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Evolutionary and Institutional Economics as the New Mainstream?*

Geoffrey M. HODGSON

The Business School, University of Hertfordshire, De Havilland Campus, Hatfield, Hertfordshire AL10 9AB, UK. E-mail: g.m.hodgson@herts.ac.uk

Abstract

Mainstream economics has changed radically since the 1980s, offering greatly enhanced opportunities for intervention by evolutionary and institutional economics. This article surveys the extent of this transformation and the extent that mainstream economics has moved in an evolutionary and institutional direction. There are also signs of a possible *gestalt* shift in the social sciences, where rules are seen as constitutive of social relations and social reality. This contrasts with the former emphasis in mainstream economics on incremental change and equilibria. On the other hand, mainstream economics has a preoccupation with technique over substance, and the barriers between disciplines impair appropriate conceptual developments.

Keywords: evolutionary economics, institutional economics, endogenous preferences, bounded rationality, mainstream economics.

The character of mainstream economics changed significantly after the 1980s.¹⁾ Since fractures appeared in the edifice of general equilibrium analysis in the 1970s, mainstream economics has visited a number of approaches, including game theory, evolutionary game theory, experimental economics and behaviouralism. One of the consequences is that evolutionary ideas and the study of institutions are now commonplace. Previously the longstanding preserve of mavericks and dissidents, such ideas are now fashionable. Does this mean that evolutionary and institutional economics have or will become the new mainstream? This essay addresses this question.

In 1935 Sidney and Beatrice Webb published a widely sold volume entitled *Soviet Communism: A New Civilisation?* However, by 1937 the question was considered answered. The question mark was removed from this and later editions, to produce what with hindsight is a highly dubious statement. Concerning the future of economics and its current potential for transformation, I am sufficiently uncertain to suggest that the

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question mark in my title should remain — at least for now.

Institutional and evolutionary ideas in economics have a long history. Adam Smith promoted one of the central ideas in evolutionary economics, that economic outcomes are not always the result of conscious overall design and social order can emerge without central direction. Alfred Marshall was inspired by the evolutionary ideas of Herbert Spencer, and Thorstein Veblen (1898, 1899) was one of the first to import into the social sciences the evolutionary principles of Charles Darwin (Hodgson, 1993, 2004). Various evolutionary ideas were later developed by Joseph Schumpeter (1912, 1934), Friedrich Hayek (1978, 1988), Richard Nelson and Sidney Winter (1982) and several others. Institutional ideas in economics can be traced back to several sources, including the German historical school, the original American institutionalists (Veblen, 1919; Commons, 1934; Hodgson, 2004) and the new institutional economics (Williamson, 2000).

Recent changes in economics create an unprecedented opportunity for evolutionary and institutional economists. Below I address some key developments in the new institutional economics and in economic theory. These include revised ideas on the human agent and rationality, the re-emergence of endogenous preferences, and the belated mainstream recognition of Herbert Simon's (1957) idea of bounded rationality. Consequently a new zone of economic research, with both evolutionary and institutional credentials, appears on the landscape of economic theory.

The following section addresses important theoretical developments in the mainstream that move it in an institutional and evolutionary direction. Another section looks at changes within the new institutional economics. Following that, another section places evolutionary and institutional economics at the centre of the resurveyed landscape of economic theory. The penultimate section considers doctrinal and institutional barriers to the wholesale transformation of economics along evolutionary and institutional lines.

The Changing Face of Mainstream Economics

By 1980, general equilibrium analysis faced insurmountable theoretical problems. Research into the problems of the uniqueness and stability of general equilibria showed that they may be indeterminate or unstable unless very strong assumptions are made, such as the supposition that society as a whole behaves as if it were a single individual. These results demolished the entire project to base economics on general equilibrium microfoundations (Kirman, 1989; Rizvi, 1994).

Consequently, game theory replaced it at the cutting edge of mainstream economics.

This meant the abandonment of a general theory of economic interactions. By contrast, the results of game theory depend on the particular rules and mode of play of the game. Instead of everything interacting with everything else in a continuous, universal field of infinite connections, game theory assumes a structured world of binding rules and limited interconnectedness (Potts, 2000). Game theory is thus more accommodating to ideas of institutions, conventions and rules (Schotter, 1981; Sugden, 1986). Furthermore, game theory has revealed that standard neoclassical definitions of rationality are problematic, and in some contexts rationality has ambiguous outcomes (Sugden, 1991; Hargreaves and Varoufakis, 1995; Gintis, 2000).

However, full-blown models of individual interaction in game theory, where every possible human interaction and defined response is considered, and every agent is assumed that every other is fully rational, have fallen into widely acknowledged problems of tractability and relevance. In response, some have hinted at an altered direction of research, involving a world where rational capacities are bounded, and specific institutions structure agent interactions (Kirman and Gérard-Varet, 1999). Instead of the macro economy being treated as a magnified representative individual, social structure has to be introduced in a population of heterogeneous individuals. This is another open door for institutional analysis.

Game theory is a monument to the limits of deductive general theorising in economics. Himself a former pioneer of general equilibrium theory, Frank Hahn (1991, pp. 47–50) was one of the earliest to predict the likely outcome of developments in the 1970s and 1980s:

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 ... [but also] less frequently for them the pleasures of theorems and proof. Instead the uncertain embrace of history and sociology and biology.

Similarly, his theoretical collaborator and Nobel Laureate Kenneth Arrow (1995, p. 1618) remarked:

the very notion of what constitutes an economic theory will have to change. For a century, some economists have maintained that the biological is a more appropriate

paradigm for economics than equilibrium models analogous to mechanics...
economic theory may well take an analogous course.

Since then, the increasing use of simulations and agent-based models in economics has brought important lessons (Judd and Tesfatsion, 2006), although their legitimacy is only partly accepted. Notably, in specifying the decision-rules of artificial agents, the universal canons of rationality are of little use. Instead one has to specify the particular data inputs and decision algorithms. Furthermore, an agent-based model is a system with unpredictable, emergent properties that cannot be reduced to properties of individual agents (Lane, 1993; Kirman and Gérard-Varet, 1999).

Experimental economics has also helped to dramatize the institutional texture of social reality. Within experiments, markets have to be treated not as the abstract and universal ether of human interaction but as designed systems of rules. Experimental economists, in simulating markets in the laboratory, have also to face the unavoidable problem of setting up a specific institutional structure with procedural rules. As Vernon Smith (1982, p. 923) explains: 'it is not possible to design a laboratory resource allocation experiment without designing an institution in all its detail.' This challenges the idea that the abstract market is a universal forum of human interaction, free from any specific rules (McMillan, 2002).

Experimental economics has also pointed to a situated rather than context-independent conception of rationality. On the basis of extensive experimental observations, Smith (1991, pp. 881, 894), has gone so far to consider how 'institutions serve as social tools that reinforce, even induce individual rationality' and 'how decision making is mediated by institutions.' Smith concluded that rationality does not emerge on the basis of cognition alone, but only through 'ongoing social interaction with other agents'. Reviewing the results of experimental economics, Graham Loomes (1998, p. 486) proposes that generalized rational preferences should be replaced by 'rules of thumb specific to the particular structure of the decision task in hand'. On the basis of experimental evidence, Loomes (1999, p. F37) rejects the idea that 'that people come to problems armed with a clear and reasonably complete set of preferences, and process all decisions according to this given preference structure.' Both modern experimental economics and game theory have revealed the limitations of all-purpose, context-independent rationality and pointed to the institutional influences on rationality itself.

'Rational economic man' has fallen upon hard times recently, after being banished from some avant-garde circles within economics itself. In this respect, experimental economics has had a major impact (Kahneman, 1994; Kagel and Roth, 1995). It has even

given credence within mainstream economics to the idea of ‘social preferences’, involving non-selfish, ‘other regarding’ and cooperative motives (Fehr and Fischbacher, 2002). Overall, experimental economists have convinced many of their colleagues that the evidence does not support the ‘lightning calculator of pleasures and pains’ lampooned by Veblen (1919, p. 73) long ago.

Remarkably, several leading economists now admit endogenous and situation-dependent preference formation in economics (Akerlof and Kranton, 2005; Bowles, 1998, 2004). In contrast, from the 1940s to the 1990s, the concept of endogenous preferences was criticized as theoretically unnecessary within economics and inconsistent with its basic theoretical approach (Stigler and Becker, 1977).²⁾ The partial rehabilitation of endogenous preferences is a major development and brings us closer to a major theme of the old institutional economics (Hodgson, 2004).

Although economic theory has become highly fragmented into a number of technically-driven specialisms, and nothing yet has emerged to replace the consensus that prevailed from the 1950s to the 1970s, mainstream economics has changed radically. A number of authors have recently argued that the neoclassical paradigm — involving its core concepts of rationality and equilibrium — is no longer dominant within mainstream economics, and it has been replaced by a variety of different approaches.³⁾ This conclusion has been reinforced by interviews with graduate students in the most prestigious departments of economics, principally in the USA. As David Colander (2005b, pp. 930–931) argues, mainstream economics has abandoned its ‘holy trinity’ assumptions of ‘rationality, greed and equilibrium’. Instead the vision of economics is changing from ‘*the study of infinitely bright agents in information rich environments to a vision of economics as the study of reasonably bright individuals in information-poor environments.*’

As I argue below, this shift creates a massive opportunity for institutional and evolutionary economics, which has generally emphasized dynamics, uncertainty and bounded rationality.⁴⁾

²⁾ However, discussions or models with shifts in preference functions did occasionally surface in the mainstream literature. For example Hammond (1976).

³⁾ See for example Colander (2005a, b), Colander *et al.* (2004a, b), Davis (2006).

⁴⁾ Indeed, the origins of bounded rationality lie in early twentieth century work by institutional economists, and both Knight and Keynes, who pioneered the uncertainty concept, had affinities with the original institutionalism (Hodgson, 2004).

The Changing New Institutional Economics

Alongside changes within mainstream economics, important developments have occurred within the ‘new institutional economics’, creating new opportunities for dialogue and development. In the 1970s and 1980s, a prominent theoretical project in the ‘new institutional economics’ was to explain the existence of political, legal, or social, institutions by reference to a model of given, individual behaviour, tracing out its consequences in terms of human interactions. The attempted explanatory movement is from individuals to institutions, ostensibly taking individuals as primary and given, in an initial institution-free ‘state of nature’.

However, this research program was quickly criticized and it proved unviable. Alexander Field (1979, 1981, 1984) argued that the new institutional economics always has to presume given individuals acting in the context of governing rules of behaviour. In the original, hypothetical, ‘state of nature’ from which institutions are seen to have emerged, a number of weighty rules, institutions and cultural and social norms have already and unavoidably been presumed.

Williamson (1975, p. 20) famously proposed that ‘in the beginning there were markets’. Some individuals then go on to create firms and hierarchies, which endure if they involve lower transaction costs. However, the market itself is an institution, involving complex rules. In reality, markets involve social norms and customs, instituted exchange relations, and information networks that have to be explained (Hodgson, 1988; McMillan, 2002; Vanberg, 2001). Markets are not an institution-free beginning.

The institution of private property also requires explanation. It has been argued that it can generally arise spontaneously through individual interactions, involving reputation and other effects (North, 1991). However, these theoretical arguments break down with large numbers or radical uncertainty. The possibility of property rights emerging in a complex society without any role for the state has been challenged by writers even within the new institutionalist tradition (Sened, 1997; Mantzavinos, 2001).

We cannot understand the world without concepts and we cannot communicate without some form of language. As the original institutionalists argued, the transmission of information from institution to individual is impossible without a coextensive process of *enculturation*, in which the individual learns the meaning and value of the sense data that is communicated. Overall there are good reasons why the starting point of a given individual is generally misconceived.

This does not mean that new institutionalist research is without value, but it suggests that the starting point of explanations cannot be institution-free. What is required is a

theory of process, development and learning, rather than a theory that proceeds from an original 'state of nature' that is both artificial and untenable. In his 1989 lecture on receipt of the Nobel Prize, the econometrician Trygve Haavelmo (1997, p. 15) argued that

existing economic theories are not good enough ... We start by studying the behavior of the individual under various conditions of choice. ... We then try to construct a model of the economic society in its totality by a so-called process of aggregation. I now think this is actually beginning at the wrong end. ... Starting with some existing society, we could conceive of it as a structure of rules and regulations within which the members of society have to operate. Their responses to these rules as individuals obeying them, produce economic results that would characterize the society.

Haavelmo rightly suggests that historically specific institutions should be brought into the analysis at the beginning. Such a reformulated institutionalist project would stress the evolution of institutions, in part from other institutions, rather than from a hypothetical, institution-free 'state of nature'.

Other studies have developed in this direction. Jack Knight (1992) criticizes much of the new institutionalist literature for neglecting the importance of distributional and power considerations in the emergence and development of institutions. Even more clearly, Masahiko Aoki (2001) identifies the problem of infinite explanatory regress in much of the former literature and develops a novel approach. He takes as given not only individuals, but also a historically bestowed set of institutions. With these materials, he explores the evolution of further institutions using game theory. The next step, which Aoki recognizes but does not complete, is to develop a more evolutionary and open-ended framework of analysis.

The familiar idea in economics of the primary and given self, with its all-purpose rationality, is being undermined. It is slowly becoming accepted that reasoning is impossible without, and inseparable from, its institutional and material context. The adoption of a context-dependent, situated rationality is consistent with an institutional economics in which agency and structure are both important and mutually constitutive. Notably, Douglass North (1994) has examined the limits of the rational-choice framework and points to the importance of ideologies and cognitive classifications. North (1994, p. 363) links these 'classifications' and 'mental models' with their institutional and cultural context:

A common cultural heritage provides a means of reducing the divergence in the

mental models... and constitutes the means for the intergenerational transfer of unifying perceptions. ... Belief structures get transformed into societal and economic structures by institutions ... The relationship between mental models and institutions is an intimate one. Mental models are the internal representations that individual cognitive systems create to interpret the environment; institutions are the external ... mechanisms individuals create to structure and order the environment.

This recognition of social influences on individuals places North very close to the old institutionalist tradition (Groenewegen *et al.*, 1995; Rutherford, 1995; Pålsson Syll, 1992). He accepts that institutions or a ‘common cultural heritage’ can somehow reduce divergences between the mental models held by different individuals, or otherwise effect individual beliefs or goals. This leads us back to a theme in the old institutional economics concerning the role of institutions in melding preferences.

The idea of endogenous and context-dependent preferences ties in with a more open-ended and evolutionary approach. If in principle every component in the system can evolve, then so too can individual preferences. Of course, most economists recognize that preferences are malleable in the real world. But they have often taken the assumption of fixed preferences as a reasonable, simplifying assumption. However, some malleability of preferences may be necessary to explain fully the evolution and stability of institutions. Institutional stability may be reinforced precisely because of the reconstitutive capacity of institutions to change preferences (Hodgson and Knudsen, 2004).

Overall, these developments mean that the formerly discernable boundaries between the original and the ‘new’ institutionalism are now much less clear (Dequech, 2002).

The Landscape of Modern Economic Theory

Figure 1 maps the landscape of theoretical depictions of individual interactions in economics. The horizontal dimension refers to the minimum number of actors in the theory concerned. The vertical dimension refers to the assumed extent of knowledge and deliberative (rational) consideration of the (rational) deliberation and knowledge of other individual actors in the theory.

Starting with the bottom-left corner of the figure, simple monopoly refers to elementary monopoly theory—without price discrimination—where the monopolist merely faces an aggregate demand curve, and individual consumers do not otherwise come into the picture. In the bottom-right, perfect competition beholds the price-taking competitive firm of the textbooks. For most of the twentieth century, economic theory

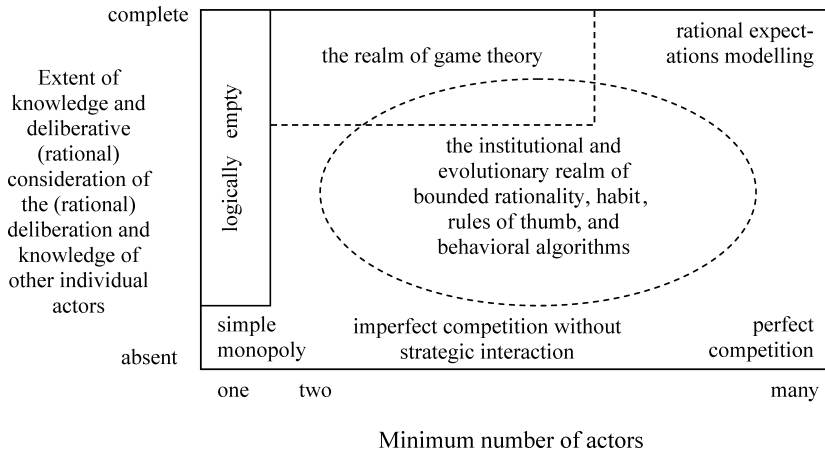


Fig. 1. Mapping the domain of economic theory.

explored the linear region at the bottom of this diagram, between simple monopoly and perfect competition, including early theories of imperfect competition without strategic interaction.

Rational expectations modelling came to prominence in the 1970s, and appears in the top-right corner of the figure. These models assume that agents quickly become aware through experience of the ‘true’ underlying model of the economy. Assuming a sufficient number of other competing agents who are all similarly informed, the well-known result is that government macroeconomic policy is ineffective. Every agent is tied in with the expectations of every other agent. None can escape from the circle of rational intersubjective determination, and under these assumptions no government can effectively budge the system from its equilibrium. However, the rationality assumptions are universal and extreme. It also widely known that this result does not hold up even with partial relaxations of these assumptions, such as the introduction of heterogeneous agents who vary in their information processing capabilities (Haltiwanger and Waldman, 1985). Consequently, the exclusive focus on models in the top right hand corner of the diagram did not last very long.

The widespread adoption of game theory in the 1980s meant led economists into new territory. Strategic interactions were considered with a limited number of actors, often with the ‘common knowledge of rationality’ assumption that not only individuals are rational but also everyone believes that all others will act rationally. Hence every player takes account of what every other player does and knows that the others do so. Long

reasoning chains like ‘if I think that she thinks that I think ...’ emerge, often creating intractable logical problems of self-reference and infinite regress (Hargreaves and Varoufakis, 1995).

Game theory occupies an upper region in the diagram. Note that the realm of game theory extends downwards to some extent into an area where agents are assumed to take partial but incomplete account of the strategic deliberations of others. This lower area within the game theory box includes behavioural game theory (Camerer, 1997, 2003; Camerer *et al.*, 2004).

In the central region of the diagram, between game theory and the monopoly-competition axis at the bottom, lies the realm of modern institutional and evolutionary economics. Like game theory it assumes a structured world of limited interconnectedness, dominated by rules. Unlike much game theory, it adopts a more limited view of individual deliberative and calculative capacities. Decision-making takes place in the context of complexity and radical uncertainty, limiting the chains of logical reasoning concerning the likely reactions of others to different behaviours. The analytical focus on equilibrium becomes less central, unlike the upper and lower regions in the figure. Its ontological fundamentals involve institutional structures and algorithmic learning processes involving program-like habits and rules.⁵⁾ As Kurt Dopfer *et al.* (2004, p. 263) put it: ‘the central insight is that an economic system is a population of rules, a structure of rules, and a process of rules.’

Following Veblen (1899, 1919), some theorists uphold that generalized Darwinian evolutionary principles of variation, inheritance (or retention) and selection apply to social as well as biological processes, despite huge differences at the level of detail (Hodgson and Knudsen, 2006).

This leads us to a fundamental ontological proposition. Society is not merely a collection of individuals, it also and unavoidably involves systems of rules, through which individuals communicate and interact. This would be true of the anarchist utopia, as it is true of the market individualism that is popular in some libertarian policy circles. Voluntary anarchist cooperation requires some rules concerning individual rights and interpersonal communication. As Friedrich Hayek (1960) acknowledged, the market itself requires rules in order to operate, just as some kinds of institutions are required to protect private property and enforce contracts.

⁵⁾ See for example Arthur (2006), Dopfer (2004), Dopfer *et al.* (2004), Hodgson (1997, 2004, 2007), Hodgson and Knudsen (2004), Ostrom (2005), Parra (2005), Potts (2000), Vanberg (2002, 2004).

Indeed, there is some evidence to suggest a possible *gestalt* shift in the social sciences, where rules are seen as constitutive of social relations and social reality. This contrasts with the former emphasis in mainstream economics on incremental change and equilibria in systems where every individual impinges on everyone else.⁶⁾

The emerging vision is of limited interconnectedness within social systems, essentially composed of structures and algorithmic processes of rules. Game theory provides a partial glimpse of this rule-structured world, with its evocation of payoff rules and strategies, but the new emerging paradigm is by no means restricted to this particular mathematical approach. Mainstream game theory still evokes agents with unrealistically powerful rational capacities. Instead of unrealistically powerful rational minds, the new paradigm stresses highly bounded rationality and rules of thumb. More generally, what is involved is an ontology of structured algorithms and rule-like dispositions, interacting and evolving at the micro-level to create complex and often unpredictable macro-outcomes.

From such an ontological standpoint, the very idea of individual interaction of any kind without rules or institutions is untenable. Instead the agenda becomes to improve on some existing institutions, and to replace others where possible and desirable.

In some senses, institutional and evolutionary economics can be more general than the monopoly-competition axis of neoclassical economics. At the centre of neoclassical economics is the idea of rational choice in the context of scarcity. Scarcity is rarely defined, but what is important and universal is scarcity in a *relative* and *local* sense, concerning *immediate* availability of capacities and resources for an agent. It is now widely acknowledged that human computational and deliberative capacities are scarce (in a relative sense). For those that wish to employ them, human skills and competences are also of limited immediate availability. Furthermore, especially since the rise of the new institutional economics, it is now realized that the essential institutional context of human activity cannot be established without costs: institutions are neither immediately available nor a free good. Institutional construction is costly, in terms of time, resources and human effort. In these senses, as Ugo Pagano (2000) points out, *both deliberative rationality and social institutions are scarce*. Following Veblen's (1899) famous work on

⁶⁾ Similar limitations apply to some heterodox approaches. For example, while Marxism rightly emphasizes social relations, their rule-like character is downplayed. The ontological image is of structures and flows rather than institutions and cognitively embedded rules. Hence the institutional economist Commons (1925, pp. 686–687) criticised Marxism for its 'failure to see the importance of custom'.

the *Leisure Class*, we may add another dimension, namely social scarcity. Pure Veblenian goods are positional goods like power and status, which involve zero-sum outcomes and invoke social limits to their consumption (Hirsch, 1977; Pagano, 1999). Overall, institutional and evolutionary economics involves an extension and deeper understanding of the principle of relative scarcity and thus, in this respect at least, is more general than the neoclassical position.

Some Barriers to Progress

However, the above developments do not mean that the transformation of economics will be easy or inevitable. There are several reasons to be cautious. Mark Blaug (1997, p. 3) has argued that in its preoccupation with technique over substance, the discipline is in an unhealthy state:

Modern economics is sick. Economics has increasingly become an intellectual game played for its own sake and not for its practical consequences for understanding the economic world. Economists have converted the subject into a sort of social mathematics in which analytical rigour is everything and practical relevance is nothing.

Do such factors prevent evolutionary and institutional economists taking advantage of the opportunities outlined above? In part, an answer to this question must depend on a consideration of the role of mathematical modelling or technique in a more viable and healthy discipline.

Tony Lawson (1997) has famously argued that as long as economics addresses open systems in the real world, then the closed models of mathematics or econometrics are inappropriate. Of course, strictly open mathematical models are impossible. Nevertheless, I believe that there is a serious flaw in this argument (Hodgson, 2006, ch. 7). The fact that one uses a closed mathematical model does not mean that one upholds that the real world is a closed system. The adoption of closure in a model does not imply the assumption of closure in reality. Models and reality have a different ontological status. Models are not and cannot be adequate or literal representations of reality. Instead they are partial and provisional heuristics to help us understand and engage with real phenomena. Consequently, the current obsession by economists with formalism does not necessarily imply that closed systems are assumed in reality.

All theorizing involves the isolating focus on some issues to the neglect of others (Mäki, 1992). All sciences address open systems but invoke closed theoretical models. Formalism does not imply an ontology of closure, and that is not the problem with it.

The claim that formalism necessarily implies the proposition of a closed real system is invalid. The problem with formalism in economics lies elsewhere.

What is the problem with formalism in economics today? In large part, as Blaug implies, prowess with formal technique has replaced the broader intuitive, methodological and historical intellectual grounding required of the great economist. Such qualities were emphasized and personified by both Alfred Marshall and John Maynard Keynes. Today, economists are no longer systematically educated in economic history, the philosophy of science or the history of their own discipline. These have regrettably become fringe preoccupations for economists, and publications in these areas are often discounted in the institutionalized scramble for recognition and promotion. Recruitment and professional advancement are generally on the basis of technical competence, rather than knowledge of the real economy or of the evolution of economics as a discipline. This bias towards formalism has become deeply ingrained and institutionalized in the academy. It is compounded by the fragmentation of the profession into technical specialisms, often lacking the generalist background that enables communication and synthetic advance. These institutional factors will be very difficult to overcome and reverse.

There are further barriers to progress in modern economics, apart from formalism as such. Some old habits of thought obstruct developments. While many economists have abandoned the standard assumptions of rationality, and some have embraced endogenous preferences, atomistic individuals still occupy the centre stage of mainstream theory (Davis, 2003). Sometimes deviations from rationality are regarded as mere random errors. The 'Harsanyi doctrine' that all individuals interpret information in a similar way remains prevalent in theoretical models. Divergent cognitions of given information are considered only rarely, even after the noted work of George Akerlof and William Dickens (1982). Radical (Knightian or Keynesian) uncertainty is rarely embraced, partly because it puts severe limits on the possibilities for atomistic models of individual decision-making. Economics clearly remains enamoured by Robinson Crusoe, and it remains to be seen how much it will move away from its longstanding idea of the individual as an independent social atom.

While economics should not abandon its consideration of individual choices and incentives, the individual has to be placed more firmly in a social context. Individuality and cognition are impossible without interaction with others (Hodgson, 1988). Although moves in this direction are evident in economics (Bowles, 2004; North, 1994), many economists have yet to take them on board.

Wider awareness of other disciplines would be helpful in this respect. While other social sciences such as sociology have their own serious internal problems, and are perhaps in a no better overall state than economics, economists have a great deal to learn here from social theory and social psychology. Their institutionalized obsession with narrow technique rather than broader conceptual fundamentals is again a severe impairment to progress.

These arguments suggest that the transformation of economics into an institutional and evolutionary science is not simply a matter of theoretical assumptions but of the institutional reform of the higher learning. Without such institutional reforms in universities and elsewhere, involving a broader and more adequate interdisciplinary grounding, the growth of institutional and evolutionary economics will be partial and lop-sided. It may triumph in the academy, but only in terms of the adoption of different theoretical techniques.

Conclusion

Notwithstanding the reservations expressed in the preceding section, without doubt the possibilities for the development of institutional and evolutionary economics are much greater today than they were in the 1980s, or even the 1990s. These opportunities have emerged at a time when there is widespread dissatisfaction with neoclassical approaches, and major departures from previous canons of orthodoxy are taking place.

A major priority for evolutionary and institutional economists is to develop a theoretical alternative to replace the neoclassical equilibrium approaches that previously held sway. No victory is possible without major progress on this front. While important, empirical and policy studies are no substitute. It is necessary to challenge older theories by newer ones.

This article has also emphasized the importance of interdisciplinary dialogue, including with psychology, sociology, history and philosophy. The technocratic specialists that now populate departments of economics have little grounding in the broad fundamentals of enquiry in the social sciences. Academic wisdom and breadth of knowledge is required as well as technical competence. Dealing with the issues raised in this essay will also involve a reconsideration of the nature of and boundaries between the social sciences, and their possible reorganization on different lines.

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