

The Handbook of Economic Methodology

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independently of being experienced. More generally, philosophers advocating such views emphasize the possibly distorting contribution of the knowing subject to the cognition.

This is related to the idea of fallibility. Fallibilism is the view that knowledge claims are in principle fallible (and possibly corrigible, revisable in the light of further evidence and arguments) so that full certitude is unattainable. Realists typically are fallibilists, opposing both dogmatism and radical scepticism. Even more, realism is often defined so as to presuppose fallibilism. This is entailed by the idea, mentioned above, that even an epistemically ideal theory or statement may be wrong.

It is a widely shared view among realist philosophers that the resolution of (or to put it less strongly: progress with respect to) issues about many themes mentioned above, such as what the world is made of, and what reference, truth and knowledge amount to, is up to future science. In other words, the specifications are understood as being *a posteriori* in regard to the progress of special sciences such as biology, cognitive science and, to anticipate boldly, economics. It is not the task of philosophy, in this opinion, to decide *a priori* what kinds of entities exist, what structure the world has, what relations our language has to the non-linguistic reality, what can be known and perceived, and so on. As an *a posteriori* exercise, philosophy produces claims that are fallible in the same sense that any other claims may be wrong.

Do realism and economics fit together? This is a question of interest to economists, economic methodologists, philosophers of science, politicians and lay public. The answer depends on what we mean by 'economics' and 'realism'. For example, we can take 'economics' to refer variously to any current form of economics or to economics as we would like it to be or economics as it might be – and the answer might vary accordingly. As for realism, we have not exhausted the full list in the foregoing, but we have come up with many forms of realism, and the answer obviously depends on the form(s) we choose. For example, if we opt for radical physicalist scientific realism, current economics will not fit. The outcome is the same if realism is taken to require that all components of economic theories be true.

However, a number of economists have been shown or can be shown to subscribe to one or another form of realism. These include J.H. von Thünen, J.S. Mill, Karl Marx, J.E. Cairnes, Carl Menger, Lionel Robbins, Nicholas Kaldor, Milton Friedman, Ronald Coase, George Richardson, Oliver Williamson and others. Even though there are important differences between them, they share the view that economic reality has an objectively (albeit not mind-independently) existing structure, and that economic theories, even though being partial and involving false elements, are able to truly represent some of the important aspects of this reality. There are some special features regarding realism about economics, such as commonsense realism playing a prominent role. This is because economic theories much of the time appear to be pretty much about the same objects that our commonsense understanding of the economy is about, such as households and business firms, money and prices, buying and selling, wants and expectations. Another feature, and an epistemologically significant one, is that the simplified and isolated settings theoretically brought about by economists usually cannot be reproduced empirically, thus making the empirical testing of truth claims particularly difficult. Fallibilism should therefore play an exceptionally prominent role in economics.

As an explicit research project, realism has been explored only recently in economic methodology. Two major realist projects have been those of Uskali Mäki (the first published statement appeared in 1982) and Tony Lawson (for example 1997). The differences between these two projects are many, but two 'meta-methodological' ones stand out immediately. One is that Lawson's project is largely an application of one philosophical system, that of Roy Bhaskar,

while Mäki's is a matter of drawing from different philosophical sources as well as creating new conceptual tools that are hoped to reflect some of the peculiar features of economics. The other is that Lawson's project is supposed to have more or less direct critical implications about the poverty of what is called mainstream economics, while Mäki's project has been more neutral: the normative implications are expected to be more indirect and to require lots of factual premises that go beyond realism as a philosophical doctrine. Boylan and O'Gorman (1995) provide expositions and criticisms of these two projects. These projects do not exhaust all there is to the study of realism in the context of economics. Many other economic methodologists and philosophers of economics (such as Alex Rosenberg, Alan Nelson, Daniel Hausman, Don Ross, Nancy Cartwright and others) have contributed to the realist project without necessarily doing it explicitly under the banner of 'realism'.

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Realisticness

Economists have the habit of arguing about the 'realism' of theories and their assumptions. In this usage, 'realism' is an attribute of economic theories: it refers to a property or a set of properties of theories and their constituent parts. In contrast to the usages of the term in philosophical literature, 'realism' that economists argue about does not refer to a philosophical view or thesis, such as a philosophical theory of scientific theories. In order to keep these two notions separate so as to examine how realism as a theory of theories is related to various attributes of those theories, it has been suggested in Mäki (1989) that another term be adopted to denote these attributes; this term is 'realisticness'.

The suggestion is that economists, and especially economic methodologists, should talk about the realisticness and unrealisticness of theories and assumptions rather than their 'realism'. The terminological separation of realism and realisticness is supposed to help us see, on the one hand, what different ideas about realism as a theory of theories imply concerning the realisticness and unrealisticness of these theories; and on the other, what different forms of realisticness and unrealisticness in different parts of theories imply concerning the philosophical interpretation of these theories in terms of realism as a theory of theories. One of the major findings reached on this basis has been that, with most forms and locations of realisticness, realism does not require

realisticness. Realism and unrealisticness are compatible, provided unrealisticness is suitably understood and suitably located within theories.

Commentators customarily only focus on one specific pair of meanings of realisticness and unrealisticness, namely truth and falsehood. However, realisticness and unrealisticness appear also in many other forms in the ways in which economists characterize their theories. In his commentary on the assumptions issue in economics, the philosopher Ernest Nagel (1963) distinguished three ways in which a statement can be said to be unrealistic: it does not give an exhaustive description of some object; it is believed to be either false or highly improbable on the available evidence; and it contains theoretical terms in the sense of idealizations and therefore does not refer to anything actual. It is obvious that there are many more ways in which a theory or sentence may be said to be unrealistic or realistic. The following list goes beyond Nagel's classification by suggesting further divisions within his categories and by adding other forms. The list is incomplete, but it gives some representative examples.

Referentiality

A term, assumption, or theory is realistic or unrealistic in that it either refers or does not refer to a real entity or a set of such entities. To refer to something is to 'pick out' this something from among the endless number of entities in the universe. There are alternative theories of the way reference is accomplished. Some link reference and description together, others do not. According to the latter, in referring to *X* one does not describe *X* as being like this or like that, as being this or that way. It is therefore possible to refer to consumers as real entities – and thus to be realistic in this referential sense – and yet attribute characteristics to them that they may not possess, such as transitive preferences. To refer to *X* is to be about *X*, not to assert true claims about *X*.

Observability

Being about some observable entity or set of entities is a special case of referential realisticness. On a popular view of so-called theoretical terms in science – such as, famously, 'electron' – these terms do not refer to anything observable, and thus they could be judged as being observationally unrealistic. Someone with strong empiricist preferences may then want to dispense with such terms in favour of observationally realistic theories; that is, theories phrased solely in terms of observational terms. Thus the theory of revealed preference purports to be about observable behaviour rather than about 'unobservable' preferences. One may also choose to extend the range of the observable by including anything encompassed by our ordinary 'commonsense' or 'folk' views of the world, such as wants and expectations. On this more general view, claims about preferences would be observationally realistic.

Truth

One of the conventional ways in which an assumption or theory may be taken to be realistic or unrealistic is for it to be true or false. In this case, we may talk about veristic realisticness and unrealisticness. If a theory states that the world is so-and-so, then the theory is true if the world really is so-and-so; otherwise it is false. If people's preferences are not transitive while it is assumed that they are, then the assumption is veristically unrealistic. A number of qualifications are needed in this sense of realisticness, owing to the complex nature of theories and the problematic notion of truth. To accommodate the fact that many claims are only more or less close to the truth, we may need a notion of closeness-to-the-truth, and adjust the concept of realisticness accordingly. Moreover, to take account of the fact that theories include

elements that play different epistemic roles, we may want to say that a given theory is veristically realistic even though it includes veristically unrealistic assumptions. It may be true about important aspects and false about unimportant aspects of the object under consideration. Finally, there is a variety of theories of what truth amounts to, and some of them suggest that truth can be defined in such epistemic and pragmatic terms as confirmation or plausibility or practical usefulness. They give rise to other concepts of realisticness; this implies that, in these cases, no separate concept of veristic realisticness is needed. However, if one wants to retain a non-epistemic and non-pragmatic concept of truth, such as truth as some sort of correspondence, then a separate concept of veristic realisticness can be maintained.

Partiality

The idea of being false is often confused with that of being partial. To distinguish between the two, the familiar distinction between nothing-but-the-truth and the-whole-truth may be invoked: violation of the former would lead to veristic unrealisticness, while violation of the latter leads to partiality. Partial representations are representations of only parts of the object under consideration. Marshallian models are more unrealistic than Walrasian models in that the latter include all markets of a given economy, while the former covers only a small fraction of them. Both exclude a number of items, from Jupiter's moons to the gender of the agents trading in the markets included. This is partiality in one sense, and all theories are partial in this sense: they isolate only a small slice of the world from the rest of reality. Marshallian and Walrasian models are equally unrealistic when they depict markets only in the abstract, without specifying any concrete, particular markets in real time and space. This is partiality in another sense: it is a matter of isolating types from tokens, universals from particulars, of including only the general aspects of certain items and excluding their time-space specific particularities. Consumer theory is abstract, thus partial, in that it does not speak about Mr van Dijk and Mrs Virtanen but rather consumers in the abstract. Partiality in both senses is ubiquitous. The issue of realisticness on this interpretation is how much of the world and which parts of the world have to be covered by the theory for it to do its intended job.

Success in empirical tests

Doing well in empirical tests is also to be kept distinct from being true. It is often taken not just as an *indication* of realisticness but also as a *form* of it. There are as many notions of realisticness (and unrealisticness) based on this general idea as there are more specific theories of what it is to do well in empirical tests. Such theories involve ideas about what a good test is like and what is actually tested in such a test (such as truth value or some pragmatic virtues). Such theories range from probabilistic to non-probabilistic accounts, from theories of instant assessment to more historical accounts, from Bayesian accounts to the bootstrap idea, from experimental to non-experimental and from inductivist to fully deductivist accounts. Consider two pairs of contrastive positions, familiar from debates on economic methodology. First, there is the contrast between confirmationist and falsificationist conceptions. While the former takes success to be a matter of being supported by empirical evidence, the latter conceives it as failure to be falsified by evidence in tests that seek refutation. (On the other hand, if in the latter case 'success' is understood as success in the pursuit of refutation, then 'success in empirical tests' has to be taken as defining unrealisticness rather than realisticness!) Second, there is the issue of the immediate target of testing a theory. The traditional division in the debates over economic theories is between those views which require the 'assumptions' of a theory – in particular concerning the behavioural dispositions of the actors – to be 'directly' tested, and

those that are content with testing only the predictive 'implications', concerning phenomena in the market or on the aggregate level. Many other more specific ideas about what appropriate testing amounts to could be cited. They can be taken to characterize different notions of realisticness with some family resemblance.

Plausibility

Sometimes, when economists say that a theory or assumption is realistic or unrealistic, they mean to say that it is plausible or implausible. When we say that a claim is plausible, we are not making an unambiguous assertion about that claim. We may take 'plausible' to mean the descriptive idea of 'believed by C' (where 'C' denotes some epistemic community) or the strong evaluative idea of 'worthy of belief' or the somewhat weaker evaluative idea of 'worthy of acceptance'. The concept of plausibility often invokes the connotation of appearance, thus making it even weaker; thus 'plausible' may be taken to mean ideas such as 'appearing to be true' or 'appearing to be worthy of belief' or 'appearing to be worthy of acceptance'. When an economist finds an assumption or theory plausible, she may think that, given her other (evidential and theoretical) beliefs or commitments, this theory or assumption has the chance of being true or believable: it is worthy at least of tentative acceptance and further exploration. It is the coherence with other believed or accepted statements that ascribes plausibility to a statement. An economist may find the assumption of rational expectations plausible because it fits the overall framework to which she is committed, while an ordinary consumer may find it implausible because it does not fit her commonsense conception of economic behaviour. This indicates that there is a strong flavour of subjectivity in this notion of realisticness.

Practical usefulness

An obvious sense of 'realisticness' is practical relevance or, more strongly, practical usefulness. Again, this idea is ambiguous; it may mean a number of things. An economic theory may be regarded as practically useful because it can be used to derive waterproof guidelines for fine-tuning a given economy with various policy instruments. Much more weakly, a theory may be taken to be practically useful in that it helps avoid large-scale mistakes regarding economic policy, perhaps by implying recommendations to refrain from action altogether. In the former case, a theory or its models have to be fairly detailed and comprehensive and predictively powerful, while in the latter case the theory may be a simple explanatory account of a few key properties of the economic order. In both cases, practical relevance and usefulness are defined in terms of the goals that the economist finds important. In the case of relevance, the issue is whether the theory has implications concerning these goals; in the case of usefulness, the issue is whether these implications in fact help attain these goals.

Once we have distinguished such forms of realisticness and unrealisticness, it can be shown that realism – as a philosophical theory of theories rather than a property of theories – is compatible with large doses of unrealisticness in many senses of unobservationality, falsehood, failure in tests, partiality, implausibility and practical uselessness.

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Reflexivity

To include epistemological questions concerning the validity of sociological knowledge in the sociology of knowledge is somewhat like trying to push a bus in which we are riding. (Berger and Luckmann, 1966: 13)

The dictionary defines the word 'reflexive' as that which is 'directed back upon itself'. Examples would include the photographer who takes a picture of his own reflection in a mirror, or the physician who diagnoses her own illness. While such reflexivity occurs in a wide range of human activities from literature, to the arts, to the natural sciences, it seems to be particularly pervasive in the social sciences. After all, if a social scientist asserts that humans will necessarily believe certain things or behave in certain ways under particular circumstances, the social scientist making that assertion should also believe the same thing or behave in the same way under those same conditions. While reflexivity may be quite common in the human sciences, it is also clear that it is often not a serious problem. For example, neither the recognition that writing a paper about utility maximization can be described as the result of a utility-maximizing decision, nor the claim that the actions of a behavioural psychologist are actually conditioned responses, seems to be a particularly disturbing (or a very interesting) revelation. On the other hand, reflexivity is not always so benign; one place where reflexivity appears to be a serious problem is within the sociology of scientific knowledge (SSK).

While SSK encompasses a wide range of different approaches and different points of view, the common theme is that science, the behaviour of those within the scientific community, is a social phenomenon and should be studied in the same way that one would study any other social phenomenon; the beliefs and behaviours of scientists are to be explained in the same ways that one would explain the beliefs and behaviours of the members of any other society or culture. For example, the 'strong programme' within SSK explains the behaviour of scientists on the basis of 'social interests': either the interests of the scientists themselves or social interests defined in some wider (macrosociological) sense. This of course implies that scientific theories are caused by social processes and not, as traditional philosophy of science and most practising scientists would have us believe, by nature. While sociologists could remain agnostic about the veracity of scientific claims – in the same way an anthropologist who studies the religious practices of a particular tribe need not ask whether the god they worship really does exist or really does make the crops grow – such epistemic agnosticism is not standard practice within SSK. Standard practice is to debunk, or to unmask, the epistemic privilege of science; the routine attitude of those in SSK seems to be: 'Your theories are not the pristine reflection of nature that you claim; they are the (implicitly epistemically debased) products of social interests and culturally negotiated strategies (that is, the emperor has no clothes).' This deconstructive profile exposes SSK to a potentially damaging reflexive turn. If the output of the scientific community is a product of social forces at work within that community, then why should not this also be the case for the scientific community of those doing SSK? If theories are the result
