Keynes on Knowledge, Expectations and Rationality

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Abstract

The purpose of this paper is to revisit Keynes’s ideas on knowledge, expectations and rationality in the light of interpretations and developments over the last few decades. Keynes’s philosophy focused on establishing grounds for belief under the general conditions of uncertainty. He argued that calculative individualistic rationality (in the standard mainstream economics sense) had limited scope. He developed these ideas within his macroeconomics in terms of a theory of expectations and confidence in expectations, emphasizing the role of social conventions as a basis for judgment. Keynes saw sociality interplaying with individuality also in terms of ethics, and the idea of public institutions as a vehicle for promoting social good. Keynes’s ideas on knowledge suggest a pluralist methodology for economics, employing a range of models and sources of evidence, based on a notion of rationality as ‘reasonableness’.

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Introduction

In his seminal 1968 article, and in the edited volume which followed in 1970, Phelps refocused economists’ attention on expectations formed with incomplete information. In doing so, he referred back to Keynes’s *General Theory*, and particularly Keynes’s analysis of the labour market. The purpose here is to revisit Keynes’s work with a particular emphasis on his treatment of knowledge, expectations and rationality. The focus will be on his ideas, not only on expectations formation, but also on the degree of confidence attached to those expectations, ie uncertainty, and what this means for macroeconomic theory. In particular, since uncertainty stands in the way of the complete ordering of assets according to risk and return required for rational choice theory, Keynes’s ideas have particular import for discussion of microfoundations.

This aspect of Keynes’s thinking has been downplayed in current discussion, compared to his macroeconomic theory and policy. Yet Keynes’s macroeconomics developed on the foundation of his philosophy, and in particular on his theory of knowledge. Keynes (1937a) made it clear that he saw uncertainty as lying at the heart of the *General Theory*. While a few scholars (dubbed by Coddington, 1976, the ‘fundamentalist Keynesians’) continued to keep Keynes’s ideas on knowledge, uncertainty and rationality alive, it was only in the 1970s, following the publications of Keynes’s *Collected Writings*, that research on this topic expanded significantly. Over the subsequent decades, Keynes’s ideas on knowledge, expectations and rationality were explored, reinterpreted and developed.
What will be provided here is a synthetic summary account of Keynes’s philosophical ideas in relation to his economics, rather than a history of Keynes’s thought. There is a large history of thought literature on the subject, spearheaded by Carabelli (1988) and O’Donnell (1989), as well as a large literature on subsequent interpretations and developments, for example as gathered in Runde and Mizuhara (2003). Inevitably, as for any great thinker, Keynes’s ideas evolved over his lifetime, particularly as his economics both drew on, and fed back into, his philosophy. Further, his ideas have inspired a range of interpretations and developments. Anticipating the discussion which follows, Keynes’s thought is an open system. But this rich detail will be downplayed in what follows in the interests of considering what we might draw from Keynes as we consider future developments in macroeconomics in the light of the crisis in banking, in the global economy, and in economics itself.

We therefore start with a synthetic account of Keynes’s ideas on knowledge and expectations, and his understanding of the source of uncertainty. We consider his emphasis on the role of conventional judgement, and of conventions more generally, and then focus on the implications of these ideas for how we may understand and use the concept of rationality in a Keynesian framework, alongside considerations of logic and consistency. This concern in Keynes with the interplay between individuality and sociality sheds some light on Keynes in relation to the formulation of microfoundations. The paper concludes with a consideration of the implications of Keynes’s ideas on knowledge, expectations and rationality for economic methodology.
**Keynes on Knowledge and Expectations**

For Keynes the general case was uncertainty, rather than certainty or certainty-equivalence. His ideas on knowledge were developed in his first book, *A Treatise on Probability* (Keynes 1921), whose purpose was to explore how the grounds for belief in propositions are established, as the basis for action. As we shall see, ‘action’ involves more than the conventional mainstream notion of choice among an array of existing possibilities, since it also includes creative leaps, along the lines of the Austrian notion of ‘praxis’.

By ‘probability’ Keynes meant logical probability, ‘the various degrees of rational belief about a proposition which different amounts of knowledge authorize us to entertain’ (ibid.: 3). Quantified probability based on frequency distributions was a special case; the general case was uncertainty, where even non-quantifiable (ordinal) probability may not be identifiable. While probability might not be quantifiable due to lack of knowledge which is in principle available (‘known unknowns’), he was more concerned with the more general case where there is no firm basis on which to quantify it (there are ‘unknown unknowns’). The focus on uncertain knowledge was general also in its application to scientific argument as well as argument in everyday life: ‘in metaphysics, in science, and in conduct, most of the arguments, upon which we habitually base our rational beliefs, are admitted to be inconclusive in a greater or less degree’ (ibid.).

The source of this inconclusivity or uncertainty was the nature of the real world, which he understood to be organic rather than atomistic. As Keynes (1926: 262) put it in discussing the application of mathematics to economics:
We are faced at every turn with the problems of an organic unity, of discreteness, of discontinuity – the whole is not equal to the sum of the parts, comparisons of quantity fail us, small changes produce large effects, the assumptions of a uniform and homogeneous continuum are not satisfied.

Keynes notably applied one feature of an organic system, the fallacy of composition, in his macroeconomics. For example the paradox of thrift arises when individual intentions to increase saving are thwarted by their macroeconomic consequences, something of concern in current circumstances. Similarly there is a paradox of liquidity, whereby the attempt to make portfolios more liquid reduces the liquidity in the system, as we experienced during the banking crisis. Individuals cannot be sure of their expectations being met, creating uncertainty.

More generally, an organic system involves complex and evolving interactions among heterogeneous and evolving elements. The result is the problem of induction explored by Hume (of whom Keynes was a scholar; see Carabelli 1988). If the system’s internal structure is evolving in a non-deterministic manner, and the influences to which it is subject in the future are not known (or all knowable) in advance, then the scope for using frequency distributions to quantify a probabilistic or stochastic expectation is lacking. Keynes believed that this was particularly the case with social systems.

While probability might not be quantifiable, there may be scope for an ordinal notion of probability, such that one outcome is judged on the basis of the evidence to be more probable than another. But even then, there are cases which are incommensurate – how do we compare the probability of a further banking crisis in 2011 against the
probability of nuclear war in 2015 for example? There is a large subsequent literature on subjective quantitative valuations of probability around the subjective expected utility (SEU) approach, which implies that agents are nevertheless able to make subjective quantitative estimates of probability with respect to all variables. But Keynes (1931) pointed to the inadequacy Ramsay’s (1931) use of formal inductive logic as the basis for subjective probability (Gerrard 2003). In an organic system, we cannot logically be certain that the past is an adequate guide to the future. Indeed, in the context of SEU theory, Savage (1954: 15-6) himself warns that it is practical only in suitably limited domains to assume that agents are capable of a complete preference ordering of all possible choices: ‘carried to its logical extreme [such an assumption] is utterly ridiculous … because the task implied is not even remotely resembled by human possibility’.

In particular, the SEU framework does not take account of uncertainty, on account of which agents may prefer to keep options open rather than commit to a choice (Davidson 2009: 108-9). In other words, there is the possibility that uncertainty may be so high as to preclude any ‘bets’ at all (Runde 1995), as evidenced by the customary exclusions from insurance policies on a routine basis, or the refusal to enter a market under conditions of particular uncertainty. The freezing of the interbank market during the recent banking crisis, for example, reflected such high uncertainty as to the riskiness of bank assets that banks were no longer prepared to lend to each other. Similarly, when uncertainty is too high to justify commitment to capital investment, firms’ preference to keep assets liquid (and thus options open) is high (Davidson 2003). High liquidity preference has been a notable feature of the current crisis, reflecting the high degree of uncertainty about future economic developments (Bibow 2009).
While Keynes’s theory of probability undermines the logical foundation for a general frequentist theory of probability itself, he also undermined any idea of a general frequentist theory of confidence, or uncertainty. Keynes introduced the notion of weight of argument as the determinant of confidence, where weight is generally higher the higher the amount of relevant evidence brought to bear (relative to relevant ignorance). But of course what is relevant is itself theoretically loaded, and theoretical understandings can change (Dow 1995). It should therefore not be assumed that weight inevitably increases with amount of evidence; in particular more evidence may reveal new realms of ignorance (Runde 1990). Weight falls if new evidence reveals previously unrecognized ‘unknown unknowns’, as happened with the financial crisis. Finally, there is no direct correspondence between degree of confidence and degree of probability, so there may for example be high confidence that an outcome has low probability, and vice versa.

It is therefore not possible to order all possibilities according to risk and uncertainty in a reliable way. Even if it were feasible to contemplate an identification of all future possibilities and complete orderings of these according to risk, the degree of uncertainty attached to these calculations is liable to discrete shifts according, not only to new information, but also how that information feeds back into the subjective knowledge system which generated the risk estimates. While the basis for decision-making, eg in portfolio choice, may be expressed formally in terms of probability and weight (Dequech 2005), the derivation of probability and weight cannot be derived deductively. In any case the outcome depends on attitude to confidence (or uncertainty) which is also subject to shifts, and is therefore also not a purely logical derivation.
Positive action in spite of uncertainty requires the exercise of animal spirits (Dow and Dow 1985), or low uncertainty-aversion (Dequech 1999). A positive decision, or action, is more likely the higher the weight of argument, and the lower the aversion to uncertainty. In analyzing the investment decision, for example, Keynes (1936: 149) implied that a rational investor (in the Benthamite sense) would never invest at all since expectations as to return were bound to be uncertain: ‘The outstanding fact is the extreme precariousness of the basis of knowledge on which our estimates of prospective yield have to be made.’

Keynes argued that, in an open organic system, reason and evidence alone are not sufficient for judgment, to yield theoretical conclusions or to justify decision making. Yet agents normally do manage to form a view when uncertainty is present, but not prohibitive. Keynes argued that this was made possible by recourse to conventional judgment as an input to individual judgment.

We do not know what the future holds. Nevertheless, as living and moving beings, we are forced to act. Peace and comfort of mind require that we should hide from ourselves how little we foresee. Yet we must be guided by some hypothesis. We tend, therefore, to substitute for the knowledge which is unattainable certain conventions, the chief of which is to assume, contrary to all likelihood, that the future will resemble the past. (Keynes 1937b:124)

In spite of the problem of induction, past evidence is the most reliable source of knowledge we have, adding weight to argument. Two other common conventions which
Keynes (1937a: 114) identified are: relying on expert opinion and following conventional expectations.

Conventional judgment in conditions of uncertainty cannot be based on demonstrable logic any more than individual judgment. Yet it provides a more objective benchmark for individual judgment, as a point of reference (Davis 1994: 117, 133). Individuality or agency allows for individual choice as to whether or not to follow social convention. But sociality means that social convention provides the norm, such that expectations are formed interdependently with expectations in the market. This non-deterministic social interactionism is a key ingredient of Keynes’s organic view of the economic system (Park and Kayaketin 2002).

Many social conventions have a moral dimension. Incorporating moral principles into the analysis of behaviour compounds the heterogeneity of the factors at work. Van Staveren (2001: 6-7) for example argues that the two incommensurate principles of liberty and justice are better understood as commitments rather than preferences, that they involve conflict and thus negotiation and that their interpretation is specific to particular cultural contexts. They cannot therefore be homogenized within a general optimization framework.

Moral issues have attracted new attention in the wake of the crisis. The conventional level of executive pay in the financial sector and the procedure of rewarding staff with bonuses, for example, have come under public scrutiny on moral grounds. It is not just the apparent rewards for failure which have been questioned from the perspective of principles of social justice, but also what has been revealed of the growing disparities in compensation across different occupations. In the meantime, the literature on executive
pay suggests that the system itself relies heavily on convention as to what is normal for such positions, on reciprocity relations and on power relations (see for example O’Reilly and Main 2009). Similarly the evidence suggests that it is relativities which dominate the response to bonuses rather than absolute levels. This is heavily reminiscent of Keynes’s (1936) analysis of the labour market more generally. Further, he observed the convention of relatively stable money wage levels as providing some stability alongside other conventions.

Keynes himself approached the subject of uncertainty from an ethical perspective: how do we as individuals determine the morally best action if we are uncertain of the consequences? The answer to that question was what divided Keynes and Hayek, who grappled with similar issues of reconciling individuality with sociality. For Hayek, knowledge difficulties were such that institutions, like government, could not justify intervention; individual judgment was the most reliable. But for Keynes public institutions provided a mechanism for actively promoting public-spirited behaviour, which would address the consequences of uncertainty in the economy and in society, albeit on the basis of uncertain knowledge (O’Donnell 1989; Davis 1994).

The use of conventional judgment, as well as conventions more broadly, not only assists the individual but is also socially useful. As Hodgson (1988: 205) put it:

The argument, in short, is that in a world of uncertainty, where the probabilistic calculus is ruled out, rules, norms and institutions play a functional role in providing a basis for decision-making, expectation and belief. Without these ‘rigidities’, without social routine and habit to reproduce them, and without
institutionally conditioned conceptual frameworks, an uncertain world would present a chaos of sense data in which it would be impossible for the agent to make sensible decisions and to act.

Insofar as most agents follow social conventions, they normally act to stabilise markets. Indeed markets in general function successfully only because participants observe social norms in trading, for example. Similarly the institution of money has developed to provide liquidity in the face of uncertainty, and central banks have evolved in order to support that role.

Keynes argued that conventional judgment is particularly important for financial markets. Keynes (1936: ch. 12) explored the juxtaposition of the long-term expectations of firms seeking to invest in capital projects, and the short-term expectations of capital markets as the source of finance. For firms, as Shackle (1955) explained, capital projects are ‘crucial experiments’; it is clear that frequency distribution data are inadequate for projecting long-term yields, and animal spirits are vital. For capital markets on the other hand, where sociality dominates over individuality, and where the relevant variables are more clearly expectational than for producers, social conventions play a more important role. Both entrepreneurs and financial markets require both conventional judgment and animal spirits to some degree, but arguably Keynes’s analysis of conventions has more force for financial markets.

However, conventional judgment in financial markets may fuel instability, because it is prone to discrete shifts. Another expression for conventional judgement is ‘market sentiment’, which played a powerful role in the banking crisis. Conventional
expectations that the long boom in asset prices would continue fuelled the boom; these expectations were shared by the banks, capital markets and households, encouraging the credit creation and asset purchases which fuelled the boom. Yet when awareness grew of the implications of structured products containing unknown elements of toxic debt, there was a massive turnaround in market sentiment, which created the crisis. Certainly information was concealed, or wilfully ignored, and incentives encouraged more risky behaviour than otherwise. There is an extent to which we can talk about conventional valuations losing touch with the underlying reality, ie they were unreasonable. But the underlying reality for financial markets is in turn influenced by market valuations and the resulting decisions as to investment, production and consumption.

Keynes’s argument is that there is no basis on which to identify anything we might regard as a ‘true’ market valuation of any asset, since any valuation is contingent on unknown and unknowable future developments. Markets require some conventional judgement by which to establish prices, and as a benchmark for opinion. We have seen that his analysis precludes the complete ordering of assets required by the rationality axioms of mainstream choice theory. We consider now where Keynes’s analysis leaves us on the subject of rationality, and focus on the fact that understanding of rationality is contingent on the type of logic being applied.

**Keynes on Rationality**

Rationality in the sense in which the term is used in mainstream economics is the application of calculative deductive logic (ie formal logic) to a set of premises taken as given (optimizing behaviour with respect to a set of preferences, endowments and
technologies). It requires agents to make calculative choices among the array of all possible options (including contingent options), and for these choices to be consistent. As long as deductive logic is correctly applied and contradiction avoided, the system itself will be internally consistent.

The formal logic view of rationality places huge knowledge demands on economic agents. But Keynes had argued that the scope for calculative rationality was very limited, given the relative shortage of knowledge which could be held with certainty (including certainty equivalence). If probabilistic expectations (even where they can be calculated) are held with varying degrees of confidence, and confidence may shift discretely with expert or conventional opinion (or fail altogether), the rational optimum set of choices cannot be deduced.

In his response to Ramsey’s subjective probability approach, Keynes pointed to Ramsey’s reliance on induction as the ‘useful mental habit’ we employ given the shortcomings of formal axiomatic logic under uncertainty. Ramsey identified recourse to convention as ‘human logic’, as opposed to ‘formal logic’. The theory of knowledge which Keynes developed in his economics conforms more to Ramsey’s idea of human logic (Gerrard 2003). As we have seen, this draws on inductive logic, in the sense that evidence is brought to bear as far as possible. It was in this sense that Keynes referred to ‘rational’ belief, as opposed to mere belief (Winslow 2003). But induction is not sufficient given the organic nature of the economic system. So conventional knowledge and animal spirits are required to fill the gap if action is to be taken. We can therefore understand rational judgment within human logic as ‘reasonable judgment’ – employing evidence and reason as far as possible.
Of course not all conventions are reasonable (just as not all conventions are moral). In particular, Keynes identified the conventional goal of financial accumulation as unreasonable, indeed as pathological (Winslow 2003). On the other hand, in the absence of alternative knowledge, the convention of assuming the future to be like the past is not unreasonable:

It would be foolish, in forming our expectations, to attach great weight to matters which are very uncertain. It is reasonable, therefore, to be guided to a considerable degree by the facts about which we feel somewhat confident, even though they may be less decisively relevant to the issue that other facts about which our knowledge is vague and scanty (Keynes 1936: 148).

What is not reasonable, within this framework, is to focus on what we confidently know in one respect when it is contradicted by what we know we don’t know. Thus, according to the well-known joke, a drunk insists on looking for his keys under a lamppost because he can see better there, even though he knows he dropped his keys elsewhere. This is not reasonable behaviour.

But rationality in the formal logic sense can itself be a social convention, and apparently dominated thinking in the financial sector, with its reliance on quantitative models to predict asset prices as if the data were drawn from an atomic system with a fixed structure. Given this convention, we are driven by the need to appear to others as rational. Thus an investment decision may be presented as a comparison between the marginal efficiency of capital and the rate of interest as if the former were knowable. This
is a useful procedure ‘which saves our faces as rational economic men’, even although it cannot generally provide a rational basis for decisions (Keynes 1937a: 114). But actual decisions are taken, reasonably and of necessity, on the basis of reference to conventional judgments and ultimately on the basis of animal spirits (Carabelli 1988, Dow 1991). But it can also be reasonable for individual decision makers, with their own evidence, creative thinking and animal spirits, to flout convention (Dequech 2003). In other words, conventional judgment and animal spirits may well conflict.

Part of the conventional formal logic view is a dualism between rationality and irrationality/emotion (Dow 1990). Discussion of social conventions and, even more, animal spirits, raises the issue of the relationship between psychology and economics, between emotion and rationality (with which the two disciplines were traditionally associated, respectively). Deductivist logic sees the two as distinct and mutually-exclusive. But for Keynes, as for Hume, emotion was integral to his theory of human nature and thus of human decision-making. And indeed the modern psychology literature points to the need for emotion, or ‘affect’, to motivate behaviour (see for example Damasio 1994). Keynes’s evolving thinking on this subject was captured in his essay (Keynes 1949), where he presents his realization, during a talking-at-cross-purposes by Bertrand Russell on the one hand and D H Lawrence on the other (promoters of reason and emotion respectively), that human behaviour arose from a combination of reason and emotion. What is rational for agents therefore is not separable from what is emotional (see further Dow 2010).

Rationality is important – some reasons are given to justify decisions. But these reasons can include support from social convention, or a dismissal of concerns over
uncertainty, as well as a more conventional theoretical argument. Indeed support from social convention and dismissal of concern with uncertainty can be employed by economists as much as by business investors. The key is that formal deductivist logic yields definitive conclusions which can be classified as rational (even if they cannot be justified in relation to the nature of the economic system), while human logic yields arguments which involve reasoned judgment which is always open for discussion. There is no hard and fast divide between what is rational and what is irrational in human logic.

**Implications for Methodology**

We noted earlier that Keynes’s theory of knowledge was intended to apply to economists as well as to agents. Uncertainty for economists means that certainty equivalence is beyond our grasp. Although economists by definition push reason further and analyse more evidence than others, these are not enough for forming judgments under uncertainty and so we too draw on conventional knowledge and knowledge conventions. Theory then evolves when new connections are made on the basis of creative thinking, fuelled by animal spirits.

One of the strongest conventions in mainstream economics is to employ general equilibrium analysis, based on rational optimizing individual behaviour, to aim for the one best model the economy. Lucas (1980) argued that Keynesian uncertainty was formalized and therefore operationalized by the later technical advances in economics. For example, formal macro modeling techniques allowed economists (and agents) to correctly anticipate the macroeconomic consequences of individual action, and thus subvert any fallacy of composition. Similar analytical optimism is evident in current
attempts to model the macroeconomic phenomenon of systemic risk. Inattention to systemic interdependencies between financial portfolios in decision-making at the micro level was a feature of the run-up to the crisis, causing a paradox of liquidity.

A complete modeling system which yields definitive predictions (or at least multiple equilibria) requires the following conditions: given structures with fixed (or at least predictably random) interrelations between separable parts (e.g., economic agents) and predictable (or at least predictably random) outside influences. Such a system is a ‘finite’ system (Keynes 1921: 280), or in modern parlance a ‘closed’ system. Such a system, correctly applied, promotes internal consistency, but risks inconsistency with the nature of the economic system unless it too is closed. An open, organic economic system can however be understood more consistently by means of an open theoretical system.

An open system is not the opposite of a closed system, since there is a range of possibilities, depending on which conditions are not met, and to what degree (Chick and Dow 2005). Indeed it is an important feature of this view of knowledge that it is not dualistic. Deviating from a closed system, and thus certainty or certainty-equivalence, does not mean abandoning theory altogether. On the contrary, Keynes was concerned to identify the logical grounds on which we habitually form beliefs, make judgments and take decisions (both as economists and as economic agents) in spite of uncertainty. The question was what view on probability would be logically justified, in relation to the evidence, within an open system.

Economic agents are seen by Keynes as drawing on a range of incommensurate sources of knowledge which, in combination with the exercise of judgment, provide the basis for decision making. By the same token, economists too face uncertainty with
respect to the future of an economy, and should therefore also draw on a range of (incommensurate) sources of knowledge. It is one of the main attractions of mathematics that it is capable of making different arguments commensurate. Thus, variables such as confidence, uncertainty aversion etc can be combined in a formal system (see for example Dequech 2000). But if these variables cannot be derived formally from a foundational account of behaviour and further are not quantifiable, then such a model is not sufficient for prediction. Further, as Chick and Dow (2001) argue, the process of formalization is non-neutral in that it tends to change meanings. According to Keynes (1936:297), formal modelling is therefore best used as an aid to thought, rather than something which alone yields definitive final answers:

The object of our analysis is, not to provide a machine, or method of blind manipulation, which will furnish an infallible answer, but to provide ourselves with an organised and orderly method of thinking out particular problems; and, after we have reached a provisional conclusion by isolating the complicating factors one by one, we then have to go back on ourselves and allow, as well as we can, for the probable interactions of the factors amongst themselves. This is the nature of economic thinking. Any other way of applying our formal principle (without which, however, we shall be lost in the wood) will lead us into error.

Any formal model is a closed system. Variables are specified, identified as endogenous or exogenous, and relations specified between them. They are a mechanism for separating off some aspect of an open-system reality for analysis. But, for consistency
with the subject matter, any analytical closure needs to be justified on the grounds that, for the purposes of the analysis, it is not unreasonable to treat the variables as having a stable identity, to have stable interrelations, and not to be subject to unanticipated influences from outside. (To allow for random shocks is simply to assume certain knowledge of the randomness of outside influences.) But in applying such an analysis it is important then to consider what has been assumed away. In Keynes’s (1936: 297) own words, when discussing formal theory which separates the effects of monetary expansion on output and prices:

   It is a great fault of symbolic pseudo-mathematical methods of formalising a system of economic analysis … that they expressly assume strict independence between the factors involved and lose their cogency and authority if this hypothesis is disallowed; whereas, in ordinary discourse, where we are not blindly manipulating but know all the time what we are doing and what the words mean, we can keep ‘at the back of our heads’ the necessary reserves and qualifications and the adjustments which we shall have to make later on, in a way in which we cannot keep complicated partial differentials ‘at the back’ of several pages of algebra which assume that they all vanish. Too large a proportion of recent ‘mathematical’ economics are merely concoctions, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols.
While general equilibrium analysis may be thought of as a mechanism for keeping hold of all the relevant variables and interrelations between variables, Keynes’s argument is that *any* formal model is bound to be an incomplete representation of an open-system reality. Any formal specification, and in particular any formal closure, abstracts from the complex interactions and evolution of interactions, as well as unforeseen developments which characterise that reality. Models are inevitably partial representations, invoking closures which are both porous and provisional. They can only be approximated in reality, and only then cannot be presumed to persist. The better approach therefore, from a Keynesian perspective, is simultaneously to segment off certain aspects of reality for partial formal modelling, keeping ‘at the back of our heads’ what needs to be relaxed when applying the model’s conclusions to combination with the conclusions of other partial models, and then to policy recommendations.

This methodology explains why Keynes’s general theory did not take the form of a single large model, including formal microfoundations. Lawson (2009) applies this reasoning in a critique of the ongoing search for one best formal macroeconomic model. Macroeconomic relations in Keynes’s view were separable as a partial analysis. It was not that Keynes lacked a microeconomic analysis, but rather that his study of individual behaviour was that it was organic rather than atomistic. In particular, in facing uncertainty, individuals’ sociality comes to the fore in their (rational) reliance on social conventional knowledge. Only if social conventions can be derived deductively from optimising individual behaviour can they be incorporated in a bottom-up microfoundations framework. And even then, changes in conventions and the choice, or not, to exercise animal spirits, would have to be derivable from optimising individual
behaviour. It has been suggested that individual behaviour instead needs to be expressed in relation to macrofoundations (Nelson 1994). But the problem would remain of only allowing for uni-directional causation. How the reality is segmented for analytical purposes is a matter of judgment, and different partial analyses can focus on different directions of influence between the micro and macro levels (see further King 2009).

A Keynesian analysis thus would employ a range of models and methods of gathering evidence, much of which will be incommensurate; were they commensurate, we would be back to general equilibrium theory as a complete system. There might be contradictions, in the sense that one variable might be endogenous to one chain of reasoning and exogenous to another (as provisional forms of abstraction). The emphasis is rather on consistency with the organic nature of the subject matter and thus the uncertainty of any knowledge about it. This is a pluralist strategy, as against a monist strategy addressed to generating a complete formal system (Salanti and Screpanti, eds, 1997, Dow 2004).

Such a methodology is addressed to raising confidence in economists’ judgment. Confidence is higher the greater the weight of evidence, ie the number of partial chains of reasoning and types of evidence addressing a particular question. These partial analyses may not point in the same direction, but this may reflect the presence of a range of countervailing forces potentially acting simultaneously (Lawson 1997). Thus it is unlikely that, putting together a range of analyses, it is possible to say with certainty that, say, inflation will rise to a certain level within the next six months. Rather the economist can point to a range of potential forces and express some judgment as to where the balance lies in terms of the likely inflation outcome. Indeed the balancing of a range of
partial analyses normally characterises expressions of the reasoning behind monetary policy (Downward and Mearman 2008). This is the case even though central banks still also use large formal macroeconomic models. Is this latter a reflection of convention in mainstream academic economics?

Finally, while partial formal models are important, we need to return to Keynes’s theory of knowledge to recall that the source of uncertainty is changes in conventional judgment, especially as to confidence in expectations, as well as to the exercise of agency under animal spirits which may encourage discrete shifts in conventional judgment. Neither deductive logic nor inductive logic can predict such things with certainty. Therefore theory incorporates socio-psychological variables which cannot be explained, and yet are not random; they can only be observed, and signs picked up of impending changes using alternative methods. Thus, while it is welcome that systemic risk is now being modelled so that the interdependencies in the financial structure are better understood, the predictive power of such models is limited by the inability to explain or predict the state of confidence and changes in it, ie market sentiment. Methods to identify and observe market sentiment, as well as other aspects of conventional behaviour, would therefore be part of a pluralist strategy for understanding financial markets.

Conclusion

In considering rationality and the microfoundations issue in the light of Keynes’s ideas, we have seen the centrality of uncertainty. For agents, uncertainty prevents a definitive complete ordering of assets (and possibilities more generally), such that decision-making must rely on additional input from social convention and from animal spirits. Since these
are both liable to indeterminate discrete shifts, as well as mutual conflict, there is scope for market behaviour to be unstable in a way which is very difficult to anticipate (as to timing, direction and degree). Such behaviour may well be reasonable, given existing knowledge, particularly within the internal logic of financial markets. At the same time, conventional understandings (eg with respect to the ability of the central bank to support the banking system) will reduce uncertainty and stabilise markets. But there may also be conflict with other social conventions (eg as to justice in relation to remuneration across sectors) prompting individual responses and a political response in the form of regulation. The knowledge base for individual decision-making is not homogeneous.

The rationality implied for agents is more like something we could call ‘reasonableness’, avoiding the strict conditions for the mainstream notion of rationality which uncertainty precludes us from satisfying. This focus on the possibilities for knowledge for the individual has pointed us in the direction of the social, in the form of social conventions.

Uncertainty too is crucial for economists themselves in attempting to theorise about this non-homogeneous economic system, with its interplay between individuality and sociality. Given this subject matter, both deductive and inductive logic fall short, so that economists too must employ conventions as to how to proceed. While a dominant convention has been to seek one best, formal, general equilibrium model, this has created inconsistencies with actual behaviour which is conditioned by uncertainty. The methodology which emerges from Keynes’s theory of knowledge is instead a pluralist one, mirroring the multi-pronged approach he suggested we take to knowledge as agents. This implies using a range of partial models, with provisional closures, together with a
range of sources of evidence, in order to build up a picture of the various forces at work in the economy. Forming a view on the basis of this plurality of knowledge in turn requires the exercise of judgment according to human logic on the part of economists.

References


