Science and Support:
The Struggle for Mastery in Economics

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Abstract
The scenario for shifting the mainstream of economic theory from the neoclassical model to an alternative under the arrangements for the World Economics Association contrasts sharply with the conventional view of theory change through the methodical testing of hypotheses. This article suggests that the two approaches are both part of a process of intellectual support-bargaining involving the construction of theories by theory groups to advance their interests. A brief account of the theory of support and money-bargaining is provided, with particular reference to its significance for scientific method, the peer review process, and the 'herd instinct.' Under the theory, institutionalisation is used to strengthen bargaining positions through the use of hierarchies and money budgets. The ascendancy of neoclassical economics is understood in terms of institutional strength. It is understood as an outcome of intellectual support-bargaining in an isolated and insulated theory group advancing specific interests. Neoclassical theory has protected itself through the development of a methodology that emphasises the importance of its supposed strength in forecasting and minimises the significance of the weakness of its assumptions. The establishment of a new mainstream is seen as dependent on the emergence of a new and realistic theory of economic activity. The theory of support-bargaining and money-bargaining offers an alternative.
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Introduction

The conventional view of the pursuit of scientific knowledge, natural or social, is that the scientist observes phenomena, forms hypotheses about the regularities of the observed behaviour and designs tests to see whether the results of the tests are consistent with the hypotheses. The tests, and all data relating to them, are recorded in detail, so that other scientists can repeat the tests and confirm or refute any identified consistencies. With consistent evidence from this process in support of hypotheses, other scientists are expected to accept the hypotheses as proven. They become part of an assembled store of knowledge.

In the natural sciences, many of the phenomena of interest lend themselves readily to this procedure. They are stable, so they can be used in repeated tests (Spread, 1984, pp. 3-8). It is also possible to control fairly precisely, at least in a laboratory, for factors such as temperature and air pressure that might affect results. In the social sciences the phenomena of interest are not commonly so well suited to such testing. They may be ephemeral and are invariably encountered in settings of extensive 'noise' – other factors that cannot be controlled but which potentially have a significant influence on the outcomes observed. While the nature of the phenomena in the social sciences frequently makes the application of scientific method particularly difficult, the difficulties are not confined to the social sciences. Much natural science deals with obscure phenomena. Climatologists must deal with many potential causative factors. But even when the phenomena at issue do not lend themselves readily to it, it is still reckoned that the observation-hypothesis-testing-consistency-confirmation process should be followed as far as possible.

The complications relating to this 'established view' are not important here. What is important is that there is a well-trodden and well-accepted path that leads to the sort of knowledge that inspires the most confidence in its truth in great numbers of people.

In contrast, Fullbrook's (2010a) paper on 'How to bring economics into the 3rd millennium by 2020' describes a major economic institution, the American Economic Association (AEA), protecting neoclassical theory through the weight of its numbers and its control of five academic journals. The AEA is presented as the leader of a number of institutions committed to the maintenance of neoclassical economic theory. The movement has 'generals' and 'middle ranks.' It is presented as a tribe or cult. Fullbrook (2010a, p. 95) quotes a comment of James Galbraith:

> The neoclassical trick is to insist that all “real economists” adhere to an arcane and limited set of techniques. The focus on conformity, on a bizarre hierarchy of journals, the dominance of the AEA at the annual meetings, all serve to define who is in the tribe, and their rank. Mainstream economics . . . is defined by who accepts the discipline of the cult.

Mainstream economic theory is cultivated and protected by a particular group, including particular institutions, which use it to sustain their ascendancy. The remedy, according to Fullbrook (2010a, p. 97), is to take advantage of the identified weaknesses of the established order – its nationalistic character and its old fashioned means of disseminating information – and bring about defections to a new organisation (2010a, p. 102):

> Despite their atomist ideology, economists are, even more than most academics, herd animals. The site of a global organization larger than the AEA and with more subscribers to its journals will split the old herd, making the new one, with all its inherent diversity, economics’ new mainstream.

The implicit analogy is with a political autocracy exercising power over a people, with a rival revolutionary group seeking to split the autocracy and take power. It is a struggle for mastery in economics analogous to the old struggle amongst the nation states for power in Europe. The way to bring about the downfall of political autocracy is to form a revolutionary force and confront the rulers at their weakest points. The way to bring down the AEA is to form a new international association.

Fullbrook's account could scarcely be more at odds with the conventional view of the advance of knowledge and understanding. On the one hand, scientists pursue the truth by subjecting their hypotheses to rigorous testing designed to root out misconceptions; on the other hand institutions compete for the adherence of economists and achieve success when their numbers are greater than those of other institutions. This paper suggests that the two contrasting approaches can be understood as different facets of intellectual support-bargaining. Both the conventional approach and the political approach to learning are part of intellectual support-bargaining. The purpose of both is to assemble support, for it is support that determines what effectively constitutes knowledge or truth. Theory-making is, furthermore, conceived as motivated by interest. One of the interests pursued is the truth about the world, because in knowing the truth we are potentially better able to arrange affairs to our advantage – that is, the advantage of the human race, but possibly also a more factional advantage. The use of scientific method has been devised to take us closer to the truth. But truth is only one of the interests that are pursued through intellectual support-bargaining. People also have interests in advancing the cause of their social group. Some will want to advance an individualist interest – individual freedom and reward for effort. Others will want to advance communal interests – compassion and equality. People also have interests in employment, careers and incomes. Some will aspire to be 'generals' of their tribe. Ietto-Gillies (2008, p. 15) writes: 'All our authors need to use their reputation as published authors to access the next even greener field: the luscious field of academic jobs, promotions, grants

allocation.' Fullbrook (2010b) describes his encounter with the opulent high end academia of France's 'grandes ecoles', where he first presented his proposals for change. The pursuit of truth is tempered by other considerations of interest. Truth may be so elusive and so unrewarding a quarry as to be abandoned or neglected in preference for more tangible interests. Fullbrook (2010a) describes the competition for intellectual ascendancy, which is as much a part of intellectual support-bargaining as the pursuit of truth. What comes to be understood as truth depends as much on the assembly of support as on the testing of hypotheses. The latter is itself a means of assembling support amongst a certain type of participant in the support-bargaining process – those with a primary interest in establishing realistic explanations of the functioning of the world and human society.

Intellectual support-bargaining

Intellectual support-bargaining is part of a larger theory of support-bargaining as a socio-political process described in earlier work.[1] In brief, support-bargaining derives from a human sense of insecurity, which causes individuals to seek the support of their associates. Individuals adapt their opinions and behaviour to acquire the support of those around them. Groups form through support-seeking. The 'bargaining' element arises because individuals, whilst they seek support, want also to retain as much as possible of their own individual interest and inclination. They concede in opinion and behaviour only so much as seems necessary to gain the support they need. 'Democratic' systems of government can be understood as formal support-bargaining systems, using electoral structures to involve many people in the support-bargaining that determines governance. Intellectual support-bargaining is concerned with the creation of theories and ideas about society for the advancement of interest. The support assembled around theories and ideas can be applied also in political support-bargaining – the support-bargaining directly concerned with governance. So the theories developed have a direct bearing on political processes. Intellectual support-bargaining is carried on across society, but in its purest and most intense form it is carried on in institutions of learning. The creation of theory is inseparable from the theory groups that create it. Theories reflect the interests of the theory groups that create them.

The pursuit of interest involves the development of strength in support-bargaining. The major way of developing this strength is through organisation. Organisation permits the activities of a group to be focused through a hierarchy on purposes defined by leaders. The bargaining strength of organisations arises also because of their use of money budgets. The power deriving from support is supplemented in organisations through their capacity for money-bargaining. The concept of organisations includes institutions, in the sense of supervisory or representative organisations like the Bank of England or the American Economic Association, and institutions such as universities or the Church of England. Universities, as organisations,

[1] The main account is Spread, 2008, *Support-Bargaining: The Mechanics of Democracy Revealed*. Chapter 10 is specifically concerned with Intellectual Support-Bargaining. An earlier work, *A Theory of Support and Money Bargaining* (Spread, 1984), shows the theory in a formative stage, and describes academic work connected with it. *Getting It Right: Economics and the Security of Support* (Spread, 2004) deals mainly with economic aspects of the theory. An article, 'Situation as Determinant of Selection and Valuation', dealing with the effects of support-bargaining on consumer choice, was published in March 2011 in the Cambridge Journal of Economics. The article notes the potential link of the group formation arising from support-bargaining with the process of natural selection. This link is developed in a further work, provisionally titled *Survival of the Sociable: How support-bargaining allowed humans to survive and prosper* (Spread, Forthcoming). Three articles have been submitted to the *World Economics Journal*: 'Companies and Markets: Economic Theories of the Firm and a Concept of Companies as Bargaining Agencies'; 'Comparative Advantage and the Format of Companies'; and 'Adam Smith: Neoclassical or Money-Bargaining?'

focus the activities of their members on purposes defined by their leaders. They also operate money budgets, enabling them to pay their members for the services they render through the institution. On this understanding, Fullbrook (2010a) is identifying the institutional power of the AEA in sustaining the focus of academic economists on the neoclassical model. The 'generals' command; others follow, in their institutional affiliations, with varying degrees of authority, and enjoy the benefits, including pecuniary benefits, attendant on membership of organisations with strong bargaining positions.

The focus effect has meant that some universities have become identified with particular approaches to economics. Backhouse (2002, p. 316) records that in the last quarter of the twentieth century Chicago was the centre of orthodox free market economics, while Yale, Harvard and MIT were centres of orthodox Keynesianism. Austrian economics was centred in New York and Auburn universities. Nevertheless, Backhouse records that, 'The variety of the American university system was vital.' He concludes (2002, p. 307), 'If economics has become Americanized, there is a sense in which this is because the American academic system has been so large, so wealthy and so open to international influences.' Volume of support and the power of money have given American academics ascendancy in economics. The absorption of international influences is probably to some degree a reflection of the pulling power of money. In terms of intellectual support-bargaining, these developments exemplify the development of institutional bargaining position.

However, the full importance of institutional bargaining strength only becomes apparent when it is recognised that the ascendancy is built on the most insecure theoretical foundations. If the theory were solid, the institutional strength would not be particularly apparent; but when it is recognised that the theory is flimsy, the overwhelming importance of institutional strength becomes apparent. In the former case, the theory would be sustained by the kind of support that is attracted by demonstrations of scientific truth; in the latter case, it is the advantages of adherence to strong bargaining agencies that assemble the support necessary to sustain the theory.

Fullbrook (2010a) identifies the AEA as the ‘enemy’, and identifies its national character as an important weakness. The ‘struggle for mastery in economics’ then takes on the character of a struggle between nations. Support is attracted to the revolutionary flag for nationalistic as well as intellectual reasons. Flags flutter more bravely in a nationalist breeze than in intellectual wind. Neoclassical theory has already fought one successful campaign against Marxism and the Soviet Union. Lee’s (2007) article on the dominance of mainstream economics in British universities makes it plain, however, that the neoclassical theory group is multinational. ‘Economics’ is still neoclassical theory in many British universities. Lee (2007, p. 322) notes a specific association of mainstream economic theory in Britain with ‘the pro-market ideology adopted by the Thatcher, Major and Blair administrations since 1980.’ Theory groups help to assemble support for political movements, and at the same time political movements help to sustain theory groups that reflect their values.

Scientific method and support-bargaining

Support-bargaining explains the scientific method outlined at the start of this paper as the response of scientists to an implicit awareness of the engagement of everyone in support-bargaining and of its likely consequences for the pursuit of truth. People are likely to be distracted from the pursuit of truth by their need for support. People will gain support by

producing theories that advance factional or personal interests in their community. Scientific method counteracts this tendency by prescribing tests and the replication of tests, so that several agents confirm results. The process is clearly intended to eliminate the possible distortions brought about by the support-seeking of any one agent. Scientific method requires that tests are meticulously recorded, so that they can be reproduced.

Of course, if the testers are all conditioned to observe and understand by reference to the same paradigm (cf Kuhn, 1970) or research programme (cf Lakatos, 1978), there will be distortion arising from group affiliation. Each individual tester will observe and interpret in accordance with the common preconception, which is at the same time the common interest. Scientific method is designed to eliminate the influence of preconceptions and generate knowledge that is mind-independent. But in practice knowledge can never be mind-independent. We have knowledge only in our minds and the nature of our minds will stamp itself on our knowledge. Support-bargaining takes as a psychological starting point the inclinations of our minds to seek security in the support of others.

Scientific testing cannot be understood in terms of the testing of a single hypothesis or a related group of hypotheses. The results of testing must be consistent with the hypotheses tested, but they must also be consistent with everything else that has become known through the exercise of scientific method. Consistency is the critical concern. The greater the range of phenomena that a theory can explain with consistency, the more likely it is to be a valid representation of mind-independent reality. This may be understood both as a single agent seeing consistency in the explanations of a great range of phenomena through a single theory, and also multiple agents seeing consistency across the range. Many agents seeing consistency in the explanations of a single theory across a wide range of phenomena will suggest that the theory is valid. Natural scientists require that results of tests are consistent over the whole of natural science. Social scientists tend to confine themselves to consistency within particular theory groups, where the rules of scientific method are adapted to the limitations of the phenomena. In some cases, the criteria for consistency are adapted within the theory group to ensure that it is not discredited.

Peer review and support-bargaining

Fullbrook (2010a, p. 95) sees the control of major economic journals by the AEA as a means by which its control of developments in economic theory is exercised. In the context of intellectual support-bargaining, peer review permits the theory group to vet what is proposed for publication. Reviewers are the immediate contact of the individual with the theory group. Ietto-Gillies (2008, p. 12) notes that individuals may be required, as a condition of acceptance – that is, as a condition of receiving the support of the group – to modify their paper. If they do not do so, the theory group rejects the paper. Proposers will normally concede to reviewers to get the support they need. They may add references on the suggestion of the reviewers, in order, effectively, to assemble support from the theory group. Ietto-Gillies notes, 'In extreme cases the paper may be damaged by the author's attempts to fit in comments by successive referees and indeed by adding bogus references in the attempt to ingratiate editors and reviewers…' The individual subordinates himself or herself to the group in order to get the required support. The bargaining position of proposers is weakened by the importance of publication to academic advancement, the time delays involved in moving from journal to journal, the frequently limited options for placing a specialist paper, and the large number of submissions that compete for the favour of editors.

This understanding of the process in terms of intellectual support-bargaining explains also the weakness of the system in accommodation of ground-breaking work (Ietto-Gillies, 2008, p. 16; 2011, p. 8). These are papers that have no established theory-group. Unless they conform to the interests of the existing theory-group whose members are asked to review, they are likely to be rejected. This means not simply that ground-breaking work is likely to be rejected; it means, more importantly, that it will not be written. As a strategy for advancement, scholars are well-advised to stick with established theory groups (Ietto-Gillies, 2008, p. 16). In economics, that means staying close to neoclassical theory. Lee (2007, pp. 322-3) describes how the mainstream economic theory group in Britain has been able to establish control of standards and criteria for 'quality' research in such a way as to ensure its continued ascendancy. Straying out of the mainstream means that research is more likely to be identified as of secondary quality, and its authors will not be so readily eligible for promotion as those who work in the mainstream.

The intellectual effort required to take on a new theory, or a new way of thinking, also constitutes an impediment to acceptance. As Ietto-Gillies (2008, p. 12) notes, decisions on some submissions will be made on the basis of a quick read through. Most of the papers rejected following this screening will be of poor quality. But novelty may at first be difficult to comprehend. 'When refereeing, the reviewers will read a paper with the mind frame of the paradigm they are working under; what is presented to them may appear as strange, unusual, not properly researched; it may be something presented in a new and untried language or framework' (2008, p. 16). Careful attention is required. It may even be necessary to undertake background reading. Given the high risk of fruitless effort, the unpaid workload is likely to be unacceptable.

The herd instinct

Fullbrook (2010a, p. 102), in the quotation above on page 3, refers to the AEA and neoclassical economists as 'the old herd.' References to 'the herd instinct' are fairly common in academic literature but its nature is never specified. The phenomenon is easily understood in terms of support-bargaining. An individual advances an idea that looks likely to advance the interests of himself, or herself, and his or her associates. The idea is taken up within the group and, since the group is seen to be advancing, others join the group. People all go in one direction with the one idea. The group members convince each other that the idea is the answer they have all been looking for. Then some event occurs that casts doubt on the idea. A rival individual puts forward an alternative idea, and gains support. People begin to move away from the first idea and edge towards the second. At a certain point, the erosion of support erodes the confidence of the old group, and a trickle of defections becomes a torrent. The new group gains confidence from the build-up of its support. The new group, with the new idea, becomes ascendant. People move with the herd because it gives a sense of security, whatever the status of the herd ideas. The course of events, favourable or unfavourable to a particular idea, can influence the way support moves. To stem the ebb and flow that is associated with the herd instinct, a herd has to be corralled in an institution, so that its members have institutional incentives to stick with the herd idea. Through institutionalisation the life of an idea can be prolonged way beyond what science or the course of events suggest to outsiders is appropriate.

References to 'the herd instinct' have become common in recent years in the context of the behaviour of stock exchanges. Groups form amongst stock market investors with certain

ideas about how markets will behave. Mutual support within the group gives rise to confidence that the ideas can only be right, and shares are bid up on the strength of the idea. Then events show the ideas to be less than wholly valid, and support for the relevant shares is lost. This pattern of behaviour can be seen in the '.com boom' and subsequent 'bust' at the turn of the century. The confidence of investors in the idea that economists had developed mathematical techniques of pricing securities so that all risks were covered, coupled with confidence in free markets that forestalled regulatory intervention, probably played a part in the heavy investment in high-risk securities in the period before the financial crisis of 2007-9. What appears as the herd instinct is a consequence of support-bargaining.

Common theory

The association of theories with the groups that hold them gives rise to the idea of a common theory – a theory developed by common people for their own guidance in the conduct of their lives. It can, of course, immediately be questioned whether it is appropriate to regard the varied and disorganised jumble of ideas and beliefs that is characteristic of popular thought as amounting to a 'theory.' Even common theories might be too great a stretch. But if it is accepted that theories are inseparable from theory groups, then it has to be accepted that people form theories. At the most basic level, and hence most widespread, and hence most worthy of the name 'common theory', there are ideas about the passage of time, about distance, the nature of objects, the nature of humans, and the nature of existence, that are held broadly in common by humans and which have enabled them to survive. Many of the elements of common theory appear to be built into language. We communicate on the basis of common ideas which are embedded in language. Different language groups will then have different common theories, except in so far as different languages incorporate the same elements of theoretical understanding. Many do probably incorporate the same or very similar understanding of those basic ideas regarding time, space, the existence of objects and the nature of people.

The common theory then constitutes a basic 'world view' for all humans, including scholars seeking to develop more refined theories about issues relating to human interests in general or to factional interests. Everyone unavoidably uses this common theory or world view, if only on account of the necessity of expressing themselves in language. Some explicitly acknowledge that they will draw on it. Simon (1957, p. 198) writes,

> Lacking the kinds of empirical knowledge of the decisional processes that will be required for a definitive theory, the hard facts of the actual world can, at the present stage, enter the theory only in a relatively unsystematic and unrigorous way. But none of us is completely innocent of acquaintance with the gross characteristics of human choice, or the broad features of the environment in which this choice takes place. I shall feel free to call on this common experience as a source of the hypotheses needed for the theory about the nature of man and his world.

In other words, Simon sees in common experience readymade hypotheses about the nature of the world which he is at liberty to draw on. It is, in effect, an acknowledgement of the necessity of drawing on an established common theory. The argument here is that everyone does it. Even Friedman in his article on methodology (1953, pp. 8-10, 40) acknowledges the overriding importance of 'experience' in the evaluation of theory. Ruccio (2003, p. 42) and Guala (2006, p. F320) criticise Lawson (1997; 2003; 2004) for his appeals to common knowledge in his exposition of the importance of ontology. But if our basic ideas about 'being'

are part of the common theory, Lawson can hardly avoid appeal to common theory when he discusses 'being.' Common theory constitutes the basic world view for Lawson, as for everyone else. [2]

Economic theorists draw copiously on the common knowledge of what goes on amongst traders, consumers and manufacturers. They draw informally on the buying and selling, the calculations of income and profit, the uncertainty and preferences that surround everyday deliberations. Yet at the same time they deny common theory any part in the neoclassical model. The neoclassical model is conceived very distinctly as a means of eliminating the misconceptions that hold sway amongst ordinary people. It purports to show that what seems right in common theory is not right in reason. The pursuit of individual self-interest, rather than personal benevolence, advances communal interest. The neoclassical model exalts reason above the emotionalism that is seen as dominating the ideas and actions of ordinary people.

Even the common theory of less than common people is rejected. Henderson (2001, p. 82; see also Spread, 2008, pp. 350-52) dismisses ideas on economics put forward by non-economists as 'do-it-yourself' economics and continues:

> …what is in question here is not just 'popular economic fallacies', the uninstructed beliefs of ordinary and unimportant people. These same ideas are held with equal conviction, and expressed in much the same language, by political leaders, top civil servants, chief executives of businesses, general secretaries of trade unions, well-known journalists and commentators, religious leaders, senior judges and eminent professors – as also by economists themselves, in uninstructed or unguarded moments.

The ideas not just of common people, but of distinguished people, in their areas of practical expertise, are dismissed as of no significance. Henderson clearly regards himself as representative of the mainstream economic theory group and displays the self-assurance of a member of a group accustomed to the copious support of his peers. But notably, there are apparently times when economists cannot prevent themselves from expressing common theory. Neoclassical economics only makes sense within the theory group, where neoclassical economists assure each other that it makes sense. Let out on their own, economists may 'go native' with the common theory.

Retention of the neoclassical model

By reference to common theory, neoclassical economics makes no sense at all. Most obviously, it has no understanding of spatial issues and the problems of distance. It has no understanding of companies (Spread, Submitted WEJ 2012 (1)). It provides only the most rudimentary account of consumer behaviour. It assumes standardised homogeneous products. It assumes that everyone knows everything they need to know about all transactions, including future circumstances. It has no concept of infrastructure or communal action. It is conceived as a mathematical model and its components are shaped for purposes of mathematical manipulation. Hennings (1986, p. 240) writes, 'Just as the theory of consumer behaviour was thinned out to a minimal set of assumptions required to derive downward-sloping demand schedules, so the theory of producer behaviour was pared down to a minimal set of assumptions that would allow upward sloping supply schedules to be

[2] For a further account of common theory as a world view, see Spread, Forthcoming, Chapter 8: Common Theory and Personification.

derived.' 'Consumers' and 'producers' in neoclassical theory behave as they are required to behave by the mathematical exigencies of the model. Which means they are not consumers or producers at all, but figments of analytical convenience. It would be possible to define tests in accordance with scientific method whereby it could be determined whether distance has no relevance to economic transactions, but the operative tests are those of the common theory. We can see that overcoming distance costs money, time, effort and resources. Similarly, common theory tells us that firms do more than can be represented by a production function. Because of the fantastic nature of its basic model, economic theory and economists attract popular ridicule, recorded, for example, by Fullbrook (2010a, pp. 90-2), and before the financial crisis of 2007-9 by Hodgson (1988, pp. xi-xii) and Lawson (1997, p. xii, 3). It attracts also a great deal of sober criticism from both heterodox and neoclassical scholars (Lawson, 2003, pp. 8-11).

The retention of unreasonable and even fantastical beliefs is not rare amongst humans. They arise because the primary requirement is not for truth, but for support. As remarked in *Support-Bargaining* (Spread, 2008, p. 13), we can do without truth, but we cannot do without support. So long as an idea can attract support, it will be sustained. Ideas will attract support so long as they advance interests. The reasons for the longevity of neoclassical theory must first be sought in the interests it accommodates.

There is, first of all, its accommodation of an almost purely intellectual interest in study, with the understanding that the study is carried on in the pursuit of truth. The engagement is consistent with the highest principles of intellectual endeavour in western society. The origins of the western intellectual tradition in studies regarding the nature of deity has brought an assumption that the way to 'truth' is to insulate the cleverest people from everyday concerns and have them study texts that are regarded as sources of enlightenment. In an ecclesiastical context this is entirely appropriate, since the texts to be studied were regarded as deriving from divine inspiration. In economics, mathematics seemed to offer the best alternative to divine revelation. The idea of an objective, absolute truth, in accordance with the ecclesiastic concept of knowledge, was retained. Insulation from everyday concerns meant the development of an isolated theory group pursuing the truth using such means as were available to it within the institutional confines that were established. Outsiders, the common people, accustomed to looking with some awe on the researches of their institutions of higher learning, have assumed, at least until the present wave of ridicule, that something useful was being produced. As has been seen, the world within the institutions of higher learning accommodates other interests, besides the pursuit of truth, in the form of careers, incomes and prestigious positions at the head of academic hierarchies.

Besides the insulation deriving from institutionalisation, neoclassical theory has enjoyed the natural insulation provided by mathematics. Mediaeval theologians insulated themselves as theory makers from ordinary people through their use of Latin; neoclassical economists have escaped criticism from persons outside the theory group by claiming that those who do not understand mathematics are unqualified to comment. To a considerable extent, such is the status of mathematics, outsiders have accepted this claim. The success of mathematics in explaining the workings of the natural world has suggested that the application of mathematics to economic affairs might produce valuable results. The use of mathematics in economics developed with particular rapidity in the latter half of the twentieth century, increasing the isolation and insulation of the study of economics. Arguably, the trend towards mathematics represents a growing awareness of the weak conceptual foundations of the subject. A theory group expressing its ideas in plain language invites comment from

outsiders; expressing ideas in mathematical terms ensures that comment will be largely confined to those within the theory group.

The advance of interest through neoclassical economics has not been confined purely to the interests of those engaged in the theory group. The nineteenth century saw the start of the era of the common man. The elite classes of Europe felt threatened by the growing numbers of people and the advance of socialism and democracy. Economic theory provided a justification for keeping the state at bay. John Stuart Mill (1848) wrote in his *Principles of Political Economy,* 'Laisser-faire, in short, should be the general practice: every departure from it, unless required by some great good, is a certain evil.' As the century progressed, neoclassical economics gave mathematical expression to the merits of letting be – the exclusion of the state from economic affairs. In the twentieth century the confrontation between individual freedom and the omniscient state brought long-running conflict, both physical and ideological. Neoclassical theory played a prominent role in sustaining the creed of individualism. In the era of the Cold War, any dissent from neoclassical theory could be designated 'socialist' or even 'communist.' As the theory group behind capitalism, neoclassical economists celebrated ideological victory, or, as they would claim, vindication of their mathematical model, with the collapse of the Soviet Union in 1990.

The argument that neoclassical theory was sustained by interest rather than the pure force of its arguments is apparent in the compromises that were made within the theory group to ensure that it was sustained. Bruni and Sugden (2007) provide a detailed account of the compromises and subterfuges adopted to sustain a mathematical model that would give the ostensibly objective confirmation of the merits of individual enterprise that its creators saw would attract support. Marshall, who dominated economic theory from his position at Cambridge University for much of the first half of the twentieth century, was not above subterfuge. Hennings (1986, p. 230) writes, on the simplifications of 'his prolix and sometimes intricate analysis',

Marshall's hostility to those who, like Wieser (1884) or Wicksteed (1888), sought to base the cost concept on subjective evaluations with the help of the notion of opportunity costs, his decision to hide the general equilibrium framework of his theory behind partial equilibrium analyses and a rich tapestry of realistic empirical detail, and his penchant to minimize and even obfuscate theoretical differences no doubt invited such simplifications.

> Neoclassical economists claim a rigour of analysis that sets them apart and above other social scientists, but close inspection of the claim reveals that it is hardly justified. Considerations relating to the assembly of support and the advance of interest have influenced the understanding of what can be accepted as rigorous within the theory group. Neoclassical economics, more than anything else, is a triumph of intellectual support-bargaining.

Development of neoclassical theory

The need for adjustments to the basic neoclassical model was apparent even to economists. It is hardly an exaggeration to say that, with the basic contours of the neoclassical model established in the late nineteenth century, economists spent the twentieth century trying to put it right. The model has been the subject of long-running discussions regarding its relevance to the real world, and how it might be adapted to make it more realistic. The discussions have been confined largely within the neoclassical theory group, since they are directed not so

much at illuminating the processes of the real world as reconciling the model as far as possible with the real world. They have been model-focused rather than focused on explaining the real world. With this programme, the theory group has been able to maintain its seclusion. The members have also been able to sustain their support for a model that, for outsiders, strains credulity.

The modifications and supplements have included those relating to asymmetric information, public goods, externalities, companies, consumer choice, market failure, rational expectations, transaction and contracting costs, information management, economic rent, the role of entrepreneurs, 'characteristics' of products, uncertainty and risk, demand deficiencies, and stock market behaviour. Distinguished careers have been built through work on these subjects. Couched in the vocabulary of neoclassical theory, and commonly formulated in mathematical terms, the basic commonplace is not apparent. The observations of the real world to which the modifications relate are such as are largely taken for granted outside the neoclassical theory group. It is their inconsistency with the neoclassical model that makes them matters of concern within the theory group. Only within the neoclassical theory group, for example, is it regarded as remarkable that sellers know more than buyers about their products, and may take advantage of their superior information. Even John Maynard Keynes's *General Theory* (1936) makes sense only as a corrective to the assumption of the neoclassical theory group that economic systems move to equilibrium at full employment. The commonplace becomes complex in the process of reconciling it with the neoclassical model. Ietto-Gillies (2008, p. 14), on the basis of work by Campanario (1998a, p. 195), notes that, 'Obscurity of the text seems to correlate highly and positively with acceptance into highly-rated journals.' Straightforward conditions of the real world are made complex in the attempt to reconcile them with a model that designedly misrepresents the real world for analytical convenience.

'Market failure' in particular has become a catch-all explanation for the many misalignments of neoclassical theory with observed behaviour. The neoclassical concept of a 'market' is impossible in practical terms, so any study of real-world markets by reference to the neoclassical model will necessarily conclude that the reality has fallen short of, or 'failed', the theory. 'Market failure' arises because 'markets' in the neoclassical sense do not exist. It is like describing a camel as an ugly consequence of 'unicorn failure'; or describing humans as having 'fallen from grace.' The implicit suggestion in all this process of modification is that the basic model is subject only to localised dysfunction. But in total the modifications confirm that neoclassical economics merits the ridicule it receives.

Forecasting and Prescription

Support for the neoclassical model has also been sustained because it so readily answers the social requirement for information about the future. Societies commonly have some recognised source of predictions about the future, whether it be an 'oracle', a 'soothsayer', astrologers or the entrails of a goat. In terms of support-bargaining, this agreed predictive function serves to sustain support within the social group and gives it confidence. Neoclassical theory offers a particularly sophisticated response to the requirement, well-attuned to a scientifically minded and educated populace. It is couched in mathematical terms. If mathematical patterns are strongly established, then there is no difficulty in extrapolating them into the future. Economists have fixed themselves firmly in the social

'establishment' by providing forecasts about future events, supposedly based on scientific analysis.

Economists have also been dependable sources of prescriptions, or at least a prescription, for the well-being of society. The idea of *'laisser-faire'* and 'free markets' is associated above with factional interest. But it is invariably presented as conducive to the health of society as a whole. Neoclassical theory implies that free competition will 'optimise' the allocation of resources in society. Few would want to reject a course of action that will bring such advantage to society. The diagnosis 'market failure' carries within itself the appropriate remedy: the institution of functional markets. 'Free markets' constitute a ready prescription for all times, all places and all spheres of economic activity. Economists have fulfilled an important social role by having always to hand an appropriate remedy for whatever problems arise.

Protecting the neoclassical model

Neoclassical economists have tried to adapt their model to closer consistency with the real world. But the underlying weakness of the model under any sort of scientific scrutiny has not been overcome. Some writers have expressed concern that a study that makes claims to scientific status ignores all scientific evidence of deficiencies. Latsis (1976, p. 11), for example, writes, 'The crucial question is the following: Is all awkward evidence to be regarded as either unreliable or reconcilable or can it serve a serious critical role?'

The main response of neoclassical economists to this lack of scientific credibility has been the creation of a distinct methodology for economics that specifically exempts it from the normal demands of scientific method and permits it to claim scientific validity on its own terms. Scientific method, as suggested above, is designed to divorce support seeking, as distinct from the pursuit of truth, as far as possible from the process of theory formation. Economic methodology, by contrast, is designed to protect the neoclassical model from the withdrawal of support that would seemingly follow necessarily from any moderately serious application of scientific method. Economic methodology is designed to protect rather than to test.

One form of protection is the argument that in societies there are so many contributory causal factors to any event that it is generally impossible to apply scientific method. Methodology based on this understanding pre-dates neoclassical economics. John Stuart Mill (1836) argued that, because of the multiplicity of causes, it was necessary to employ an *a priori* method. In this method, the laws governing relationships between various economic causes and effects are first identified, and their consequences are then investigated by deduction. Scientific 'testing' is used to check the deductions, but conclusions cannot be drawn from the testing, because of the inevitable presence of disturbing but unidentified causes (Hausman, 2008). Hausman remarks that, 'In defending a view of economics as in this way inexact and employing the method a priori, Mill was able to reconcile his empiricism and his commitment to Ricardo's economics.' Hausman further remarks, 'Mill's methodological views dominated the mainstream of economic theory for well over a century.' In a 1992 paper he (Hausman, 1992) argues that current methodological practice closely resembles Mill's methodology, despite the fact that few economists would explicitly defend it.

One of the most influential modern works on economic methodology argues that assumptions are irrelevant to the validity of a theory; rather success in forecasting, or prediction, is the

critical determinant of viability. It thus discounts precisely the weakness of neoclassical theory and emphasises the methodological importance of its supposed strength. It is by way of being a 'purpose built' methodology. It is a methodology constructed within the theory group to sustain and protect the interests of the theory group. Hausman (2008) remarks on Friedman's (1953) theory:

Philosophically reflective economists proposed several ways to replace the old-fashioned Millian view with a more up-to-date methodology that would continue to justify much of current practice…By far the most influential of these was Milton Friedman's contribution in his 1953 essay, 'The Methodology of Positive Economics.' This essay has had an enormous influence, far more than any other work on methodology.

Hausman (2008) recognises explicitly that neoclassical economists did not seek a methodology that would isolate the truth, but a methodology that would 'justify much of current practice.' It cannot be regarded as a scientific methodology, since it is designed to provide the results that are desired. Neoclassical economists have nurtured Friedman's 'methodology' as a protection against criticism on grounds of realism. As Hodgson (1988, p. 30) remarks, 'Neoclassical theorists have repeated these arguments to great effect within the profession, especially in rebutting the view that a good or valid theory must have realistic assumptions.' Hausman (2008) notes that some assumptions are also predictions. For example: 'firms maximise their profits.' He notes also that Friedman takes a narrow view of the predictions that are to be deemed relevant. He concludes:

> So economists can simply ignore the disquieting findings of surveys. They can ignore the fact that people do not always prefer larger bundles of commodities to smaller bundles of commodities. They need not be troubled that some of their models suppose that all agents know the prices of all present and future commodities in all markets. All that matters is whether the predictions concerning market phenomena turn out to be correct. And since anomalous market outcomes could be due to any number of uncontrolled causal factors, while experiments are difficult to carry out, it turns out that economists need not worry about ever encountering evidence that would disconfirm fundamental theory. Detailed models may be confirmed or disconfirmed, but fundamental theory is safe. In this way one can understand how Friedman's methodology, which appears to justify the eclectic and pragmatic view that economists should use any model that appears to 'work' regardless of how absurd or unreasonable its assumptions might appear, has been put in service of a rigid theoretical orthodoxy.

Friedman's methodological theory is as absurd as the model it protects – Hodgson (1988, p. 50) refers to 'The scandal of this affair…' It provides a good example of how a theory can be protected within an institutionalised theory group by weight of support when it answers the interests of the group.

It is worth noting that economic forecasting is as much subject to compromise and subterfuge as the neoclassical model. Lawson (1997, p. 5) remarks that, '…economists frequently employ methods, practices and techniques of enquiry and modes of inference, that are inconsistent with the theoretical perspectives on method which they claim to draw upon.' Econometric forecasting is cited as the paradigm example (Lawson, 1997, p. 6). Lawson comments:

> When their models are used to forecast unobserved (typically future) states of the economy, econometricians repeatedly make *ad hoc* revisions to estimated parameter

> values, or introduce 'add on' factors, in order to generate results that are ‘sensible’ or ‘believable’, thereby contravening what Lucas designates the ‘theory of economic policy’ (Lucas, 1976).'

A forecast is then an assessment by the forecaster of a likely outcome, veneered with mathematical method. The confined nature of neoclassical theory making and the esoteric nature of mathematical tools mean that the profession finds itself free to make its own rules about what is scientifically, mathematically and ethically acceptable. It adopts practices which command support in the theory group, which are inevitably the practices which the group finds advantageous to itself.

Lawson (2003, p. 18) links forecasting failures with the absurdity of the neoclassical model in the following comment:

> It is not only the case that modern economics mostly fails as a predictive and explanatory endeavour. It is also evident, and equally remarkable, that the mainstream project's theories are everywhere couched in terms of constructs that are absurd fictions, and acknowledged as such.

What if a pharmaceutical company were purveying products that had behind them only such quality of science, and such ethical tolerance, as is displayed in neoclassical economic theory? Hausman (2008) defends economic theory against the charge that it has made no progress in prediction with the comment, 'For example, contemporary economists are much better at pricing stock options than economists were even a generation ago.' The financial crisis of 2007-9 teaches the painful lesson that disregard for scientific principle can be toxic. Fullbrook's (2010, pp. 92-4) account of the responses of neoclassical economists to the crisis suggests that they intend to carry on in much the same way. The lesson has not been learnt.

The way to change

Fullbrook (2010, p. 97) suggests that the weaknesses of the AEA lie in its nationalist identity and its old-fashioned business model. He suggests, in the quotation above on page 3, that an organisation with an international identity and a business model based on the internet will bring defections from the AEA sphere of influence and create a new mainstream of theory.

Institutions, however, as has been suggested above, build bargaining strength both through the use of hierarchies and the use of money budgets. Backhouse (2002, p. 307) remarks that one reason for American ascendancy in economic theory is the wealth of the American university system. The 'pursuit of truth' to which academia is presumed to be committed implies that incomes, careers, etc. are not relevant considerations in academic debate, and consequently it seems irrelevant and offensive to suggest that they affect the work of scholars. But in the context of support-bargaining, where interests are a recognised focus of concern and institutions establish bargaining strength, it is not possible to ignore the important interest of everyone in providing themselves with the material necessities of life. The cohesion of American academia around neoclassical economics, such as it is (bearing in mind Backhouse's (2002) reference to diversity), probably owes much to the institutional careers that can be made by working with the neoclassical model. Lee’s (2007) article on economics in British universities clearly associates advancement in academic economics with adherence to the neoclassical model.

This has an important bearing on the process of change. It implies that a new mainstream will be difficult to establish unless scholars see that careers can be made in the new theory. The institutional strength that sustains neoclassical theory depends on finance. It is then a precondition of change that those responsible for the funding of institutions, for appointments and for research grants recognise the importance of the new theory and ensure that it is funded. The new theory has to be institutionalised in universities around the world. The new arrangements of the WEA described by Fullbrook (2010a) will help to develop new theory and provide inducements for the herd to move away from its neoclassical commitments, but the critical migration is likely to occur only when the necessities of life are seen as deriving from the new theory rather than the old.

What is needed, then, is a theory that justifies the intellectual and financial commitment necessary for change to come about. Judging from earlier work (e.g. Fullbrook, 2004), Fullbrook would probably agree that, more fundamental than the institutional considerations, is the development of a realistic alternative to neoclassical theory. Fullbrook (2010a, p. 101) recognises in his 2010 article that, while pluralism in theory making is important, the displacement of neoclassical economics, '…will require a new cohesion of underlying economic ideas other than the neoclassical ones and which heterodox schools will in the main accept and, even more importantly, which their members will become in the practice of relating to their particular school of thought as they currently do with neoclassical ideas.' A unified theory is required, implying a unified theory group. Heterodox schools need to abandon their dependence on the neoclassical school, even if only as a 'sparring partner.'

Unification is only likely to be achieved if a theory is developed that is clearly and demonstrably realistic. Natural scientists achieve high levels of agreed consistency across many phenomena because their theory is always strictly related to reality. Something similar has to be the objective in social science. Each can construct his or her own fantasies, but there is only one reality, and a focus on realism provides the best chance of forming a unified theory group with a single theory. Furthermore, the more realistic, the more secure. It was noted above that support-bargaining, including intellectual support-bargaining, is motivated by concern for the security that derives from being amongst supportive colleagues. The security of realism provides the best prospect of assembling and sustaining support.

Realistic, in terms of support-bargaining, means theory that passes tests involving, as far as possible, the elimination of the effects of support-bargaining on what is accepted as 'known.' Scientific method implicitly aims to eliminate support-bargaining effects arising from the pursuit of support for interests other than the interest in truth. Knowing the dynamics of support-bargaining, it is possible to check hypotheses for the effects of support-bargaining. Thus, for example, phenomena must be seen and interpreted consistently by different theory groups. Any particular theory group will see and interpret by reference to its own interests and ideas. If many theory groups see and interpret in the same way, the probability rises that they are seeing and interpreting phenomena in the way that they are, independent of the observing minds. This process of cross-checking must include the common theory group, since for all its idiosyncrasies, it has sustained the human race. At the least, sharp departures from common theory have to be justified. This is the equivalent of repetitive testing in natural scientific method – it eliminates, or at least reduces, the risk of contamination of observations and interpretations by individual or group interests, incorporated in theoretical preconceptions, and the desire to assemble support around those interests. The widest ranging viewpoint, the common theory, is important to the assessment of the consistency of the multiple observations and interpretations.

This concept of methodology based on support-bargaining is consistent with the prevailing view that we can have no absolute knowledge. All our knowledge is mind-dependent, because we store knowledge in our minds. Where the phenomena permit, natural scientific testing is applicable as most likely to eliminate adverse effects of support-bargaining. But the nature of the phenomena of the social sciences is such that it is often impossible to apply strict scientific method. The understanding of support-bargaining assists in distinguishing the consequences of the desire to assemble support from realistic accounts of the phenomena at issue.

This methodological commitment means a complete break with neoclassical theory. Neoclassical theory fails most immediately the test of consistent observation and interpretation by different theory groups. It makes sense only to those within the neoclassical theory group. The financial crisis has caused outsiders to look more closely at the model that underlies the diagnoses, predictions and prescriptions of neoclassical economics. The reactions range from concern to consternation. It is clearly a creation of intellectual support-bargaining within an isolated and insulated group, advancing certain interests, and presented as scientific to attract support. Nelson and Winter (1982, pp. 405-6) comment on this isolation: 'One consequence of this linguistic and conceptual isolation is that economics today is quite cut off from its sister social sciences…For their part, scholars in the other social sciences tend to take a relatively hostile view of economic theory because they find it simply an unbelievable characterization of what is going on, inconsistent with what they themselves know.'

This is good reason for heterodox economists to end their use of neoclassical theory as primary reference. To the extent that heterodox theory derives from or depends on neoclassical theory, it is necessarily open to question, and must suffer from any demise of neoclassical theory. In so far as heterodox theory depends on the neoclassical model, it cannot provide an alternative theory. Neoclassical theorists have a point when they respond to heterodox criticism by acknowledging the weaknesses of the model but insisting that criticism goes only so far; what is needed, and what they might heed, is an alternative. As has been seen, a major function of theory in support-bargaining is to provide a sense of intellectual security. Criticism breaks down theory groups and reduces security. Before neoclassical theorists will leave the security of their group, they have to be offered a theory that can provide comparable security.

The theory of support-bargaining and money-bargaining offers an alternative. This paper may prompt the community to investigate whether it merits support as an accurate representation of the dynamics of human society and an accurate explanation of observed social phenomena. Beyond that, if it is found to merit support, there is much communal work to be done in reassessing social phenomena around the world in detail in the light of the new theory. Experience indicates that the theory can reveal new aspects of a wide range of social activity, not least the intellectual processes of theory formation.

The arrangements adopted for the World Economics Association (WEA) and its associated journals, the *World Economic Journal* and *Economic Thought*, provide a valuable framework for the development of new theory. They provide a forum for open intellectual support-bargaining, without the opportunities (or with much more limited opportunities) for the imposition of an 'orthodox' line by referees and editors, and for the rejection of dissenting opinion. Ietto-Gillies (2008, p. 18) notes that an open review system for academic papers would intensify the social aspect of research: 'These open debates should be positively

encouraged as a way of developing research; they are a way of recognizing that research is a social activity and the interaction of various researchers can aid progress.' Equally importantly, the system gives positive encouragement for new thinking, and is consequently likely to stimulate individual writers to think and write new thoughts.

Support-bargaining, including intellectual support-bargaining, involves not only cooperation between individual and group, but competition. As noted above, individuals must have support, but they want it as much as possible on their own terms. Individuals will want the support of referees, and will want the agreed improvements that referees can provide. But they will also want to retain as much of their content as possible against any impositions of referees. The arrangements of the WEA may be seen as improving the bargaining position of individual writers. Instead of dealing with just two or three reviewers, and finding himself or herself strongly obliged to accept their recommendations, the individual under the WEA system has more reviewers from whom to seek support, with a correspondingly greater chance of getting the necessary support. There is a greater chance that some among the reviewers will see the validity of novel theory than that one or two selected referees will see beyond their preconceptions.

Given the importance of observation and interpretation by multiple agents, the open process is clearly conducive to the emergence of truth. But it is not infallible. Support-bargaining makes plain that what is accepted as truth is what the group says is the truth. It discounts any claims that the objective can be reached. Nevertheless, if theory groups adjust their understanding in the light of the dynamics of support-bargaining, there is a chance that what is accepted as truth will not be far from the real thing.

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