On "Metaphilosophy and Methodology in Economics"

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Introduction

In a paper that appeared in the last issue of Methodus, Norton Jacobi discusses various methodologies that have been employed in economics (such as "deduction from hypothesis" or "introspection"), and relates them to what he calls "metaphilosophical" positions such as rationalism, logical positivism, or scientific realism. Having briefly noted some methodological issues and problems of these positions, he sketches "a position to be termed modern realism" (p.24). This is the position that Jacobi favors and he recommends it as an alternative to both the "metaphilosophical allegiance" of "conventional, mainstream economics" and the "anti-realist relativism" of "rhetoricism" and "deconstructivism".

In this comment I will argue that (i) Jacobi grossly misrepresents (some of) those philosophical positions that he criticizes, (ii) Jacobi's "modern realism" faces all sorts of philosophical problems that he does not notice or, at any rate, does not care to mention, (iii) Jacobi fails to adequately characterize the role of basic axioms for deductive economic theory.

The Realist's Credo

According to Jacobi (p.24), realists believe that

"outside of our experience [there exists] an underlying reality (or ultimate reality, hereafter designated by UR) which is (a) largely independent of the states, wills or intentions of any minds which experience it and (b) is the underlying cause of our experiences".

I will call this statement the realist's credo for the following reasons. Firstly, the phrase "ultimate reality" is just as meaningless to some and immediately clear to others (according to their own testimony) as the word "god". In fact, if in the realist's credo "UR" is replaced by "GOD", a religious credo results. Secondly, the history of philosophy abounds with pantheist positions that have in fact identified "god" with "reality". Finally, Jacobi (p.24) explains that the realist's credo cannot

"be proven either true or false either by reference to experience or to logical argument. [Its] source is a judgmental-experiential gestalt, an intuitive predisposition...."

Of course, the history of ideas has witnessed quite a few philosophies, religions, and theories that declare certain statements to be exempt from the possibility of being proved or disproved. Whatever the role of such declarations of immunity may be - a metatheory or comparison of different theories certainly should pay special attention to those statements that are not derived within the respective theory. As a rule, the non-derived or "basic" statements of two different theories will employ quite different vocabularies or - more generally - symbols, and some metamethodological circumspection would be required to "translate" the primitive terms of one theory into the language of another one. At any rate, a metatheorist should recognize that what is a "primitive" concept or problem for one theory may be a rather peripheral one - or even meaningless - for a different theory.

Jacobi, however, attempts to characterize rationalism, logical positivism, logical empiricism, etc., by how they answer the following, allegedly "primitive", question (p.23):

[1] Does anything exist other than the phenomenological contents of our experiences?

Now, this question makes no sense at all to those who do not speak English; it makes no sense to most people who do speak English but do not have a university education; it does not make much sense to many people who have a university education but do not like philosophy. And - according to their own testimony - it makes no sense at all to some philosophers of science who have scrutinized it quite carefully.

To give just one reference, Carnap (1928) - a logical positivist if ever there was one - declared [1] to be a scheinproblem. According to him, neither the affirmative nor the negative answer to [1] are true or false; instead, he considers both answers to be meaningless (sinnlos).

Thus, it is simply incorrect to claim as
Jacobi does (on p. 23-24) that “all modern philosophical inquiry that attempts to understand the growth in scientific knowledge has accepted” the realist’s credo.

A possible explanation for this rather astounding misrepresentation is that Jacobi seems to believe that one’s answer to his “primitive” question [1] must either be “yes” or “no”. In fact, he even asserts that “an explicit commitment must be made since the answers provide the metaphilosophical structure necessary for the development of a coherent world view” (p. 24, my italics). To my mind this is on the edge of being ridiculous. Why should those who refrain from answering [1] don’t have a coherent world view? Some may find Carnap’s view or the rather common refusal to care for metaphysical questions narrow-minded, but why should narrow-mindedness be regarded as incoherent? Moreover, one may very well, and quite coherently, take the view that [1] is meaningful - and even that it is most interesting and important - but that one simply does not know the answer. I dare say that many open-minded scholars are well aware of the fact that they don’t know the answers to many important and meaningful questions. But incompleteness of one’s knowledge hardly entails incoherence of one’s world view.

Some Problems of Modern Realism

While Jacobi lists all sorts of “methodological issues” and “problems” for rationalism, logical positivism, logical empiricism, and scientific realism, no difficulties whatsoever are acknowledged in the case of “modern realism”. Unless the following problems are solved, however, Jacobi’s “modern realism” is hardly a serious alternative to the positions he criticizes.

Problem 1. Many of the words and phrases that appear in Jacobi’s sketch of modern realism are used quite differently in different theories. (E.g., the statement, implicit in [1], that the phenomenological contents of our experiences exist, would be greeted with laughter in a mathematics seminar where the predicate “exists” is used according to an agreed-upon set of axioms.) It has to be explained how this ambiguity of terms can be handled. If terms like “ultimate reality”, “human mind”, “existence”, “closeness of homomorphism”, “our experiences”, etc., are meant to be unambiguous, it has to be spelled out, according to which rules, if any, these terms are used. E.g., the meaning of the realist’s credo depends heavily on the number of URs that are admitted. In an everyday context the statement “everybody has his own reality” may be as plausible as “there is just one reality”. (I suggest that, according to the number of URs that are believed to exist, one should distinguish Monorealism from Polyrealism.)

Problem 2. According to Jacobi’s account of modern realism (p. 27), “there are no incorrigible grounds for knowledge. The human condition is characterized by radical fallibilism...” If the “no” in this statement is interpreted radically enough, one is led to ask whether the proposition “there are no incorrigible grounds for knowledge” is itself considered to be fallible. If it is not, the modern realist’s fallibilism would not be as radical as it purports to be. But if it is considered to be fallible, modern realism seems to be very close to the position of a skeptic who - much like Sextus Empiricus - would say: “It may well be that there are incorrigible grounds for knowledge, but so far every allegedly incorrigible principle has turned out to be doubtful.”

Problem 3. According to Jacobi (p. 27), “successful societies and cultures will be those whose theories are closest to the truth”. As the mathematical culture with its emphasis on hypothetico-deductive reasoning appears to be rather successful, the modern realist’s position seems to favor the hypothetico-deductive methodology - contrary to Jacobi’s view. On the other hand, as modern realism has admittedly “had little influence upon the social sciences and economics in particular” (p. 34), it is a position that - by its own criteria - is likely to be far away from the economic truth. (Moreover, correlating truth with success invites the comment that this would have made Hitler’s ideology “close to the truth”, if he had succeeded.)

On the Choice of Basic Axioms

According to Jacobi, the basis for selecting a starting-point such as the realist’s credo is “fundamentally pragmatic” (p. 24). At the same time, he urges economists to recognize “what contemporary society requires from economics” (p. 34). As I will argue in this section, these two contentions may very well support conventional, deductive economic theory - contrary to what Jacobi seems to believe.

For the present purpose, I define a theory to be deductive, if the set of statements that the
theory accepts without proof includes the basic axioms of logic and mathematics. "Mainstream" economic theory certainly is a deductive theory in this sense, and it seems to me that Jacobi's criticism of mainstream economics is due to a misunderstanding of the character of its basic axioms.

At this point, a digression on the use of the term "axiom" seems advisable. Within mathematics, the term may be used in two different ways. On the one hand, it is quite common to use it simply as a synonym for "assumption". Many important assumptions are traditionally called "axioms" even in a context where they may well be violated. Of course, such axioms will be mentioned by any careful mathematician whenever he assumes them to hold. For instance, Euclid's parallel axiom ("any two distinct parallel lines do not have a common point") or Hausdorff's axiom ("any two distinct points have disjoint neighborhoods") have to be mentioned as premises if they are used in the proof of a theorem. To be sure, such assumptions are often mentioned laconically, e.g. by a phrase such as "Let X be a Hausdorff space." But as such "axioms" are not assumed to hold in every mathematical context, their use has to be indicated somehow.

On the other hand, there are the axioms of logic and set theory (as stated, e.g., in Bourbaki 1978, p. 414). Examples are "((A\lor A)\to A)" or "\(\forall x : \forall y : (x \subseteq y \land y \subseteq x) \to x = y\)." These axioms are somewhat different in character from mere assumptions. Firstly, they are basic in the sense that – except for some rather subtle metamathematical truths - virtually all known mathematical theorems can be derived from the axioms of logic and set theory. Secondly, in any standard mathematical text they are taken for granted even when they are not mentioned explicitly. In fact, Halmos' well-known text-book advises the student of set theory to "read it, absorb it, and forget it." Of course, in deductive economic theories such as Debreu's paradigmatic "Theory of Value" "the logical foundations of set theory and even an elementary knowledge of the integers are taken for granted" (Debreu 1959, p.2).

Jacobi's account of the "hypothetico-deductive methodology" ignores this difference between basic axioms and mere assumptions. He asserts that "in mathematics, the choice of the axioms is governed largely by aesthetic principles: to find those sets which produce interesting and intellectually stimulating domains." For "axioms" in the sense of assumptions, this may be correct, but it hardly applies to the basic axioms of mathematics. These are not used because of aesthetic considerations. Instead, they are accepted by mathematicians and mainstream mathematical economists for fundamentally pragmatic reasons. These may be indicated briefly.

Firstly, the basic axioms appear to be consistent. This is certainly not the place to discuss the question whether Gödel has proved the impossibility of proving the consistency of mathematics. At any rate, contemporary mainstream mathematicians do not consider this consistency as being susceptible of proof. To quote Bourbaki (1968, p. 13), "we believe that mathematics is destined to survive, and that the essential parts of this majestic edifice will never collapse as a result of the sudden appearance of a contradiction; but we cannot pretend that this opinion rests on anything more than experience." (This must be emphasized, as many economists still seem to share the contention of Popper's Logik der Forschung (1935) that there is a watertight distinction between logic, mathematics, and metaphysics on the one hand and "empirical science" on the other.) The reason why consistency is considered as crucial, is, of course, well known: A contradictory theory is not very useful, as any statement can be derived from it.

Secondly, if translated into English, the basic axioms appear to be true. In fact, any single one of the basic axioms may be looked at as a rather boring and uninteresting "truisms". To be sure, contemporary mathematicians would hesitate to call the axioms "self-evident", but there is nevertheless a grain of truth in this classic characterization of axioms. Obviously, there are many people who certainly would not exclaim "Yes, of course!" when confronted with the string of symbols "((A\lor A)\to A)". However, it seems that most people are likely to accept it without reservations, once these symbols have been translated into a language they are familiar with. Again, this cannot be sharpened into a statement such as "Everybody must accept that A is true if (A or A) is true". But if it is reasonable to suppose that a suitable translation would make the axioms evident to most members of contemporary society, this seems to be a rather good argument in favor of mathematics and, hence, in favor of the
deductive method.

Now, Jacobi mentions that mathematics “is known to be fundamentally incomplete” (p. 26). Roughly, this means that for any given set of axioms (e.g., the one chosen by Bourbaki) a true statement can be constructed in the language of the axioms that cannot be derived from the axioms. Of course, there are also true statements which cannot even be expressed in the language of a given mathematical theory. Far from being an argument against logic and set theory, this invites one to try and discover additional truths. If one can reasonably suppose that they would be as evident to the relevant society as the axioms of mathematics, the combination of mathematics and the additional axioms would be endorsed by a methodology that Jacobi’s taxonomy would, perhaps, label [C3]: the combination of the hypothetico-deductive method with the insistence on basic axioms that are considered as beyond reasonable doubt by the majority of contemporary society.

In fact, the view that the basic axioms of economics are “consistent with the currently accepted .... world view” (p. 31) was adopted already by Robbins (1935, p. 3 78-79) when he wrote that the postulates of economics are “so much the stuff of our everyday experience that they have only to be stated to be recognized as obvious.” More recently, Hahn (1985, p. 18) has emphasized the distinction between basic axioms and assumptions in economics: “That people have preferences and try to satisfy them we treat as an axiom, while universal perfect competition, for instance, must count as an assumption. By this I mean that neither introspection nor observation makes it self-evident up to an acceptable margin of error that agents are price takers in all markets.”

While it may be argued that mainstream economics employs some other axioms as well, the “rationality” axiom is certainly the most important one. Somewhat loosely, it may be stated thus: Nobody carries out an action A if he considers an action B as feasible and prefers it to A. This axiom can be accepted on the same pragmatic grounds as the axioms of logic: Hardly anybody who understands the symbols “action”, “feasible”, “prefers”, etc., is likely to deny the above statement. Jacobi, too, seems to admit that it is a tautology. Surprisingly, however, he combines this admission with the desire “to replace the tautology” (p. 25). This tendency to regard tautological statements as useless because of their tautological character is quite common among those who have never experienced a series of tautological transformations resulting in surprising insight.

Of course, no statement is particularly interesting if it is considered in isolation from the other relevant statements. But, as the case of mathematics aptly illustrates, the combination of several “vapid tautologies” may generate a most interesting and useful theory. Quite similarly, the combination of logic, set theory, and the axiom of rationality generates a theory one may wish to call economics.

Of course, one may be dissatisfied with the present state of economic theory, but in so far as society has to finance the economists’ theorizing, it seems reasonable to require a choice of basic axioms which are acceptable to most (or sufficiently many) members of the relevant society.

Conclusion

Any theory - whether “economic” or “metaphilosophical” - will have to employ some statements which are not proved within that theory. If it is recognized that the development of any particular theory takes place within a society that for the most part will not be engaged in that particular theorizing, one should try to choose axioms that are likely to be acceptable for the members of the society. To my mind, the unproved axioms of logic and set theory, and, e.g., the “axiom of rational action” seem to be reasonably consistent with what non-economists and non-philosophers think and say. I am therefore quite confident that - given time and patience - they could be convinced of any particular implication of these axioms. But I am afraid I can say nothing similar in favor of the set of unfounded assertions that seem to constitute “modern realism”.

Notes
1. Jacobi (1990). Unless noted otherwise, subsequent quotations are from that paper.

References