

Scope and Method in Neoclassical Economics

20.1 INTRODUCTION

Despite the enormous differences in the way they approached their economic inquiries, Jevons, Menger and Walras were seen by many of their contemporaries to stand alongside the English classical political economy of Ricardo, Senior and Mill as placing abstract, deductive theory at the centre of economics. It was the historical school which challenged English classical political economy on methodological grounds, the work of Jevons, Menger and Walras being seen, in words written not long after, as “a reversion to the abstract method ... just at the moment when Historical study seemed to be triumphantly forging ahead”.¹

This chapter is concerned with the views on method put forward by the successors of Jevons, Menger and Walras. This is not to say that other economists had nothing to say on method – far from it, for most neoclassical methodological writings were in response to arguments of critics who cast doubts on the propriety of their approach. However, because the attacks on neoclassical methodology were frequently the major part of the case against orthodox economics, it makes sense to consider these methodological criticisms in chapter 18 rather than here.

20.2 J. N. KEYNES²

The most important British work on methodology in the late nineteenth century was John Neville Keynes’ *Scope and Method of Political Economy* (1891), in which he tried to resolve the differences between the abstract, “English” school and its historical, “German” critics.³ Keynes presented his views in a spirit of compromise: “The besetting fallacy of writers on economic method has been well said to be one of exclusiveness.”⁴ Different methods, according to Keynes, were appropriate for different problems, and he claimed that economists of both schools used the same methods when they were discussing the same problems. Their differences really concerned the relative importance of different problems.⁵ Furthermore, it was only the extreme exponents of each school who disagreed; most economists were agreed over method.

Although Keynes presented his argument as one of compromise he clearly sided with the abstract, “English” school. Most importantly, he argued for a clear separation of positive and normative economics, rejecting

the claim that economics was an ethical science: "The attempt to fuse together the enquiries into what is, and what ought to be, is likely to stand in the way of our giving a clear and unbiased answer to either question."⁶ Keynes also denied the historical school's claims that the economic aspects of behaviour could not be isolated from other social phenomena.

The best starting point for discussing Keynes' methodological views is his definition of a science as "a connected and systematized body of truths possessing generality of form".⁷ Keynes saw scientific activity as a search for *truths*, the basis for this being observation, or induction. Though, for reasons considered below, deduction was vital, deduction would be of no significance unless the premises on which it worked were founded on observation: "all deduction is barren, so long as it does not start from observation".⁸ Two remarks need to be made about this role for observation and induction. The first is that observation, for Keynes, was an elastic term, including not only experiments (for example to test diminishing returns, or the effects of the division of labour on productivity),⁹ but also common sense¹⁰ and the results of introspection.¹¹ Though Keynes realized that observation was theory-dependent, this was not seen as a barrier to the inductive testing of theories: it was rather that understanding of the correct theory could help remove "personal bias": "The more complete our knowledge of the laws by which economic phenomena are regulated, the more accurate will our description and classification of them become."¹² The second remark is that the task of inductive reasoning was confined to the observation of "elementary economic forces", not "complex economic facts".¹³ Keynes' rejection of the historical method was not based on any objection to induction *per se*, but was rather because he believed the subject matter of economics to be too complicated to be amenable to an inductive treatment. Thus, writing on the method of differences (which involves, for example, finding two countries that are identical in all respects save the one in which we are interested) he argued that whilst

a connection of cause and effect can be established by this method with a more or less high degree of probability[,] the cases of which this can be said are, however, exceptional; and even in the most favourable instances, confirmation by some independent line of reasoning is indispensable.¹⁴

The greater the number of causes in operation, and the more complicated the mode of their interaction, the less possible it becomes to fulfil the conditions required for valid inductive reasoning.¹⁵

Deduction was also important, not only because of the inability of inductive reasoning to establish complex economic laws, but also because scientific activity was seen by Keynes as going beyond mere description to the establishment of links between economic facts. For this deductive reasoning was vital: It was this which led Keynes to quote with approval Jevons' claim that,

It is, in fact, in proportion as a science becomes deductive, and enables us to grasp more and more apparently unconnected facts under the same law, that it becomes perfect. He who knows why a thing happens, will also know exactly in what cases it

will happen, and what differences in the circumstances will prevent the thing from happening.¹⁶

It is important to stress, however, that Keynes was concerned not merely with prediction, but with finding the true causes (*verae causae*) of economic phenomena.¹⁷

The truths of which political economy consisted were to be *general* truths, as is made clear both in Keynes' definition of science, and in the passage from Jevons just quoted. There are two aspects to this generality of economic laws. The first is that the desire for general laws supported Keynes' emphasis on deductive reasoning. Keynes claimed that abstract, deductive theory could be made "demonstrative and necessary", with little grounds for dispute as to its conclusions. In contrast, inductive laws were seen as "contingent and indeterminate", limited in their application and less certain.¹⁸

The other aspect of the search for generality is that economic laws had to be laws of tendency, asserting what would happen in the absence of disturbing or countervailing causes. A *ceteribus paribus* qualification usually applies.¹⁹ Whilst Keynes stressed the importance of comparing predictions with observations, the purpose of this was not so much to test the theory as to establish whether the conditions necessary for the theory to be applicable were met. Thus although Keynes quoted Mill to the effect that confidence in deductive reasoning is derived from the accordance of the results of such reasoning with those of observation, he does so only in order to qualify the statement.

We may have independent grounds for believing that our premisses correspond with the facts, and that the process of deduction is correct; and we may accordingly have confidence in our conclusions, although their complete verification is almost impossible.²⁰

Discrepancies between theories and the facts might arise through aspects of the theories being unobservable; in other words, even if all the *ceteris paribus* assumptions were specified, it might be impossible to tell whether or not they were satisfied.

Though conciliatory in tone, contributing to the decline of methodological controversy in England,²¹ Keynes' book constituted a vigorous defence of abstract economics, Keynes attaching less importance to historical studies than did Marshall.²² Despite Marshall's eminence, it could be argued that it was Keynes' conciliatory defence of abstract theory, rather than Marshall's attempt to combine theory and history, which prevailed. Keynes' methodology was used to justify the use of Marshall's theoretical tools. Research in English economics was concerned above all with theory,²³ the ideas of Marshall's *Industry and Trade* not being followed up. Clapham's "empty boxes"²⁴, the Marshallian categories of constant, increasing and decreasing returns industries, remained unfilled: the research needed to say which industries came into which category was never done. The dominant trend in English economics was that leading up to Robinson's *Economics of Imperfect Competition*, developing Marshall's theoretical

tools and neglecting history. It can also be argued that the positive-normative distinction, to which both Keynes and Marshall attached so much importance, became diluted over the decades which followed. The main development here was Pigou's decision to place "economic welfare"²⁵, an essentially normative concept, at the centre of economics.²⁶ Robinson later claimed that as an undergraduate at Cambridge in the 1920s, she had never been taught the importance of upholding the positive-normative distinction.²⁷

20.3 AUSTRIAN APPROACHES²⁸

Böhm-Bawerk and Schumpeter

Though Böhm-Bawerk wrote no really important work on methodology, it is important to mention his views to show that the views of Wieser and Mises do not represent the only Austrian response to Menger's work. Böhm-Bawerk was, of course, just as committed as Menger to the development of deductive economic theory. There was, however, a softening in his attitude towards deductive economic theory, analogous to the shift in emphasis between Cairnes and Keynes, in that Böhm-Bawerk used the terms "isolating" or "abstract-deductive" rather than "exact" to describe deductive theory. Where Menger treated "exact" laws as irrefutable,²⁹ Böhm-Bawerk saw economic laws as founded on observation:

The abstract-deductive method ... has no fancy *a priori* axioms as a basis for its inferences, nor does it confine itself to inferences and deductions. On the contrary, it starts exactly as the historical school would have it start, with observation of actual conditions and endeavours from this empirical material to build general laws.³⁰

Even the doctrine of marginal utility, for which Menger claimed so much, was, for Böhm-Bawerk, based on observation.

Böhm-Bawerk emphasized the methodological parallels between economics and the natural sciences, his empiricist methodology becoming clear in his criticism of Marx, whose system he saw as being out of touch with the facts.³¹ This emphasis on the parallels between economics and the natural sciences was characteristic also of Schumpeter's writing (1908). In this book Schumpeter expounded and defended the Walrasian general equilibrium system on the grounds that, although abstract and unrealistic in character, it enabled the economist to understand, better than he otherwise would, an important set of experiences. It was solely for the purposes of gaining insight into empirical observations that the assumptions of abstract economic theory were chosen.³²

Wieser

The claims of Böhm-Bawerk and Schumpeter that economics was an empirical science analogous to the natural sciences was completely rejected

by Wieser. His main argument was that economics was in a privileged position *vis à vis* the natural sciences, in that it had available to it insights obtained from “inner observation”.

We can observe natural phenomena only from outside but ourselves from within... This psychological method chooses the most advantageous position for observation. It finds that certain acts take place in our consciousness with a feeling of necessity. What a huge advantage for the natural scientist if the organic and inorganic world clearly informed him of its laws, and why should we neglect such assistance.³³

The situation facing natural scientists was that they

must be content to describe a series of happenings, abandoning the hope of showing how the effect springs from the cause... For all actions unaccompanied by a consciousness of necessity, economic theory need never strive to estimate a law in a long series of inductions. In these cases we, each of us, hear the law pronounced by an unmistakable inner voice.³⁴

Thus where Böhm-Bawerk tried to take economics in a direction similar to that advocated by Keynes, Wieser attempted to move it the other way, much closer to the position of Senior and Cairnes, claiming that significant conclusions could be deduced from a few fundamental, self-evident and indisputable assumptions.³⁵

Mises

Wieser's arguments were carried a stage further by Mises, whose ideas, brought together in *Epistemological Problems of Economics* (1933) were very influential in the 1930s. He summarized the aim of his book as being to establish the logical legitimacy of the science that has for its object the universally valid laws of human action.³⁶

These laws covered not merely economic activity, but “extended to all human action and all social phenomena”.³⁷ His concern was thus much wider than simply economics. Economics was special because it was the discipline in which, due primarily to the work of the English classical school, the science of human action had been most fully worked out.³⁸ The wide nature of Mises' concern led him to discuss not only the historical school, the combat of whose ideas was his main task, but also the views of sociologists. Thus the writings of men such as Dilthey, Weber and Bergson receive from Mises attention they receive in the writings of few other economists.

For Mises not only was observation incapable of furnishing laws of human action, but it could not even provide a basis for deriving such laws. Despite asserting that both theory and history were indispensable,³⁹ he went far beyond Keynes in completely rejecting induction as a means of providing a basis for theoretical argument.⁴⁰ He argued that observations were dependent on theory.

It is only with the aid of a theory that we can determine what the facts are... To apply language, with its words and its concepts, to anything is at the same time to approach it with a theory.⁴¹

The study of history always presupposes a measure of universally valid knowledge.⁴²

This theory comprised a priori theorems, neither based on experience nor verifiable.

But no kind of experience can ever force us to discard or modify a priori theorems. They are not derived from experience; they are logically prior to it and cannot be either proved by corroborative experience or disproved by experience to the contrary.⁴³

If theories could not be based on observation, on what could they be based? Mises found the answer to this in the logic of human action.

The science of human action that strives for universally valid knowledge is the theoretical system whose hitherto best elaborated branch is economics. In all of its branches this science is a priori, not empirical. Like logic and mathematics, it is not derived from experience; it is prior to experience. It is, as it were, the logic of action and deed.⁴⁴

Knowledge of action, or rational action, came, for Mises as for Wieser, from introspection. Unlike Keynes, however, Mises regarded this not as empirical knowledge, but as knowledge prior to experience.

What we know about the fundamental categories of action – action, economizing, preferring, the relation of means and ends ... – is not derived from experience. We conceive all this from within, just as we conceive logical and mathematical truths, a priori, without reference to any experience. Nor could experience ever lead anyone to the knowledge of these things if he did not comprehend them from within himself.⁴⁵

The knowledge derived in this way was universally valid.⁶⁴ The only role for experience in this “praxeology” as he called it,⁴⁷ was that of distinguishing interesting from uninteresting problems.

For Mises, therefore, economics comprised the working out of the implications of economizing behaviour, of behaviour in accordance with given preferences. The assumption of rational behaviour, the striving after goals, or the attainment of ends, was not an empirical hypothesis, but an axiom: to speak of irrational behaviour was for Mises meaningless.⁴⁸

Like Keynes, Mises pointed out the importance of distinguishing scientific explanation from political value judgements.⁴⁹ It can be argued, however, that Mises’ methodology provided no means for preventing the impermissible obliteration of this boundary. Despite claiming economic science to be neutral as regards value judgements,⁵⁰ Mises argued that economic laws showed the existence of a limit to political power, beyond which it could not successfully go, this leading to policies of liberalism and the transformation of the world under capitalism.⁵¹ Liberalism was nothing to do with value judgements, but was an implication of properly understood economic science. Collective organization of production was impracticable, for it would make impossible any form of economic calculation.⁵² Collectivism, therefore, could be no more than a “partisan dogma” involving both “commitment to a definite ideal” and “condemnation of all others”.⁵³ “For that reason all collectivist doctrines are harbingers of

irreconcilable hatred and war to the death.”⁵⁴ It is hard to argue that the positive–normative distinction is being upheld here.

20.4 ROBBINS⁵⁵

The outstanding contribution to the revival of the Senior–Mill–Cairnes approach to methodology was Robbins’ *An Essay on the Nature and Significance of Economic Science* (1932), probably the most widely quoted book on economic methodology in the twentieth century. Robbins claimed not to be putting forward any new approach to economics, but to be making precise the nature of the already firmly established generalizations of which economics consisted.⁵⁶ He argued that progress towards unifying the subject had been sufficiently great for this to be not only feasible, but a vital task.⁵⁷ His approach to this task was strongly influenced by the Austrians, in particular Mises.

Crucial to the whole book is his oft-quoted definition of economics: “Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses.”⁵⁸ It dealt with an aspect of behaviour, not with certain kinds of behaviour.⁵⁹ It was crucial to this definition that nothing was said as to the nature of the ends which governed behaviour: these were taken as given, economics being entirely neutral between ends. Despite this, however, Robbins did make some assumptions about the nature of these ends, for he assumed that “individuals can arrange their preferences in order, and in fact do so”.⁶⁰ He described this assumption as “one of the conditions which must be present if there is to be economic activity at all. It is an essential constituent of our conception of conduct with an economic aspect.”⁶¹ But though Robbins took rational behaviour for granted, he did not share Mises’ view that this was an a priori truth: it was merely a generalization from common experience.⁶²

No one will really question the universal applicability of such assumption[s] as to the existence of scales of relative valuation, or of different factors of production, or of different degrees of uncertainty regarding the future, *even though there may be room for dispute as the best mode of describing their logical status*.⁶³

Knowledge based on such premises was, nonetheless, more securely based than knowledge based on empirical evidence, even evidence from controlled experiments.⁶⁴

In Economics ... the ultimate constituents of our fundamental generalizations are known to us by immediate acquaintance. In the natural sciences they are known only inferentially. There is much less reason to doubt the counterpart in reality of individual preferences than that of the assumption of the electron.⁶⁵

The role of realistic studies was seen by Robbins as testing the *applicability* of a theory, not the theory itself,⁶⁶ for in addition to the universally applicable assumptions discussed above, it was necessary to introduce subsidiary postulates. Because these subsidiary postulates were “historico-

relative", valid only under specific historical circumstances, theories would rarely be universally applicable. In addition to ascertaining the applicability of theories, empirical research could suggest appropriate subsidiary postulates, and suggest new problems to be tackled.

Whilst economics was, according to Robbins, privileged as regards the sources of its knowledge, it was limited to making qualitative, not quantitative, predictions. Robbins dismissed the argument that economics ought to be seeking to estimate quantitative laws of supply and demand, for example, with the argument that this is a field "where there is no reason to suppose that uniformities are to be discovered".⁶⁷ Supply and demand will depend on individual valuations and technical facts, both of which lie "outside the sphere of economic uniformity".⁶⁸ Thus he was critical of Mitchell's attempts to use statistical methods to find common features of business cycles.⁶⁹ Going even further, he claimed that not a single "law" worthy of the name had emerged from the enormous empirical efforts of the historical and institutionalist schools.⁷⁰

20.5 HUTCHISON

Logical positivism

Although it is Robbins' *Essay* which is so often quoted, and despite the fact that it is Robbins' definition of economics which gets quoted in most modern introductory texts, the modern period in discussions of economic methodology should be dated not from this, but from the appearance of a book published six years later: Hutchison's *On the Significance and Basic Postulates of Economic Theory* (1938). The reason for this is Hutchison's introduction into economics of the ideas associated with the so-called "Vienna Circle" of the 1920s and 1930s, namely "logical positivism", or "logical empiricism".⁷¹ The central theme of logical positivism was that only meaningful statements were to be accorded any scientific status, and these comprised only two types of statement. There were analytic statements (either tautologies or self-contradictions), which could be evaluated using the rules of logic. And there were synthetic statements, factual statements, verifiable or falsifiable by empirical evidence.⁷² Other, metaphysical, statements were meaningless, neither true nor false, being incapable of evaluation, either by logical analysis or by confrontation with empirical evidence. During the 1930s and 1940s these ideas were extensively discussed, as a result of which they were substantially modified. For example, the testability criterion for distinguishing synthetic statements from meaningless ones was modified; attempts were made to provide a justification for the role of theoretical entities not capable of direct observation; and the analytic-synthetic distinction was investigated. As a result it became clear, as early as the mid 1930s, that the initial hopes of ridding philosophy and positive science of metaphysical ideas had been overoptimistic, a more moderate "logical empiricism" emerging by the mid 1950s.⁷³

Despite these developments, however, the initial concern to apply logical analysis to scientific statements, and the concern to ensure that such statements were clear and unambiguous, remained the dominant theme.

The Significance and Basic Postulates of Economic Theory

The purpose of Hutchison's book was clearly stated in its opening paragraph.

The purpose of this essay is to help in elucidating the significance of that body of "pure theory" the possession of which distinguishes Economics from the other social sciences. It is concerned, therefore to mark off clearly propositions which belong to "pure theory" from those that do not, to investigate the source of the validity of these propositions, to clarify their relation to the assumptions or postulates on which they rest, including the "ceteris paribus" assumption, and finally to clarify these assumptions themselves by analysing the main concepts ... which they contain.⁷⁴

The technique Hutchison used to analyse the nature of economic theories was to distinguish between three types of proposition: the analytic propositions of pure theory; the synthetic propositions of applied theory, in which predictions were deduced from empirically established premises; and inductive inferences (also synthetic propositions). The propositions of pure theory were indeed, as Robbins had claimed, more certain than empirical propositions, but they were also empty, in the sense that they were merely tautological: they had no empirical content. In contrast, the characteristic feature of synthetic propositions was that they "must conceivably be capable of empirical testing, or be reducible to such propositions by logical or mathematical deduction".⁷⁵ Hutchison argued that it was the acceptance of empirical testing which marked out "scientific" from "philosophical" activity, and which permitted science to progress.

It is this acceptance of the testing of propositions according to definite criteria which is the source of that steady secular piecemeal agreement and advance of "science", and its cumulative, international, impersonal, and "coral-reef-like" growth.⁷⁶

Thus whenever any economist advances as possessing empirical content any proposition which is neither capable of being confirmed or falsified, nor deducible from any such proposition, he is "transgressing the frontiers of his subject".⁷⁷ Introspection might be vital psychologically, but it could never be a substitute for empirical testing.⁷⁸

Though he argued it was tautological, Hutchison did not dismiss pure theory as worthless, but he argued that its only scientific justification lay in its being a step towards the formulation and confirmation of testable, empirical laws. Thus he criticized the way in which the ceteris paribus condition was used, arguing that its effect was frequently to remove any potential factual content from a theory, for it was only if the *cetera* were precisely specified that a theory would be testable. This was rarely done.⁷⁹ Furthermore, when he came to analyse the basic postulates of economic theory he became sceptical as to whether it could ever be used to produce

testable propositions. Scarcity alone was insufficient as a basic postulate: rational conduct, the fundamental postulate of pure theory, had to be postulated as well. The definitions of rational conduct, however, offered by the leading economists, made sense only if perfect foresight were also assumed.⁸⁰ In other words, the assumption of rational behaviour was clearly specified only for a world in which most economic problems were absent. Further problems were created by the existence of monopoly, for "monopolistic" behaviour based on perfect expectations was a logical impossibility.⁸¹ "Under oligopoly conditions there is no one clear and unambiguous answer to the question 'How would a sensible man act in such a situation?'"⁸² The only way to find out how oligopolists behave is thus to look and see; it cannot be deduced from pure theory.

Finally, Hutchison argued that it was justifiable to consider conditions of equilibrium only if the tendency towards equilibrium were postulated as a testable, empirical truth.⁸³ Most formulations of the tendency to equilibrium simply rendered the theory untestable, thus depriving the theory of any empirical content.

Knight's attack

Hutchison's introduction of the testability requirement for economic propositions elicited a fierce attack from Knight (1940). Knight's main argument was that economic truth is unlike truth in natural sciences, for economic activity is goal-directed.

Propositions about economic behaviour relate to purposiveness in human behaviour, and depend for their meaning upon knowledge of its purposive character... And it is obvious that we do not know the purpose or motives of human behaviour by inference from the observation of behaviour itself in the same sense in which we infer positive empirical laws or propositions of behaving material.⁸⁴

Knight claimed that it was impossible to verify any proposition about economics by any empirical procedure. This was summed up in his rejoinder to Hutchison's reply to his article.

In short: my point was and is that the categorical contrast drawn by Mr Hutchison, and by so many others, between propositions which can be tested and the 'vague conceptions of common sense' and the insistence that only propositions of the former character are admissible in economic theory is a false pretence and must be abandoned. *The testable facts are not really economic*, for positive process is not of the economizing character. This inability to test may or may not be regarded as 'too bad'; anyhow, it is the truth.⁸⁵

The opposition to Hutchison's stress on testability could hardly be more clearly stated.