNSW	1980
Statistical Inference A	15.452	ugrad	NEE	UNSW	1980
Statistical Inference B	15.462	ugrad	NEE	UNSW	1980

Subject Name	Code	Level	Area	University	Year
The Chinese Economy 1700-1949	15.673	ugrad	EH	UNSW	1980
The Economic History of Russia since 1801	15.683	ugrad	EH	UNSW	1980
The Economic History of Urbanization	15.743	ugrad	EH	UNSW	1980
The Economy of Britain from 1870 to 1940: External Transactions	15.605G	pgrad	EH	UNSW	1980
The Economy of Britain from 1870 to 1940: Internal Transactions	15.615G	pgrad	EH	UNSW	1980
The Origins of Modern Economics	15.703	ugrad	HET	UNSW	1980
The Political Economy of Contemporary Capitalism	15.092	ugrad	HE	UNSW	1980
The Soviet Economy	15.043	ugrad	CES	UNSW	1980
Theories and Models In Economic History	15.692	ugrad	HET	UNSW	1980
Theory of the Firm	15.164G	pgrad	NE	UNSW	1980
Thesis	15.197	ugrad	OPEN	UNSW	1980
Thesis (Econometrics)	15.497	ugrad	NEE	UNSW	1980
Thesis (Economic History)	15.697	ugrad	EH	UNSW	1980
Transformation of the Japanese Economy	15.679	ugrad	EH	UNSW	1980
Transformation of the Japanese Economy	15.678	ugrad	EH	UNSW	1980
Urban and Regional Economics	15.254G	pgrad	NE	UNSW	1980
Advanced Econometric Theory	ECON4202/6201	4	NEE	UNSW	2011
Advanced Economic Analysis	ECON 4100	4	NE	UNSW	2011
Advanced Microeconomic Analysis	ECON6101	6	NE	UNSW	2011
Applied Econometrics	ECON 4201	4	NEE	UNSW	2011
Applied Econometrics	ECON 6203	6	NEE	UNSW	2011
Applied Macroeconomics	ECON 2104	2	NE	UNSW	2011
Australia in the Global Economy	ECON1301/PECO1001	1	EH	UNSW	2011
Australian Economic Development	ECON 2313/PECO2001	2	EH	UNSW	2011
Business and Economics Statistics	ECON 1203/2292	1	NEE	UNSW	2011
Business and Government	ECON 2103	2	NE	UNSW	2011
Business Economics	ECON 5103	5	NE	UNSW	2011
Business Forecasting	ECON 2209	2	NEE	UNSW	2011
Business Forecasting	ECON 5248	5	NEE	UNSW	2011
Choice Modelling	ECON4205/6205	4	NE	UNSW	2011

Subject Name	Code	Level	Area	University	Year
Development Economics	ECON3110	3	DE	UNSW	2011
Econ growth, Tech and Structural Change	ECON 3109	3	HE	UNSW	2011
Econometric Analysis	ECON 6003	6	NEE	UNSW	2011
Econometric Methods	ECON 2207/3291	2	NEE	UNSW	2011
Econometric Theory	ECON3203	3	NEE	UNSW	2011
Economic Measurement	ECON4309/6309	4	NE	UNSW	2011
Economics of Climate Change	ECON 2128	2	NE	UNSW	2011
Economics of Climate Change	ECON 5128	5	NE	UNSW	2011
Economics of Corporations	ECON 2105	2	NE	UNSW	2011
Economics of Finance	ECON 3107	3	NE	UNSW	2011
Economics of Strategy	ECON 5111	5	NE	UNSW	2011
Economics of Tourism	ECON 2117	2	NE	UNSW	2011
Elements of Econometrics/Econometric Analysis	ECON 4207	4	NEE	UNSW	2011
Elements of Environmental Economics	ECON 1107	1	NE	UNSW	2011
Environmental and Natural Resource Economics	ECON4306/6306	4	NE	UNSW	2011
Environmental Economics	ECON 2127	2	NE	UNSW	2011
Experimental Economics	ECON 2126	2	MPN	UNSW	2011
Financial Economics	ECON 5106	5	NE	UNSW	2011
Fundamental Knowledge in Environ Mment	ECON5125	5	NE	UNSW	2011
Game Theory and Business Strategy	ECON 2107	2	NE	UNSW	2011
Globalisation	ECON 2111	2	NE	UNSW	2011
Health Economics	ECON4307/6307	4	NE	UNSW	2011
Honours Thesis	ECON 4127	4	OPEN	UNSW	2011
International Economics	ECON3116	3	NE	UNSW	2011
International Macroeconomics	ECON 3104	3	NE	UNSW	2011
International Trade	ECON4101/6302	4	NE	UNSW	2011
Intro Stats and Data Analysis	ECON 5257	5	NEE	UNSW	2011
Intro to Political Economy/Global Political Economy	PECO1000/GLST1000	1	HE	UNSW	2011
Introductory Econometrics	ECON 2206/3290	2	NEE	UNSW	2011
Macroeconomic Analysis	ECON 6002	6	NE	UNSW	2011

Subject Name	Code	Level	Area	University	Year
Macroeconomics	ECON 1102	1	NE	UNSW	2011
Macroeconomics 2	ECON 2102	2	NE	UNSW	2011
Managerial Economics	ECON 3121	3	NE	UNSW	2011
Managerial Economics	ECON5110	5	NE	UNSW	2011
Markets and Public Choice	ECON 3101	3	NE	UNSW	2011
Mathematical Economics	ECON 3202	3	NEM	UNSW	2011
Mathematical Economics	ECON 6004	6	NEM	UNSW	2011
Microeconomic Analysis	ECON 6001	6	NE	UNSW	2011
Microeconomics 1	ECON 1101	1	NE	UNSW	2011
Microeconomics 2	ECON 2101	2	NE	UNSW	2011
Organisational Economics	ECON 5112	5	NE	UNSW	2011
Political Economy	ECON3119 /PECO3000	3	HE	UNSW	2011
Quant Methods for Business	COMM 5005	5	NEM	UNSW	2011
Quantitative Analysis for Business & Economics	ECON 1202/2291	1	NEM	UNSW	2011
Quantitative Methods A	ECON 1202/2291	1	NEM	UNSW	2011
Quantitative Methods B	ECON 1203/2292	1	NEM	UNSW	2011
Special Topics	ECON4350/6350	4	NE	UNSW	2011
State and the Economy	SLSP2000	2	HE	UNSW	2011
Statistics for Econometrics	ECON 2215	2	NEE	UNSW	2011
Strategic Market Behaviour & Gov Reg	ECON 4102	4	NE	UNSW	2011
Strategic Market Behaviour + Gov Reg	ECON 6301	6	NE	UNSW	2011
Super and Retirement Benefits	ECON3114 /ACTL3005	3	NE	UNSW	2011
Super and Retirement Benefits	ECON5114/ACTL5002	5	NE	UNSW	2011
The New Europe	ECON 2322/ARTS2780	2	EH	UNSW	2011
Advanced Economic Analysis	EC0N431	4	NE	UOW	1980
Comparative Economic Systems	ECON302	3	CES	UOW	1980
Econometric Models	EC0N323	3	NEE	UOW	1980
Econometrics	EC0N321	3	NEE	UOW	1980
Economic Development Issues	EC0N303	3	DE	UOW	1980
Economic Development Planning	EC0N305	3	NE	UOW	1980

Subject Name	Code	Level	Area	University	Year
Economic Policy	EC0N304	3	NE	UOW	1980
Economics I	ECON101	1	NE	UOW	1980
Economics II	ECON111	1	NE	UOW	1980
History Of Economic Thought	EC0N316	3	HET	UOW	1980
Honours Thesis	EC0N441	4	OPEN	UOW	1980
Industrial Economics	EC0N312	3	NE	UOW	1980
International Economics	ECON216	2	NE	UOW	1980
International Monetary Economics	ECON307	3	NE	UOW	1980
International Trade	EC0N306	3	NE	UOW	1980
Labour Economics	EC0N308	3	NE	UOW	1980
Macroeconomics	ECON205	2	HE	UOW	1980
Mathematical Economics	EC0N322	3	NEM	UOW	1980
Microeconomics	ECON215	2	NE	UOW	1980
Microeconomics - Theory And Application	EC0N315	3	NE	UOW	1980
Natural Resource Economics	EC0N311	3	NE	UOW	1980
Quantitative Methods II	ECON122	1	NEM	UOW	1980
Quantitative Methods I	ECON121	1	NEM	UOW	1980
Quantitative Methods III	ECON223	2	NEM	UOW	1980
Quantitative Methods IV	ECON224	2	NEM	UOW	1980
Transport Economics	EC0N313	3	NE	UOW	1980
Urban And Regional Economics	EC0N314	3	NE	UOW	1980
Advanced Econometrics	ECON327	3	NEE	UOW	2011
Advanced Macroeconomic Theory	ECON996	pgrad	NE	UOW	2011
Advanced Microeconomic Theory	ECON997	pgrad	NE	UOW	2011
Cost Benefit Analysis	ECON310	3	NE	UOW	2011
Economic Analysis of Business	TBS 905	pgrad	NE	UOW	2011
Economic Development Issues	ECON303	3	DE	UOW	2011
Economic Essentials for Business Innovation	ECON219	2	HE	UOW	2011
Economic Policy	ECON305	3	NE	UOW	2011
Economics for Professionals	ECON910	pgrad	NE	UOW	2011

Subject Name	Code	Level	Area	University	Year
Economics Honours Coursework	ECON402	4	NE	UOW	2011
Economics of Health and Health Care	ECON317	3	NE	UOW	2011
Economics of Health and Health Care	ECON918	pgrad	NE	UOW	2011
Economics of Health and Health Care - A	ECON318	3	NE	UOW	2011
Economics of Small and Medium Enterprises	ECON320	3	NE	UOW	2011
Electronic Commerce and the Economics of Information	ECON319	3	NE	UOW	2011
Electronic Commerce and the Economics of Information	ECON915	pgrad	NE	UOW	2011
Environmental Economics	ECON309	3	NE	UOW	2011
Financial Economics	ECON331	3	NE	UOW	2011
Gender, Work and the Family	ECON208	2	HE	UOW	2011
Health Economic Principles and Research Methods	TBS 978	pgrad	NE	UOW	2011
History of Economic Thought	ECON316	3	HET	UOW	2011
Honours Research in Economics	ECON401	4	OPEN	UOW	2011
Industry and Trade in East Asia	ECON251	2	EH	UOW	2011
International Business Economic Environment	TBS 983	pgrad	NE	UOW	2011
International Economic Relations	MIST910	pgrad	HE	UOW	2011
International Trade Theory & Policy	ECON216	2	NE	UOW	2011
Introductory Econometrics	ECON221	2	NEE	UOW	2011
Introductory Microeconomics	ECON111	1	NE	UOW	2011
Labour Economics	ECON308	3	NE	UOW	2011
Macroeconomic Essentials for Business	ECON101	1	NE	UOW	2011
Macroeconomic Theory and Policy	ECON205	2	NE	UOW	2011
Managerial Economics and Operations Research	ECON332	3	NE	UOW	2011
Mathematical Economics	ECON322	3	NEM	UOW	2011
Mathematics and Economics Honours Project	INFO402	4	NEM	UOW	2011
Mathematics for Business	ECON222	2	NEM	UOW	2011
Microeconomic Theory and Policy	ECON215	2	NE	UOW	2011
Mining Economics	MINE416	4	NE	UOW	2011
Monetary Economics	ECON301	3	NE	UOW	2011
Natural Resource Economics	ECON311	3	NE	UOW	2011

Subject Name	Code	Level	Area	University	Year
Political Economy in the New Millennium	POL 319	3	HE	UOW	2011
Quantitative Analysis For Decision Making	ECON230	2	NEM	UOW	2011
Quantitative Economic Analysis	ECON939	pgrad	NEM	UOW	2011
Regional Development	ECON945	pgrad	ECL	UOW	2011
Smalls Firms and the Economy	ECON944	pgrad	ECL	UOW	2011
Statistics for Decision Making	ECON940	pgrad	NEE	UOW	2011
The Chinese Economy	ECON306	3	EH	UOW	2011
The Historical Foundations of the Modern Australian Economy	ECON304	3	EH	UOW	2011
Thesis	ECON993	pgrad	OPEN	UOW	2011
Advanced Economic Statistics	EC232	2	NEE	UQ	1980
Advanced Macro-Economics	EC314	3	NE	UQ	1980
Advanced Micro-Economics	EC313	3	NE	UQ	1980
Advanced Sampling Theory	EC447	4	NEE	UQ	1980
Australian Economic History A	EC361	3	EH	UQ	1980
Australian Economic History B	EC362	3	EH	UQ	1980
Australian Industrial Relations	EC282	2	NE	UQ	1980
British Economic History	EC311	3	EH	UQ	1980
Chinese Economic History	EC261	2	EH	UQ	1980
Comparative Economic Systems	EC364	3	CES	UQ	1980
Econometrics	EC444	4	NEE	UQ	1980
Econometrics A	EC331	3	NEE	UQ	1980
Econometrics B	EC332	3	NEE	UQ	1980
Economic & Business Statistics	EC231	2	NEE	UQ	1980
Economic Behaviour	EC111	1	NE	UQ	1980
Economic Development	EC416	4	DE	UQ	1980
Economic Development A	EC321	3	DE	UQ	1980
Economic Development B	EC322	3	DE	UQ	1980
Economic History	EC162	1	EH	UQ	1980
Economic History	EC420	4	EH	UQ	1980
Economic Information & Decision Models A	EC735	4	NE	UQ	1980

Subject Name	Code	Level	Area	University	Year
Economic Information & Decision Models B	EC736	4	NE	UQ	1980
Economic Statistics	EC443	4	NEE	UQ	1980
Economic Theory in Perspective	EC213	2	HET	UQ	1980
Farm Management Economics	AG408	2	NE	UQ	1980
General Economics A	EC100	1	NE	UQ	1980
General Economics B	EC101	1	NE	UQ	1980
History of Economic Thought	EC312	3	HET	UQ	1980
History of Economic Thought	EC419	4	HET	UQ	1980
Honours Thesis (Economic Statistics)	EC441	4	NEE	UQ	1980
Honours Thesis (Economics)	EC411	4	OPEN	UQ	1980
Industrial Economics	EC373	3	NE	UQ	1980
Industrial Economics	EC418	4	NE	UQ	1980
Industrial Relations	EC281	2	NE	UQ	1980
Information Processing Project	EC766	4	ECL	UQ	1980
International Economics	EC417	4	NE	UQ	1980
International Economics A	EC351	3	NE	UQ	1980
International Economics B	EC352	3	NE	UQ	1980
Introduction to Legal Studies	CO 121	1	ECL	UQ	1980
Introduction to the Philosophy and Methodology of Economics	EC 116	1	HET	UQ	1980
Introductory Economics	EC110	1	NE	UQ	1980
Introductory Economics	EC110	1	NE	UQ	1980
Japanese Economic History	EC262	2	EH	UQ	1980
Labour Economics A	EC381	3	NE	UQ	1980
Labour Economics B	EC382	3	NE	UQ	1980
Introductory Quantitative Analysis for Commerce and Economics	EC130	1	NEM	UQ	1980
Macro-Economic Policy	EC221	2	NE	UQ	1980
Macro-Economic Theory	EC212	2	NE	UQ	1980
Macro-Economic Theory	EC414	4	NE	UQ	1980
Macro-Economics & Inflation	EC421	4	NE	UQ	1980
Macro-Economics A	EC112	1	NE	UQ	1980

Subject Name	Code	Level	Area	University	Year
Macro-Economics A	EC12*	4	NE	UQ	1980
Marketing Economics	AG413	3	NE	UQ	1980
Mathematical Economics	EC422	4	NEM	UQ	1980
Mathematical Economics A	EC233	2	NEM	UQ	1980
Mathematical Economics B	EC234	2	NEM	UQ	1980
Mathematical Economics C	EC333	3	NEM	UQ	1980
Mathematics in Economics and Business	EC 131	1	NEM	UQ	1980
Mathematics in Economics and Business	EC131	1	NEM	UQ	1980
Micro-Economic Policy	EC271	2	NE	UQ	1980
Micro-Economic Theory	EC211	2	NE	UQ	1980
Micro-Economic Theory	EC413	4	NE	UQ	1980
Micro-Economics A	EC111	1	NE	UQ	1980
Models of Mathematical Economics	EC334	3	NEM	UQ	1980
Monetary Economics	XC301	3	NE	UQ	1980
Operations Research	EC445	4	NE	UQ	1980
Operations Research A	EC235	2	NE	UQ	1980
Operations Research B	EC335	3	NE	UQ	1980
Operations Research C	EC336	3	NE	UQ	1980
Philosophy of Economic Thought	EC214	2	HET	UQ	1980
Political Economy & Comparative Economic Systems	EC 113	1	CES	UQ	1980
Public Enterprise Economics	EC371	3	NE	UQ	1980
Quantitative Analysis	EC134t	1	NEM	UQ	1980
Quantitative Analysis A	EC 132t	1	NEM	UQ	1980
Quantitative Analysis A	EC132t	1	NEM	UQ	1980
Quantitative Analysis B	EC133t	1	NEM	UQ	1980
Regional Economics	EC391	3	NE	UQ	1980
Rural Policy Economics	AG424	3	NE	UQ	1980
Senior Forum	EC412	4	NE	UQ	1980
Senior Seminar	EC442	4	NE	UQ	1980
Special Unit	EC423	4	Open	UQ	1980

Subject Name	Code	Level	Area	University	Year
Special Unit	EC448	4	NE	UQ	1980
The Historical Development of Australian Economic Institutions	EC115	1	EH	UQ	1980
Theoretical & Applied Topics in Quantitative Economics	EC446	4	NEM	UQ	1980
Transport Economics	EC372	3	NE	UQ	1980
Urban Economics	EC392	3	NE	UQ	1980
Advanced Applied Econometrics	ECON6300	pgrad	NEE	UQ	2011
Advanced Econometric Theory	ECON6310	pgrad	NEE	UQ	2011
Advanced Macroeconomics	ECON3020	3	NE	UQ	2011
Advanced Microeconomics	ECON3010	3	NE	UQ	2011
Advanced Monetary Economics	ECON6200	pgrad	NE	UQ	2011
Applied Econometrics for Macroeconomics and Finance	ECON3350	3	NEE	UQ	2011
Applied Econometrics for Microeconomics	ECON3360	3	NEE	UQ	2011
Australian Economic History	ECON3600	3	EH	UQ	2011
Australian Economic Institutions	ECON1110	1	EH	UQ	2011
Behavioural and Evolutionary Economics	ECON2060	2	MPN	UQ	2011
Benefit-Cost Analysis for Business	ECON3220	3	NE	UQ	2011
Business & Economic Decision Techniques	ECON2320	2	NE	UQ	2011
China: Emergence, Implications & Challenges	ECON2500	2	EH	UQ	2011
Development Economics	ECON2510	2	DE	UQ	2011
Ecological & Environmental Economics	ECON6700	pgrad	NE	UQ	2011
Ecological Economics	ENVM1512	1	HE	UQ	2011
Econometric Theory	ECON3330	3	NEE	UQ	2011
Economic Analysis and Public Policy	POLS5740	pgrad	HE	UQ	2011
Economic Analysis of Law	ECON3730	3	NE	UQ	2011
Economic Development	ECON6500	pgrad	DE	UQ	2011
Economic Institutions and Global Banking	ECON3550	3	NE	UQ	2011
Economics of Business Strategy	ECON2410	2	NE	UQ	2011
Economics of Information and Communication Technology	ECON3420	3	NE	UQ	2011
Economics of Innovation and Entrepreneurship	ECON2540	2	HE	UQ	2011
Economics of Natural Resources	ECON3710	3	NE	UQ	2011

Subject Name	Code	Level	Area	University	Year
Economics of Professional Sports	ECON2830	2	NE	UQ	2011
Environment and Development	ENVM3518	3	NE	UQ	2011
Environmental Economics	ECON3700	3	NE	UQ	2011
Evolution of Economic Systems	ECON3540	3	HE	UQ	2011
Experimental Economics	ECON3060	3	MPN	UQ	2011
Game Theory & Strategy	ECON3050	3	NE	UQ	2011
Globalisation and Economic Development	ECON2560	2	EH	UQ	2011
Health Economics	ECON2460	2	NE	UQ	2011
Honours Thesis	ECON6910	pgrad	OPEN	UQ	2011
Human Resource Economics	ECON3800	3	NE	UQ	2011
Industrial & Labour Relations	ECON2810	2	NE	UQ	2011
Industrial Economics	ECON3400	3	NE	UQ	2011
Inter-Industry Economic Modelling	ECON6340	pgrad	NE	UQ	2011
International Economics	ECON6510	pgrad	NE	UQ	2011
International Economy in the Twentieth Century	ECON2610	2	EH	UQ	2011
International Macroeconomics	ECON3520	3	NE	UQ	2011
International Macroeconomics	ECON3520	3	NE	UQ	2011
International Trade Theory & Policy	ECON3510	3	NE	UQ	2011
Introductory Econometrics	ECON2300	2	NEE	UQ	2011
Introductory Macroeconomics	ECON1020	1	NE	UQ	2011
Introductory Microeconomics	ECON1010	1	NE	UQ	2011
Macroeconomic Policy	ECON2040	2	NE	UQ	2011
Macroeconomic Theory	ECON2020	2	NE	UQ	2011
Macroeconomics A	ECON6020	pgrad	NE	UQ	2011
Macroeconomics B	ECON6040	pgrad	NE	UQ	2011
Managerial Economics	ECON3430	3	NE	UQ	2011
Mathematical Economics	ECON2050	2	NEM	UQ	2011
Microeconomic Policy	ECON2030	2	NE	UQ	2011
Microeconomic Theory	ECON2010	2	NE	UQ	2011
Microeconomics A	ECON6010	pgrad	NE	UQ	2011

Subject Name	Code	Level	Area	University	Year
Microeconomics B	ECON6030	pgrad	NE	UQ	2011
Monetary Economics	ECON3200	3	NE	UQ	2011
Natural Resource Management	ENVM3523	3	NE	UQ	2011
Philosophy of Economic Thought	ECON2100	2	HET	UQ	2011
Political Economy & Comparative Systems	ECON2110	2	HE	UQ	2011
Politics & the Economy	POLS2401	2	HE	UQ	2011
Public Economics	ECON6420	pgrad	NE	UQ	2011
Quantitative Economic & Business Analysis A	ECON1310	1	NEM	UQ	2011
Quantitative Economic & Business Analysis B	ECON1320	1	NEM	UQ	2011
Regulatory Economics	ECON3440	3	NE	UQ	2011
Special Topics in Econometrics	ECON6370	pgrad	NEE	UQ	2011
Special Unit	ECON3900	3	OPEN	UQ	2011
Special Unit	ECON6900	pgrad	OPEN	UQ	2011
Statistical Theory for Economists	ECON3320	3	NEE	UQ	2011
The Economics of Labour Markets	ECON2800	2	NE	UQ	2011
The Economics of Social Issues	ECON1120	1	NE	UQ	2011
Tools of Economic Analysis	ECON1050	1	NEM	UQ	2011
Trading Floor and Economic Institutions	ECON3230	3	NE	UQ	2011
Applied Business Econometrics	ECON 3004	3	NEE	USA	2011
Development Economics N	BUIL 3011	3	NE	USA	2011
Economic Analysis of Business Decisions	ECON 2010	2	NE	USA	2011
Forecasting and Business Analysis	ECON 2007	2	NEE	USA	2011
Foundations of Environmental and Natural Resource Economics	BUSS 5360	pgrad	NE	USA	2011
Governance and Regulation in the Global Market	ECON 3005	3	NE	USA	2011
Growth Development and the Macroeconomy	ECON 2012	2	NE	USA	2011
Health Economics	BUSS 5185	pgrad	NE	USA	2011
International Economics	ECON 2009	2	NE	USA	2011
International Markets, Institutions and Policy	ECON 3006	3	NE	USA	2011
Introduction to Property Economics	ECON 1005	1	NE	USA	2011
Macroeconomics	ECON 1007	1	NE	USA	2011

Subject Name	Code	Level	Area	University	Year
Managerial Economics	ECON 3002	3	NE	USA	2011
Managerial Economics	BUSS 5248	pgrad	NE	USA	2011
Microeconomics	ECON 1006	1	NE	USA	2011
Principles of Economics	ECON 1008	1	NE	USA	2011
Property Market Analysis	ECON 2011	2	NE	USA	2011
Property Research	ECON 3003	3	NE	USA	2011
Property Research G	ECON 5019	pgrad	NE	USA	2011
Sustainability and Public Policy	ECON 3007	3	NE	USA	2011
Transport Economics	ECON 5009	pgrad	NE	USA	2011
Urban Economics G	ECON 5014	pgrad	NE	USA	2011
Economic Tools and Techniques	ENS702	pgrad	NEM	USC	2011
Economics for Business	BUS102	1	NE	USC	2011
Economics for Business	BUS502	pgrad	NE	USC	2011
Economics for Managers	BUS702	pgrad	NE	USC	2011
Economics for Managers	MBA708	pgrad	NE	USC	2011
Environmental and Resource Economics	ENS300	pgrad	NE	USC	2011
Managerial Economics	EMB758	pgrad	NE	USC	2011
Property Economics	PED120	1	NE	USC	2011
Business in the International Economy	ECO8060	pgrad	NE	USQ	2011
Economic Policy Analysis	ECO3002	3	NE	USQ	2011
Economics	ECO1000	1	NE	USQ	2011
Economics for Managers	ECO5000	pgrad	NE	USQ	2011
Macroeconomics for Business and Government	ECO2000	2	NE	USQ	2011
Microeconomics for Business and Government	ECO2001	2	NE	USQ	2011
Sustainable Economies	ECO3030	3	NE	USQ	2011
Econometric Models and Methods	ECMT3110	3	NEE	USYD	2011
Econometrics Honours A	ECMT4101	4	NEE	USYD	2011
Econometrics Honours B	ECMT4102	4	NEE	USYD	2011
Financial Econometrics	ECMT2130	2	NEE	USYD	2011
Advanced Macroeconomics Honours	ECOS3902	4	NE	USYD	2011

Subject Name	Code	Level	Area	University	Year
Analysis of Business Cycles	ECOP2601	2	HE	USYD	2011
Analysis of Discrete Choice Data	ECMT2120	2	NEE	USYD	2011
Applied Econometrics	ECMT3120	3	NEE	USYD	2011
Applied Economics	ECOS3903	3	NE	USYD	2011
Business Cycles and Asset Markets	ECOS3021	3	NE	USYD	2011
Capital and Dynamics	ECOS3019	3	HE	USYD	2011
China in the World Economy	ECOP6016	pgrad	HE	USYD	2011
Core Concepts in Political Economy	ECOP6101	pgrad	HE	USYD	2011
Current Global Issues	INGS3601	3	HE	USYD	2011
Development Economics	ECOS3002	3	DE	USYD	2011
Dissertation Part A	ECOP6026	pgrad	HE	USYD	2011
Dissertation Part B	ECOP6027	pgrad	HE	USYD	2011
Dissertation Proposal	ECOP6025	pgrad	HE	USYD	2011
Distribution of Income and Wealth	ECOP3620	3	HE	USYD	2011
Econometrics Honours C	ECMT4103	4	NEE	USYD	2011
Econometrics Honours D	ECMT4104	4	NEE	USYD	2011
Economic Development: Growth & Wellbeing	ECOP6018	pgrad	HE	USYD	2011
Economic Policy in Global Context	ECOP2612	2	HE	USYD	2011
Economics as a Social Science	ECOP1001	1	HE	USYD	2011
Economics for Accountants	ECON5003	pgrad	NE	USYD	2011
Economics for Commerce	ECON5000	pgrad	NE	USYD	2011
Economics for Commerce	ECON5000	pgrad	NE	USYD	2011
Economics of Competition and Strategy	ECOS2201	2	NE	USYD	2011
Economics of Growth	ECOS3018	3	NE	USYD	2011
Economics of Modern Capitalism	ECOP2011	2	HE	USYD	2011
Economics of the Labour Market	ECON6009	pgrad	NE	USYD	2011
Economy and Society	ECOP1004	1	HE	USYD	2011
Environmental Economics	ECON6018	pgrad	NE	USYD	2011
Experimental and Behavioural Economics	ECOS3016	3	MPN	USYD	2011
Experimental Economics	ECON6027	pgrad	MPN	USYD	2011

Subject Name	Code	Level	Area	University	Year
Finance and Economic Change	ECOP6901	pgrad	HE	USYD	2011
Finance: Volatility and Regulation	ECOP3019	3	HE	USYD	2011
Financial Economics	ECON6021	pgrad	NE	USYD	2011
Forecasting for Economics and Business	ECMT3130	3	NEE	USYD	2011
Global Employment and Migration	ECOP6015	pgrad	HE	USYD	2011
Global Political Economy	ECOP3012	3	HE	USYD	2011
Health Economics	ECOS3017	3	NE	USYD	2011
Hierarchies, Incentives & Firm Structure	ECOS3003	3	NE	USYD	2011
History of Economic Thought	ECOS3004	3	HET	USYD	2011
Human Rights & International Development	ECOP6130	pgrad	HE	USYD	2011
Human Rights in Development	ECOP3017	3	HE	USYD	2011
Industrial Organisation	ECOS3005	3	NE	USYD	2011
Intermediate Macroeconomics	ECOS2002	2	NE	USYD	2011
Intermediate Macroeconomics Honours	ECOS2902	4	NE	USYD	2011
Intermediate Microeconomics	ECOS2001	2	NE	USYD	2011
Intermediate Microeconomics Honours	ECOS2901	4	NE	USYD	2011
International Economy and Finance	ECOP1003	1	HE	USYD	2011
International Macroeconomics	ECOS3007	3	NE	USYD	2011
International Money and Finance	ECON6008	pgrad	NE	USYD	2011
International Trade	ECON6023	pgrad	NE	USYD	2011
International Trade	ECOS3006	3	NE	USYD	2011
International Trade Regulation	ECOP6010	pgrad	HE	USYD	2011
Introductory Macroeconomics	ECON1002	1	NE	USYD	2011
Introductory Microeconomics	ECON1001	1	NE	USYD	2011
Labour Economics	ECOS3008	3	NE	USYD	2011
Law and Economics	ECOS3015	3	NE	USYD	2011
Long Essay/Project	ECOP6104	pgrad	HE	USYD	2011
Macroeconomic Theory	ECON5002	pgrad	NE	USYD	2011
Macroeconomics Analysis 1	ECON6002	pgrad	NE	USYD	2011
Macroeconomics Analysis 2	ECON6902	pgrad	NE	USYD	2011

Subject Name	Code	Level	Area	University	Year
Management Decision Sciences Honours A	ECMT4601	4	NEE	USYD	2011
Management Decision Sciences Honours B	ECMT4602	4	NEE	USYD	2011
Management Decision Sciences Honours C	ECMT4603	4	NEE	USYD	2011
Management Decision Sciences Honours D	ECMT4604	4	NEE	USYD	2011
Managerial Firms: Evolution & Attributes	ECOS2306	2	ECL	USYD	2011
Market Structure and Strategic Behaviour	ECON6006	pgrad	NE	USYD	2011
Mathematical Economics A	ECOS2903	2	NEM	USYD	2011
Mathematical Methods of Econ Analysis	ECON6003	pgrad	NEM	USYD	2011
Microeconomic Theory	ECON5001	pgrad	NE	USYD	2011
Microeconomics Analysis 1	ECON6001	pgrad	NE	USYD	2011
Microeconomics Analysis 2	ECON6901	pgrad	NE	USYD	2011
Monetary Economics	ECOS3010	3	NE	USYD	2011
Political Economy Honours A	ECOP4001	4	HE	USYD	2011
Political Economy Honours B	ECOP4002	4	HE	USYD	2011
Political Economy Honours C	ECOP4003	4	HE	USYD	2011
Political Economy Honours D	ECOP4004	4	HE	USYD	2011
Political Economy Honours II	ECOP2911	4	HE	USYD	2011
Political Economy of Conflict & Peace	ECOP6019	pgrad	HE	USYD	2011
Political Economy of Development	ECOP3014	3	HE	USYD	2011
Political Economy of the Environment	ECOP3015	3	HE	USYD	2011
Power and Money in Global Society	INGS1001	1	HE	USYD	2011
Public Economics	ECON6010	pgrad	NE	USYD	2011
Quantitative Methods in Economics	ECON1003	1	NEM	USYD	2011
Regression Modelling.	ECMT2110	2	NEE	USYD	2011
Research Essay for MEc(Soc Sc) Part 1	ECOP6028	pgrad	HE	USYD	2011
Research Essay for MEc(Soc Sc) Part 2	ECOP6029	pgrad	HE	USYD	2011
Research in Political Economy	ECOP3912	3	HE	USYD	2011
Research in Political Economy	ECOP6031	pgrad	HE	USYD	2011
Social Foundations of Modern Capitalism	ECOP2012	2	HE	USYD	2011
Special Topic in Economics	ECON6101	pgrad	NE	USYD	2011

Subject Name	Code	Level	Area	University	Year
Special Topic in Economics	ECON6101	pgrad	NE	USYD	2011
Special Topic in Economics	ECOS3020	3	NE	USYD	2011
Strategic Behaviour	ECOS3012	3	NE	USYD	2011
Strategic Business Relationships	ECON6026	pgrad	NE	USYD	2011
Strategic Debates on Economic Change	ECOP6103	pgrad	HE	USYD	2011
Strategic Decision Making	ECON6025	pgrad	NE	USYD	2011
The Econometrics of Financial Markets	ECMT3150	3	NEE	USYD	2011
The Economics of Financial Markets	ECOS3022	3	NE	USYD	2011
Theories in Political Economy	ECOP3911	3	HE	USYD	2011
Trade and Development	ECON6016	pgrad	NE	USYD	2011
USA-Europe-Japan: Trade and Investment	ECOP6011	pgrad	HE	USYD	2011
Advanced Macroeconomics	25917	ugrad	NE	UTS	2011
Alternative Perspectives in Contemporary Economics	25623	ugrad	HE	UTS	2011
Applied International Business	21532	ugrad	NE	UTS	2011
Applied Microeconometrics	25572	ugrad	NEE	UTS	2011
Applied Regression Analysis	25020	ugrad	NEM	UTS	2011
Asian-Australian Economics Relations	25304	ugrad	EH	UTS	2011
Business Statistics	26134	ugrad	NEE	UTS	2011
Economic Growth and Development	25569	ugrad	NE	UTS	2011
Economic Policy Seminar	25918	ugrad	NE	UTS	2011
Economics and Finance of the Life Cycle	25005	ugrad	NE	UTS	2011
Economics for Business	25115	ugrad	NE	UTS	2011
Economics for Business 2	25566	ugrad	NE	UTS	2011
Economics for Management	25706	ugrad	NE	UTS	2011
Economics of Auditing and Assurance Services	22908	ugrad	NE	UTS	2011
Economics of Money and Finance	25416	ugrad	NE	UTS	2011
Economics of the Environment	25570	ugrad	NE	UTS	2011
Economics of the Firm	25562	ugrad	NE	UTS	2011
Ethics in Finance	25602	ugrad	ECL	UTS	2011
Fundamentals of Mathematical Economics	25565	ugrad	NEM	UTS	2011

Subject Name	Code	Level	Area	University	Year
Intermediate Macroeconomics	25568	ugrad	NE	UTS	2011
Intermediate Microeconomics	25567	ugrad	NE	UTS	2011
International Economics	25315	ugrad	NE	UTS	2011
Introductory Econometrics	25571	ugrad	NEE	UTS	2011
Introductory Health Economics	26703	ugrad	NE	UTS	2011
Labour and Industry in the Global Context	25564	ugrad	NE	UTS	2011
Labour Economics	25021	ugrad	NE	UTS	2011
Macroeconomics: Theory and Applications	25555	ugrad	NE	UTS	2011
Managerial Economics	25845	ugrad	NE	UTS	2011
Public Economics	25022	ugrad	NE	UTS	2011
Quantitative Business Analysis	25622	ugrad	NEM	UTS	2011
Quantitative Management	21742	ugrad	NEM	UTS	2011
Readings in Economics	25781	pgrad	Open	UTS	2011
Readings in Economics	25919	ugrad	Open	UTS	2011
Research Seminar in Finance and Economics	25788	pgrad	OPEN	UTS	2011
Society, Economy and Globalisation	58123	ugrad	HE	UTS	2011
The Global Economy (Capstone)	25580	ugrad	ECL	UTS	2011
Time Series Econometrics	25573	ugrad	NEE	UTS	2011
Asian Economic Systems 402	41.402	4	CES	UWA	1980
Australian Economic History 241	41.241	2	EH	UWA	1980
Australian Economic Problems and Policies 412	40.412	4	NE	UWA	1980
Australian Labour Relations 220	45.22	2	NE	UWA	1980
British Economic History 210	41.210	2	EH	UWA	1980
Capital, Growth And Distribution 415	40.415	4	HE	UWA	1980
Comparative Economic Systems 380	40.380	3	CES	UWA	1980
Comparative Labour Relations 310	45.31	3	NE	UWA	1980
Disaggregated Economics 320	43.32	3	NE	UWA	1980
Econometrics 302	43.302	3	NEE	UWA	1980
Econometrics 401	43.401	4	NEE	UWA	1980
Economic And Social Statistics 200	43.2	2	NEE	UWA	1980

Subject Name	Code	Level	Area	University	Year
Economic Demography 411	40.411	4	DE	UWA	1980
Economic Development 220	40.220	2	DE	UWA	1980
Economic History 100	41.100	1	EH	UWA	1980
Economic Statistics 301	43.301	3	NEE	UWA	1980
Economic Statistics 303	43.303	3	NEE	UWA	1980
Economics 100	40.100	1	NE	UWA	1980
Economics 201	40.201	2	NE	UWA	1980
Economics 202	40.202	2	NE	UWA	1980
Economics 301	40.301	3	NE	UWA	1980
Economics 302	40.302	3	HE	UWA	1980
Economics of Australian Industry 365	40.356	3	NE	UWA	1980
Economics of Industrial Organisation 360	40.360	3	NE	UWA	1980
Environmental Economics 370	40.370	3	NE	UWA	1980
Historical Demography 403	41.403	4	EH	UWA	1980
History Of Economic Analysis 310	41.31	3	HET	UWA	1980
International Economics 320	40.320	3	NE	UWA	1980
Japanese Economic History 231	44.231	2	EH	UWA	1980
Japanese Economic History 232	44.232	2	EH	UWA	1980
Japanese Studies 100	44.1	1	EH	UWA	1980
Labour Economics 330	40.330	3	NE	UWA	1980
Labour History 404	45.404	4	EH	UWA	1980
Labour Markets And Manpower Policy 403	45.403	4	NE	UWA	1980
Mathematical Economics 211	43.211	2	NEM	UWA	1980
Mathematical Economics 212	43.212	2	NEM	UWA	1980
Micro-Economic Theory 413	40.413	4	NE	UWA	1980
Middle East Economies 270	41.27	2	EH	UWA	1980
Middle East Economies 370	41.37	3	CES	UWA	1980
Middle East Economies 470	41.47	4	DE	UWA	1980
Modern European Economic History 215	41.215	2	EH	UWA	1980
Monetary Economics 210	40.210	2	NE	UWA	1980

Subject Name	Code	Level	Area	University	Year
Monetary Theory And Macro-Economics 414	40.414	4	NE	UWA	1980
Operations Research 311	43.311	3	NEE	UWA	1980
Operations Research 312	43.312	3	NEE	UWA	1980
Operations Research 421	43.421	4	NEE	UWA	1980
Operations Research 422	43.422	4	NEE	UWA	1980
Philosophy And Methodology Of Economic History 404	41.404	4	EH	UWA	1980
Population Economics	40.230	2	DE	UWA	1980
Public Economics 416	40.416	4	NE	UWA	1980
Public Finance and Fiscal Policy 340	40.340	3	NE	UWA	1980
Regional and Urban Economics 350	40.350	3	NE	UWA	1980
Russian Economic History 220	41.220	2	EH	UWA	1980
Settlement Of Industrial Relations Disputes 405	45.405	4	NE	UWA	1980
Social Psychology Of Work 210	45.21	2	ECL	UWA	1980
South Asian Economic History 261	41.261	2	EH	UWA	1980
Southeast Asian Economic History 261	41.200	2	EH	UWA	1980
Topics In Applied Econometrics 402	43.402	4	NEE	UWA	1980
Topics In Economic Development 408	40.408	4	DE	UWA	1980
Topics In Post-War Australian Economic History 401	41.401	4	EH	UWA	1980
Topics In Regional And Urban Economics 409	40.409	4	NE	UWA	1980
Transport Economics 335	40.355	3	NE	UWA	1980
United States Economic History 250	41.250	2	EH	UWA	1980
Workers, Unions And Employers 230	45.23	2	NE	UWA	1980
Advanced Economic Development	ECON7408	4	EH	UWA	2011
Advanced Economic Development	ECON8821	4	DE	UWA	2011
Advanced International Trade	ECON7450	4	NE	UWA	2011
Advanced International Trade	ECON8825	4	OPEN	UWA	2011
Applied Econometrics	ECON3313	3	NEE	UWA	2011
Applied Economic Analysis	ECON3305	3	NE	UWA	2011
ASEAN Economic History	ECON2260	2	EH	UWA	2011
Asia in the World Economy	ECON2203	2	EH	UWA	2011

Subject Name	Code	Level	Area	University	Year
Australian Economic History	ECON1141	1	EH	UWA	2011
Britain and the Industrial Revolution	ECON2202	2	EH	UWA	2011
Business Econometrics	ECON2271	2	NEE	UWA	2011
Business Economics	ECON2245	2	NE	UWA	2011
Dissertation	ECON8517	4	OPEN	UWA	2011
Dissertation	ECON8518	4	OPEN	UWA	2011
Dissertation (Economics) Part 1	ECON7486	4	OPEN	UWA	2011
Dissertation (Economics) Part 2	ECON7487	4	OPEN	UWA	2011
Dissertation (Economics) Part 3	ECON7488	4	OPEN	UWA	2011
Dissertation (Economics) Part 4	ECON7489	4	OPEN	UWA	2011
Dissertation (Master of Economics) Part 1	ECON8520	4	OPEN	UWA	2011
Dissertation (Master of Economics) Part 2	ECON8521	4	OPEN	UWA	2011
Econometrics	ECON3371	3	NEE	UWA	2011
Econometrics	ECON7411	4	NEE	UWA	2011
Econometrics	ECON8822	4	NEE	UWA	2011
Economic Development	ECON2220	2	DE	UWA	2011
Economic Policy Analysis	ECON8401	4	NE	UWA	2011
Financial Economics	ECON7423	4	NE	UWA	2011
Financial Economics	ECON8824	4	NE	UWA	2011
Forecasting and Economics	ECON8510	4	NEE	UWA	2011
History of Economic Ideas	ECON3310	3	HET	UWA	2011
International Trade	ECON2235	2	NE	UWA	2011
Introductory Quantitative Economics	ECON8493	4	NE	UWA	2011
Japanese Economic History	ECON2262	2	EH	UWA	2011
Macroeconomic Theory	ECON3365	3	NE	UWA	2011
Macroeconomic Theory	ECON7418	4	NE	UWA	2011
Macroeconomic Theory	ECON8818	4	NE	UWA	2011
Macroeconomic Theory and Applications	ECON7492	4	NE	UWA	2011
Macroeconomic Theory and Applications	ECON8819	4	NE	UWA	2011
Macroeconomics: Money and Finance	ECON1102	1	NE	UWA	2011

Subject Name	Code	Level	Area	University	Year
Macroeconomics: Policy and Applications	ECON2234	2	NE	UWA	2011
Master's Dissertation (Economics) Part 1	ECON8881	5	OPEN	UWA	2011
Master's Dissertation (Economics) Part 2	ECON8882	5	OPEN	UWA	2011
Master's Dissertation (Economics) Part 3	ECON8883	5	OPEN	UWA	2011
Master's Dissertation (Economics) Part 4	ECON8884	5	OPEN	UWA	2011
Mathematical Economics	ECON8412	4	NEM	UWA	2011
Mathematics for Economists	ECON2272	2	NEM	UWA	2011
Mathematics for Economists	ECON3372	3	NEM	UWA	2011
Microeconomic Theory	ECON3364	3	NE	UWA	2011
Microeconomic Theory	ECON7402	4	NE	UWA	2011
Microeconomic Theory	ECON8816	4	NE	UWA	2011
Microeconomic Theory and Applications	ECON7491	4	NE	UWA	2011
Microeconomic Theory and Applications	ECON8817	4	NE	UWA	2011
Microeconomics: Policy and Applications	ECON2233	2	NE	UWA	2011
Microeconomics: Prices and Markets	ECON1101	1	NE	UWA	2011
Middle East Economies	ECON2270	2	EH	UWA	2011
Monetary Economics	ECON2210	2	NE	UWA	2011
Monetary Economics	ECON7422	4	NE	UWA	2011
Monetary Economics	ECON8823	4	NE	UWA	2011
Money, Banking and Financial Markets	ECON3350	3	NE	UWA	2011
Public Economics	ECON7405	4	NE	UWA	2011
Public Economics	ECON8820	4	NE	UWA	2011
Public Finance	ECON2295	2	NE	UWA	2011
Quantitative Methods for Business and Economics	ECON1111	1	NEM	UWA	2011
Resource Economics	ECON8501	4	NE	UWA	2011
Resource Economics	ECON8807	4	NE	UWA	2011
Rise of the Global Economy	ECON1105	1	NE	UWA	2011
Topics in Applied Econometrics	ECON7413	4	NEE	UWA	2011
Topics in Applied Econometrics	ECON8513	4	NEE	UWA	2011
Topics in Applied Econometrics	ECON8813	4	NEE	UWA	2011

Subject Name	Code	Level	Area	University	Year
Topics in Econometric Theory	ECON8512	4	NEE	UWA	2011
Topics in Economic Analysis	ECON7503	4	OPEN	UWA	2011
Topics in Economic History	ECON8508	4	EH	UWA	2011
Topics in Economics and Its Application	ECON8519	4	OPEN	UWA	2011
Topics in Quantitative Economics	ECON7504	4	NE	UWA	2011
Topics in the History of Economic Ideas	ECON7507	4	HET	UWA	2011
Topics in the History of Economic Ideas	ECON8826	4	HET	UWA	2011
Advanced Macroeconomics	200492	5	NE	UWS	2011
Advanced Microeconomics	200442	5	NE	UWS	2011
Advanced Political Economy Theory and Research Methods	200441	5	HE	UWS	2011
Advanced Topics in Game Theory	200491	5	NE	UWS	2011
Applied Econometrics	200054	3	NEE	UWS	2011
Behavioural Finance	200518	3	HE	UWS	2011
Economic Modelling	200053	3	NEE	UWS	2011
Economics and Finance Engagement Project	200537	3	ECL	UWS	2011
Economics and Finance Research Methods	200440	5	NEE	UWS	2011
Economics Honours Thesis	200703	5	OPEN	UWS	2011
Economics Research Seminar	200489	5	NE	UWS	2011
Financial Economics	200059	3	NE	UWS	2011
Global Labour Markets	200538	3	NE	UWS	2011
Globalisation and Asia	200533	3	EH	UWS	2011
Globalisation and Australia	200540	1	EH	UWS	2011
Globalisation and Trade	200541	2	NE	UWS	2011
Government and the Economy	200532	3	HE	UWS	2011
History of Economic Thought	200064	2	HET	UWS	2011
Industry Economics and Markets	200531	3	NE	UWS	2011
Introduction to Economic Methods	200052	1	NEM	UWS	2011
Macroeconomic Issues	200546	3	NE	UWS	2011
Macroeconomic Theory	200547	2	NE	UWS	2011
Managerial Economics	200081	3	NE	UWS	2011

Subject Name	Code	Level	Area	University	Year
Microeconomic Theory and Applications	200530	3	NE	UWS	2011
Political Economy	200065	3	HE	UWS	2011
Principles of Economics	200525	1	NE	UWS	2011
Principles of Economics (UWSC)	700006	1	NE	UWS	2011
Project Evaluation and Economic Forecasting	200069	2	NEE	UWS	2011
The Australian Macroeconomy	200549	1	NE	UWS	2011
Urban and Regional Economics	200075	3	NE	UWS	2011
Advanced Macroeconomics	BEO4661	4	NE	VU	2011
Advanced Managerial Economics	BEO5602	pgrad	NE	VU	2011
Advanced Microeconomics	BEO4403	4	NE	VU	2011
Advanced Microeconomics	BEO4403	4	NE	VU	2011
Airfreight Economics	BEO3419	3	NE	VU	2011
Applied Econometrics	BEO4683	4	NEE	VU	2011
Applied Economics Research Project	BEO3500	3	OPEN	VU	2011
Applied Regression Analysis	BEO2283	2	NEE	VU	2011
Business Decision Methods	BEO2381	2	NE	VU	2011
Business Economics	BEO6600	pgrad	NE	VU	2011
Business Forecasting Methods	BEO2284	2	NEE	VU	2011
Business Risk And Planning	BEO6617	pgrad	NE	VU	2011
Business Statistics	BEO1106	1	NEE	VU	2011
Business Statistics	BEO5539	pgrad	NEE	VU	2011
Commercial Shipping Economics	BEO5322	pgrad	NE	VU	2011
Distribution Management And Operations	BEO3201	3	NE	VU	2011
Econometrics And Forecasting	BEO5603	pgrad	NEE	VU	2011
Economic Analysis	BEO6601	pgrad	NE	VU	2011
Economic Impacts Of Events	BEO5407	pgrad	NE	VU	2011
Economic Policy And Research	BEO3366	3	NE	VU	2011
Economic Principles	BEO1105	1	NE	VU	2011
Economics	BWD1004	1	NE	VU	2011
Economics	BEO5538	pgrad	NE	VU	2011

Subject Name	Code	Level	Area	University	Year
Economics For Management	BEO6500	pgrad	NE	VU	2011
Economics Of International Trade	BEO5601	pgrad	NE	VU	2011
Economics Of Public Enterprise	BEO6562	pgrad	NE	VU	2011
Economics Of Retailing	BEO3257	3	NE	VU	2011
Ethical Investment	BEO3304	3	ECL	VU	2011
Ethics In Financial Markets	BEO5551	pgrad	ECL	VU	2011
European Business Environment	BEO2302	2	NE	VU	2011
Event Evaluation And Legacy	BEO5408	pgrad	NE	VU	2011
Field Research Project	BEO3433	3	OPEN	VU	2011
Financial Institutions & Monetary Theory	BEO3446	3	NE	VU	2011
Global Aviation Economics	BEO5323	pgrad	NE	VU	2011
Global Transport Economics	BEO3418	3	NE	VU	2011
Honours Thesis Full Time	BEO4400	4	OPEN	VU	2011
Human Resource Economics	BEO5544	pgrad	NE	VU	2011
International Business Environment	BEO6567	pgrad	NE	VU	2011
International Economic Analysis	BEO3430	3	NE	VU	2011
International Economic Regulation	BEO5301	pgrad	NE	VU	2011
International Economics	BEO5567	pgrad	NE	VU	2011
International Economics And Finance	BEO3378	3	NE	VU	2011
Introduction To Music Business	BEO2403	2	NE	VU	2011
Introductory Econometrics	BEO5566	pgrad	NEE	VU	2011
Macroeconomic Analysis	BEO2263	2	NE	VU	2011
Macroeconomic Principles	BEO1104	1	NE	VU	2011
Microeconomic Analysis	BEO2264	2	NE	VU	2011
Microeconomic Principles	BEO1103	1	NE	VU	2011
Port And Terminal Economics	BEO5321	pgrad	NE	VU	2011
Probability And Data Analysis	BEO5500	pgrad	NEE	VU	2011
Public Sector Economics	BEO5522	pgrad	NE	VU	2011
Quantitative Analysis	BEO6501	pgrad	NEM	VU	2011
Quantitative Methods For Eco And Bus	BEO2250	2	NEM	VU	2011

Subject Name	Code	Level	Area	University	Year
Quantitative Techniques For Business	BEO1101	1	NEM	VU	2011
Regression And Time Series Modelling	BEO5502	pgrad	NEE	VU	2011
Risk Analysis And Management	BEO2410	2	NE	VU	2011
Risk Management And Insurance	BEO2401	2	NE	VU	2011
Risk Management Models	BEO2431	2	NE	VU	2011
Risk Models And Management	BEO6618	pgrad	NE	VU	2011
Sampling And Inferential Statistics	BEO5501	pgrad	NEE	VU	2011
Statistical Data Analysis For Business	BEO5554	pgrad	NEE	VU	2011
Statistics For Business And Marketing	BEO2254	2	NEE	VU	2011
Strategic International Trade Operations	BEO3432	3	NE	VU	2011
Supply Principles	BEO3202	3	NE	VU	2011
The Entertainment Economy	BEO3301	3	NE	VU	2011
Thesis (Part Time)	BEO7701	pgrad	OPEN	VU	2011
Thesis Full Time	BEO7700	pgrad	OPEN	VU	2011
Tourism Economics	BEO6704	pgrad	NE	VU	2011

**Appendix 2. Transcript of telephone interview between Tim Thornton and Professor Frank Stilwell
29th of September 2008**

Appendix 2

Phone Interview of Professor Frank Stilwell, Head, Department of Political Economy, University of Sydney by Tim Thornton, PhD Student, Dept of Economics & Finance, La Trobe University, 29th September 2008.

Question (Q). Your book *Political-Economy: the contest of economic ideas* is now in its second edition; it has obviously met with some level of success. Has it been used mainly in economics departments or politics departments?

Answer (A). I have difficulty in answering that. I do know that it is used by George Argyrous in the Department of Social Science and Policy at the University of New South Wales. This department is not an economics department, nor a politics department; it is a social science and policy school. Tim Batten at the Department of Economics at the University of New England also uses it. Most of the sales have been Australian, and a pretty high proportion of those have been at the University of Sydney.

Q. Was the book targeted at Australian Universities?

A. Oxford University Press (OUP) wanted a more Australian focused book but I always had the view that there was an international market. If I had written the book stuffed full of Australian examples this would have closed the door to international sales. I tried to strike a balance so as to cater to both the domestic and international markets. It has sold reasonably well in the United States and the United Kingdom (UK), though international sales have not been mega.

You have to take into account the way the publishing industry is organised; publishers are now multinational in character, they often have quite a lot of local focus in the development of new titles and this local focus is emphasised in the marketing process. Although OUP is UK based, its Australian operation is, to some extent, independent. This means that overseas sales do not necessarily get prominent marketing because one branch (for example OUP UK) wouldn't have the same commitment and incentives to sell the book as OUP Australia. These internal publishing dynamics significantly influence outcomes.

My hope of course, though never my prediction, was that the text would become a standard text to replace the introductory orthodox economics micro/macro text. Frankly, I never expected this to actually happen, because the entire history of my experience is that orthodox economists, for the most part, are closed to anything that asserts a pluralistic approach to education.

Q. The book looks like it can be easily integrated into 12 or 13 week semesters, this contrast to other texts such as Hugh Stretton's *Economics: a new introduction* which seems impractical to incorporate into a subject that only runs a semester.

A. Hugh's book is an admirable work, but it is also a difficult book from a teaching point of view; you either have to take it or leave it and ninety percent of economists will just leave it.

Q. Perhaps it is a book that has a second life, beyond being just an undergraduate text, perhaps providing an 'in' to other social scientists wanting to understand economics?

A. That's the way that I use it here, I refer students to it as a reference, something that provides a bridge into broader debates that exist within the social sciences.

Q. Political Economy has had a long struggle to exist within the Business and Economics Faculty at the University of Sydney. Why have you recently moved to the Arts faculty?

A. Are you asking if we were jumped or were we pushed? We were pushed, but when it came to the crunch I was happy to jump. The economics faculty, when I joined it here in the 1970s, was then more liberal in its concerns. Yes, the orthodox economists were dominant, but the faculty also had industrial relations and government. The department of accounting did exist, but was still a relatively small department. In the years since then all the commerce subjects have grown and the social science wing of the faculty became relatively impoverished. New departments have been fostered in management, information systems, marketing and finance. Departments like government (as politics is called here) and political economy, were seen, particularly by the Dean (who just really wanted a business school) as not being part of the core business of the faculty. The university decided to set up a review into the future of the social sciences. It became clear that the Arts faculty wanted us and the Dean of the Business faculty did not want us. Frankly, this left us no option. So, formally you could say we were pushed out of the Business faculty, but personally, I was at the stage where I was happy to go. This was because we were getting such a raw deal, in what essentially had become a business and management school. There was no sympathy for what we were doing. Staff numbers had been throttled. We were being white-anted in various ways by a faculty leadership that was unsympathetic to our activities.

Q. Was the push coming more from the Dean of the Business faculty rather than from within the economics department?

A. Yes that right, from about 1999-2000 onwards we've had a separate department of political economy that was entirely separate from the economics department. Up to then, right through the 1970s to the late 1990s, there had been just one department of economics with the two internal factions; the big faction of orthodox economists and the small faction of political economists. We clawed our way to some degree of relative autonomy, but it wasn't until 1999 that we were given the status of being a separate discipline. From then on we really didn't have any fight with the orthodox economists.

Q. So once there was a clear boundary things changed?

A. That's right. They did economics as they see it, and we did something else they weren't interested in. The students were able to choose - mind you, if they were doing a Bachelor of Commerce they were required to do the orthodox economics courses and they could only do political economy as an option.

However, there were students in other degrees such as Bachelor of Arts, Bachelor of Economics and Social Sciences and Bachelor of International Studies. Those students could freely choose between the orthodox economics stream or the political economy stream from year one onwards. It wasn't a bad setup really. If it was not for the fact that the Dean of the faculty was really unsympathetic to what we were doing, we could have carried on like that indefinitely. However, the circumstances were such that when the option of shifting the faculty of Arts arose, I was personally very enthusiastic to embrace it. Now that the department has moved, I think everyone is seeing that it is a good outcome. We have had a surge of student enrolments of the sort we have never seen before. We have got mega numbers. We have also just advertised a position; this is the first time we have hired staff in a long while. If this level of growth is maintained we will advertise more positions. Importantly, there is no pressure on us to appoint orthodox economists.

Q. Does all this suggest that we should not bother trying to rebuild economics departments in a plural way; we should instead just get politics departments to seize the turf and teach a more pluralistic economics under the banner of political economy? It sounds like it is a lucrative turf.

A. Sure, we have certainly seen it turning out that way.

Q. Structurally speaking, are you still your own department?

A. Yes, in fact we have got more autonomy than ever. We are in a new school of social and political sciences. The school is comprised of government (as politics is called here), anthropology, sociology and social policy and the Centre for Peace and Conflict Studies. We are not actually all together in the same building. The school is a sort of an institutional fiction, but it is proving to be a culture, an environment, that is much more sympathetic towards what we are doing in teaching and research.

Q. Do you now think you wish you had made the jump earlier, or do you think that it is only very recently that the move has made sense?

A. Interesting question, I would have to say that most of my colleagues would have said that they did not want to go the Arts faculty because economics and business is a rich faculty and arts is not. This means that staff do not get quite as many perks; such as grants to travel to international conferences and so on. However, I take the view that it is better to get a fair go in a poor territory than be discriminated against in a rich one.

Q. But you would now be getting far more income because enrolments have increased, is it not the case that enrolments are the primary driver of a department's wealth?

A. Yes, that's right.

Q. Back in your previous faculty, do you think the Dean had a particular vision of what a business faculty should be, or do you think he had a particular vision of what economics should be? That is, do you think the primary objective was to

give a corporate sheen to the faculty, rather than pursue a very orthodox approach to economics?

A. Corporate sheen is exactly the right phrase. Actually, you have to step back a bit and ask, where does economics stand in these circumstances? On the one hand, it is been subject to a critique of long standing on its left flank. This is a critique from people such as myself and my colleagues in political economy, who are challenging neoclassical orthodoxy with ideas drawn from heterodox traditions; Marxist, institutionalist, feminist, post-Keynesian. Yet, on the other hand, economics is vulnerable on its right-wing flank because, as it is conventionally taught, it is not much use to business. What business students and business deans require is something that is much more instrumental, much more managerial, less concerned with theoretical structures, certainly not concerned with general equilibrium. They want a 'cookbook economics' that is useful for people going into business. I don't know whether that is a good thing or not, but I do know that the way it manifests within the university is in demands by the Dean on the orthodox economists to do special courses in economics for business students. This is another thing for orthodox economists to be uncomfortable about, because they like their grand theories. They have had to grudgingly re-label some of their micro courses 'management economics' or something like that. Fundamentally, they are still teaching neoclassical theory. I find it interesting, almost amusing, to see economics challenged on its other flank.

Q. David Colander and others have recently argued that neoclassical economics is dying or dead and that established critiques are now attacking a straw man.

A. I am not convinced about that.

Q. Even if there is change at the research frontier do you think there could be changes in what is taught any time soon?

A. There have always been bubbles like this in orthodox economics, but the core features of neoclassical theory from about 1870 onwards have been constant. There have been changes over time; little fashions here and there. Over the last 20 years there has been a bit of behavioural economics, certainly big slabs of game theory, all these things have been grafted on to the orthodoxy, but they haven't fundamentally transformed it. There was always something; in the 1930s there was Joan Robinson's theory of imperfect competition, there was Pigou's theory about externalities. These were understood as deviations from general equilibrium, perfect competition neoclassicism. I wouldn't read too much into the likelihood of those adaptations actually undermining neoclassical economics. I would argue the other way around; if you judge a theory by its influence in the real world, neoclassical economics is stronger than ever. I am thinking in terms of neoliberalism as the dominant political-economic philosophy influencing public policy and prevailing attitudes in the political sphere over the last quarter century. There are other explanations for this situation beyond neoclassical theory, but it is a strong package and it is very influential. In the class room they are still

teaching basic micro and macro as ever. In the political realm they are privatising and deregulating in ways that draw legitimacy from orthodox economic theory. If there is material from game theory and behavioural economics in the journals, well that's kind of fun for the practitioners, but it is not the main game. The main game is teaching micro and reproducing a free market orthodoxy that is influential in the real world.

Q. Monash University went through a stage in the 1980s where there was open intolerance of non-orthodox views, and this was to some extent mirrored at Sydney University. Do you think that, even if orthodox economists have not changed what they are teaching, they have become more tolerant of non-orthodox views within economics departments?

A. I have certainly seen plenty of examples of intolerance, suppression and victimisation of dissidents and radicals, yet it is now a difficult question for me to answer given that political economy has been a separate department at Sydney University for quite a few years now. I now don't see such problems. Creating a department of political economy as a separate department created a major safety-valve. Students with dissident views can come and study with us and we treat them well. What now happens to people who stay in the economics department and hold critical or challenging views, I honestly don't know. My hunch, based on my knowledge of the personalities involved, is that there is no major problem these days. The problem is more one of boredom and neglect (benign or otherwise) on the teaching front. It is just cranking through the hundreds of students, processing their multiple-choice answers, there's no excitement. The orthodox economists have got their own games to play, but that is what they do in their research activities, they think 'ah, the undergraduate curriculum,' they think it's a bit of a chore. Quite how this situation looks from a student's perspective I don't know. I would think that it looks, first and foremost, boring. For students who just want a relatively straight-forward university course and go for orthodox economics, I don't think they are going to be subject to any particular problems of discrimination. Yet they are being reproduced, some would say being cloned, in a particular methodology and a particular ideology.

Q. Why do you think the number of enrolments in political economy took off so strongly once you moved out of the business faculty? I would have thought the opposite would have occurred. Are students doing commerce based degrees still able to pick up your units?

A. Students in commerce-based degrees can take political economy as an option (an elective). Relatively few do. We currently have got a lot of enrolments from Arts students, but we have drawn students from across a range of different degrees: international studies, arts and sciences, bachelor of socio-legal studies, all sorts of people come to study political economy. Our biggest growth area has been in degrees associated with international studies.

Q. There are three things that strike me as explanations for the increased enrolments: (1) other departments (particularly within Arts) being more prepared

to allowed their students to take up political economy; (2) Political economy being seen as more attractive by many students now it is completely severed from economics and business, which clearly signals a social science orientation; (3) A growing interest in political economy in society.

A. I guess the answer is a bit of each of the three. Mainly, I think we just got a more prominent position on the menu of choices. I would also add that a lot of work was put into promoting political economy at things such as 'open days' for prospective new students

It is an unusual situation here at Sydney University. It is something that is similar to UNSW where they have a policy school that teaches a political economy programme outside the economics faculty. I would have to like to have seen this structure replicated and to have had more political economy departments proliferate around the country, but it hasn't happened. This is a pity; if reforms to economics depend on the tolerance, good will and liberalism of mainstream economists I wouldn't have too much confidence of success. There is nearly always a resident dissident or two. They may try and do innovative things, teach in a way that's engaging to students and put on different types of courses, but they come and go. The courses come and go with them and the mainstream flows on forever. That is why I think it is important to have a separate institutional base. In an ideal world you wouldn't have to separate groups in this way, but in a less than ideal world this is probably the optimal situation.

Q. Would you say that all parties are happier under such a structure?

A. Yes, that's right, we are not at each other's throats. We publish articles in journals that are certainly critical of orthodox economists, but in the common room we are all the best of friends.

Q. I notice that you have postgraduate programmes, like the Masters of Political Economy. Who enrolls in this, public servants?

A. We get a trickle of public servants, but it is a very mixed profile, some from an economics background, some come from backgrounds in sociology and politics. They just want to pick up more economics, but don't want to do mathematical economics, some of them are doing further study to achieve career progression as teachers or public servants. They are a very mixed group.

Q. Have enrolments have been solid at the postgraduate level?

A. We would actually like to expand our postgraduate programme, but our focus has historically been on the undergraduate programme. We are hoping to grow this area because that will give us a better economic base for future staff hiring and so on. While we are delighted with the surge of undergraduate enrolments, we are now trying to turn our attention to getting a comparable surge at the postgraduate level. There is a lot of emphasis in the postgraduate level on getting people to a higher level of economic knowledge, but to do this in a practical way so that you can actually think on your feet and draw on a tool-kit for the task at hand.

Postgraduate enrolments are currently only a trickle, not a flood. We have had a Masters Programme for 15 years, but we didn't get much help from the economics faculty in developing it. In the arts faculty, we feel we have got more support and we are certainly developing cross-departmental links. This means that people doing a Masters in Political Economy can add in a couple of units in sociology or history and vice-versa. We are in a better situation to develop collegial relations with other departments, which is quite appropriate in an interdisciplinary social science context. I think this will help us grow in the medium term; we were always constrained in making such initiatives when we were in a more economics - and business orientated - culture.

End of interview