

The Concept of Motivation (1958), Anthony Kenny's *Action, Emotion and Will* (1963), Alasdair MacIntyre's *The Unconscious: A Conceptual Analysis* (1958), A. I. Melden's *Free Action* (1961), Norman Malcolm's *Dreaming* (1959), and Peter Winch's *The Idea of a Social Science* (1958). With the exception of Anscombe's *Intention*, all these works were published in the Routledge and Kegan Paul series *Studies in Philosophical Psychology*, later known as the "little red books" because of their distinctive color and size. This, predominantly British movement was relatively short-lived, and its death knell was sounded by Donald Davidson's 1963 article "Actions, Reasons and Causes," which maintained that reason explanations are a species of ordinary causal explanations and repudiated the "conceptual connection" argument advanced by the "Red Book Philosophers."

Although most philosophers have abandoned arguments against the causal explanation of meaningful human action in terms of reasons and motives, they have continued to develop conceptual analysis of the theoretical constructs of psychology, even as the status of conceptual intuitions has been questioned as philosophy itself has become more empirical and experimental and conceptual analysis has come to be treated as continuous with theoretical and empirical psychology. In recent years, the conceptual analysis of theoretical psychological constructs has been subsumed within the philosophy of psychology, which is nowadays frequently equated with philosophical psychology, as, for example, in the journal *Philosophical Psychology*, one of the premier journals in contemporary philosophy of psychology.

John D. Greenwood

See also Action, Philosophical Theory of; Causes Versus Reasons in Action Explanation; Experimental Philosophy; Explanation Versus Understanding; Mind-Body Relation; *Naturwissenschaften* Versus *Geisteswissenschaften*

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PHILOSOPHY OF ECONOMICS, HISTORY OF

The philosophy of economics, broadly understood as the philosophical reflection on economic matters, is almost as old as Western philosophy itself and dates back to the works of the ancient Greek thinkers Xenophon and Aristotle. More useful is a narrower understanding of the term as the systematic investigation of the nature and methods of the science of economics, which is contingent on the birth of economics (or political economy, as it was known then) as a discipline in the 18th century. The English philosopher and polymath John Stuart Mill was arguably the first philosopher of economics in this narrower sense. This entry surveys the development of ideas concerning the nature and methods of economics from its Millian origins until the present day.

The Methodological Tradition: John Stuart Mill and Neville Keynes

John Stuart Mill (1806-1873) is widely known for his writings on logic and the philosophy of science, utilitarianism and liberty, feminism, and classical economic thought. As a philosopher of economics, his major contributions are three interrelated ideas: the characterization (1) of economics as an *abstract science*, (2) of its method as *a priori*, and (3) of causal laws as *tendencies*.

Mill (1830/1948) defined economics as

the science which traces the laws of such of the phenomena of society as arise from the combined operations of mankind for the production of wealth, in so far as those phenomena are not modified by the pursuit of any other object. (p. 140)

The most notable features of this definition are (a) that economics is defined in terms of the causes responsible for certain phenomena and (b) that these phenomena are conceived of as hypothetical: whatever *would* follow from the human pursuit of wealth if no other motive *were* present. This is what Mill meant by economics being an "abstract science": For the most part it does not describe concrete states of affairs we can see, touch, and feel because these are normally the result of a concomitance of causes. Instead, it describes what happens "in the abstract" when noneconomic factors are absent.

Concerning method, Mill distinguishes two main approaches: the *a posteriori* and the *a priori* methods. The former proceeds from specific experiences to a general conclusion, and thus inductively, while the latter, by reasoning from an assumed highly general hypothesis (which is supported by a wide range of experiences) to a specific conclusion, therefore mixing inductive and deductive argument. Mill thought that the nature of social phenomena undermines attempts to employ the *a posteriori* method fruitfully. Economists cannot perform experiments, nor do economic phenomena resemble natural situations that can be sufficiently captured by experiments, since such phenomena are too varied. Therefore, the economist must resort to the *a priori* method. She is, however, helped by the fact that the desires of human beings and what triggers them are observable and thus that the relevant laws are known. The main difficulty for the economist is therefore to calculate what will happen when the laws of human nature operate in a specific situation, but this is, according to Mill, not part of the business of science but of its application.

Causal laws, whether concerning humans or natural phenomena, are to be understood, according to Mill, as tendencies. That is, causal laws describe not what actually happens but rather what tends to happen in the absence of disturbing causes. In economics, these disturbances are the noneconomic causes—everything apart from the pursuit of wealth. Mill thought that in economics, different causes combine "mechanically" rather than "chemically." That is, when the operation of one cause is disturbed by another, both causes continue to affect the result in the same direction as they would operate if the other cause were absent. In chemistry, by contrast,

when two substances combine, their product has completely different properties from those of its components. The success of the *a priori* method depends on the truth of this principle of composition: Understanding what economic factors do "in the abstract" would be of no use unless they contributed to results in predictable ways when other factors are present.

John Neville Keynes (1852-1949) was an economist and the father of John Maynard Keynes. In his methodological writings, he tried to adjudicate in the *Methodenstreit*, between the German historical school and the Austrian school of economics, by combining inductive and deductive elements more rigorously than Mill had. His attempts were met with little success, however, as subsequent generations of economists, especially after World War II, paid little attention to evidence in the choice and formulation of premises from which conclusions about concrete economic phenomena were to be derived. A lasting contribution to methodology is Keynes's three-part distinction of *positive*, *normative*, and *applied* economics. His notion of positive economics as a "body of systematized knowledge concerning what is" and of normative economics as "a body of systematized knowledge relating to criteria of what ought to be, and concerned therefore with the ideal as distinguished from the actual" (Keynes, 1890/1999, *The Scope and Method of Political Economy*, p. 22) are still in use today. By contrast, *applied economics* to Keynes was synonymous with the "art of economics" and meant more than just the use of economic principles in concrete contexts. It was rather a branch of economics, separate from both positive and normative inquiry, dealing with rules for attaining given practical purposes. It is only in recent years that methodologists have started to pay attention again to this aspect of economic thought.

A Century of Isms: Positivism, Instrumentalism, Falsificationism, and Postmodernism

The main methodological ideas that surfaced during the greater part of the 20th century were influenced by either logical positivism or critical rationalism, or both, or they developed as a reaction to these schools of thought. One unifying feature was their understanding of economics as a body of theoretical

statements such as *assumptions, hypotheses, postulates, or conjectures*.

Two methodological treatises received much attention during the 1930s: Lionel Robbins's *Essay of 1935* (a first edition had appeared in 1932) and Terence Hutchison's work of 1938. Robbins defined economics as a science that studies behavior as a relationship between ends and scarce means, and he rejected, with Mill and Keynes, the idea that economic principles could be based on specific experiences or controlled experiments. But unlike Mill and Keynes, who aimed to develop sophisticated combinations of inductive and deductive styles of reasoning, Robbins (1935) downplayed the inductive part of the endeavor as the basic postulates of economics "are so much the stuff of our everyday experience that they have only to be stated to be recognized as obvious" (p. 79). Hutchison's book can be understood as a detailed critique of Robbins's ideas from a positivistic standpoint. In particular, he sought to secure economics' status as a genuine science by showing that it is based on substantive principles capable of empirical test rather than mere tautologies, and he emphasized the need for confrontation of these principles with evidence.

Milton Friedman's 1953 essay was and continues to be the most widely discussed contribution to economic methodology. The essay should be read as providing an answer to the question "What kind of evidence is relevant to assessing economic hypotheses?" In the 1940s, doubts were raised about the empirical adequacy of some of the basic postulates of economics on the basis of survey results about how firms make production and pricing decisions. Friedman denied that such evidence should worry economists because economic theories or hypotheses ought to be evaluated on the basis of their predictive success and fruitfulness, not their literal truth or falsehood. This position has later come to be known as instrumentalism, but it also clearly bears positivistic, pragmatist, and Popperian influences.

The preponderance of Popperian ideas grew after World War II, and helped define the methodology and philosophy of economics as an independent field of inquiry, especially with the appearance of Mark Blaug's book in 1980. The book emphasized the importance of falsificationism à la Karl Popper and Imre Lakatos and argued that economists often preach falsification, though they rarely practice it.

By the time the book came out, falsificationism (and also positivism) had already largely been given

up in philosophy circles because of complications that proved quite recalcitrant, such as the Duhem problem and the difficulty of drawing a meaningful distinction between observational and theoretical statements. In a provocative article and a later book, Donald McCloskey built on these philosophical advances, rejected the 20th-century methodologies as "modernist," and developed an anti-methodological stance named the *rhetoric of economics* to replace them. Instead of using maxims such as "test your hypotheses," "build predictive models," and so on, to evaluate the content of economics, we were invited to attend to the arguments given in support of a position and to assess them using the tools of rhetorical analysis.

The Millian Tradition Revived: Causality, Models, and Evidence

The last decade of the 20th century was marked by two developments in the philosophy of economics. On the one hand, there was a revival of Millian themes, most prominently perhaps in Daniel Hausman's 1992 book, which in many ways built on and developed Mill's methodological ideas. On the other hand, philosophers of economics followed a trend initiated by a group of general philosophers of science to turn away from issues surrounding scientific theory and its assessment and instead to attend more closely to scientific practice. Thus, more applied work in economics moved into the center of methodological attention: econometrics, modeling, experiments, and measurement. In much of this recent work, philosophical analyses of economic practices often also take their cue from Mill. Thus, Nancy Cartwright develops an account of "causal capacities," which is modeled on Mill's notion of a tendency, and she uses it to analyze econometrics as well as models; Uskali Mäki similarly understands economic models as "isolations," which is also closely related to Mill's ideas about abstract science and tendencies; Francesco Guala analyzes economic experiments on the basis of Mill's "canon of inductive methods," and Julian Reiss takes Mill's skepticism about the applicability of inductive methods to economic problems as a foil to develop a more thoroughly evidence-based methodology of economics. We can expect this trend of focusing on more applied matters to continue in the future and also to extend to normative issues such as economic well-being and policy (see,

e.g., the 2009 anthology edited by Harold Kincaid and Don Ross).

Julian Reiss

See also Causation in the Social Sciences; Critical Rationalism; Critical Realism in Economics; Evidence-Based Policy; Experiments in Social Science; Falsifiability; Feminist Economics; Heterodox Economics; Marxist Economics; *Methodenstreit*; Mill and the Moral Sciences; Popper's Philosophy of Science; Realism and Anti-Realism in the Social Sciences

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PHILOSOPHY OF EXPERTISE

Experts are everywhere. People rely on doctors, lawyers, and accountants for many matters of personal well-being. Politicians and managers regularly turn to scientists, professors, and professional consultants for policy advice. Judges and journalists put experts on the spot to weigh in on numerous issues. It is impossible to imagine life without experts. Yet what is an expert?

One answer is that we need to understand what distinguishes expert knowledge from other types of knowledge. Expert knowledge is often understood as *tacit* knowledge of domains like chemistry, the U.S. tax code, or football. Tacit knowledge refers to fluency gained only through long-term immersion in a domain's practices and credentialing processes. That is, tax professionals should not have to constantly reference guides and manuals to do someone's taxes. They should know just how to do it implicitly; the right things should stand out for them. Tax professionals' tacit knowledge can be contrasted with mere memorization of the tax code, which does not produce the fluency needed to make expert judgments.

Though we may accept that expert knowledge is tacit knowledge, we may disagree on who has tacit knowledge suitable for advising others. For example, is an expert in football only someone who has played football at all relevant levels and continued on to a coaching career? Or is a sports journalist who has covered football for many years, but never played competitively, also an expert? The former has had long-term immersion in the practices and credentialing processes of the domain; the latter only has mediated experiences, such as linguistic immersion with players and coaches as well as ample time spent as a spectator. Should both be considered experts?