Epistemic values in Economics:

Economic methodology as a normative object

Su Ying

Published: 23 May 2020

Keywords: economics, epistemology, value, methodology, Coase, Keynesian
1. Introduction

Economics as a social science is not value-neutral. Non-neutral judgments are made not just in the prescription of policies, but in the selection of methodology. The type of model chosen, or the epistemic criteria emphasised, can affect the outcomes of research. The effect of different methods on outcomes is especially amplified for a discipline like economics, where the subject in question is a volatile social world, and not a physical world with relatively consistent event regularities. Robert Heilbroner argues for the fundamental difference between natural and social sciences, positing that human behaviour is unpredictable and “subject to both latent willfulness and conscious purposiveness”, and the assumption of event regularities is more implausible. However, as the discipline transformed its methods of inquiry in the image of cutting-edge modern scientific methods in the past century, the predictive legitimacy of the natural sciences spilled over into perceptions of the economics discipline. Whilst economic methods in the nineteenth century were more discursive and therefore vulnerable to popular appraisal, economics in the twentieth century was more self-consciously redirected into more systematised and empirical methods, and therefore shielded from outside appraisal, hidden behind a veil of scientific impermeability. This essay will therefore seek to recentre methodology as a component of the discipline that is value-laden. Specifically, we will argue that methodology is normative, and therefore conditioned upon historical intellectual discourse that produces a set of philosophical biases in methodology. This argument will be made through three points. First, we will demonstrate that epistemic values in economics had in fact evolved through time, developing from aprioristic methods in the nineteenth century, to empiristic methods in the twentieth century. This obvious but often overlooked historical nature of economic methods helps us quickly establish that there is no single inviolable, objective method in economics research. But what determines which methods are elevated over others? The second proposition of this essay will thus be that the selection of economic methods is aided by intellectual conditions of the time, such as the prevailing intellectual tides in parallel disciplines, or the historically-specific intellectual dissatisfactions within the profession in the period. Third, we will also demonstrate the impact of economists themselves, in mediating the epistemic values that were to be mainstreamed by the discipline, identifying and responding to the shortfalls of economic methods in each period, proposing and popularising novel methods, and creating a general methodological climate. We thus propose that the methods valued by the discipline was a result of time-contingent intellectual conditions as well individual effort.

---

2 Wright, Jack. Pluralism and social epistemology in economics (Doctoral thesis). 2019 https://doi.org/10.17863/CAM.37650
2. Discussion

The methods favoured by the discipline evolved over time, from a staunchly aprioristic and verificationist approach in the 19th century to early twentieth century, to a firm belief in empiricism by the later part of the century. This reveals the normative nature of epistemic beliefs, since there is no single epistemic standard that exists independent of time and context. We now turn to the methodological bias towards apriorism and verificationism in the genesis of the discipline. Apriorism refers to the doctrine that inquiry is to be built upon self-evident, axiomatic truths. These assumptions are to be derived from everyday experiences. Underlying this doctrine is the belief that these experiences are universal, and also shielded from further examination. A prime example of apriorism found in economic methodology of the nineteenth century classical economics (and modern neoclassical economics) is the assumption of the rational economic agent, that agents behave to maximise self-interest and/or act on all knowledge available to them. However, for the analysis of nineteenth century economics, we refer to apriorism as an extreme adherence to the idea that inquiry stems from axiomatic truths, one that excludes the possibility of examining the validity of these axioms. Verificationism, which is more characteristic of the nineteenth century in particular, is the doctrine that propositions are only significant if they can be verified as true or false by empirical evidence. This doctrine is to the exclusion of the epistemic value of predictiveness, since it posits that it is enough to be able to verify existing trends, and does not hold knowledge accountable to possible contradicting evidence in the future. These methodological biases towards apriorism and verificationism were promulgated by Nassau William Senior, John Stuart Mill, and John Elliot Cairnes, pioneering intellectuals in developing the field of economics. The Senior-Mill-Cairnes methodological tradition is partially summarised into these five theses by John Neville Keynes in his 1891 essay:\footnote{3 Blaug, The Methodology of Economics. 1980. p.65.}

“1) It is possible to distinguish between a positive science and a normative art of political economy;
2) that economic events can be isolated at least to some extent from other social phenomena;
3) that the direct induction of concrete facts, or the method a posteriori, is inappropriate as a starting point in economics;
4) that the right procedure is the a priori method of starting from “a few and indispensable facts of human nature...taken in connexion with the physiological properties of the soil, and man’s physiological constitution”; and
5) that economic man is an abstraction and hence that ‘political economy is a science of tendencies only, not of matters of facts.”
There are a few points that stand out from this passage, particularly in (3), (4) and (5). First, there existed a firm belief that the foundations behind economic reasoning could be taken a priori, since they are the “few and indispensable facts of human nature”. By evoking “human nature”, they imply a sense of universality in human and economic behaviour, which would thus justify aprioristic thinking. Next, there was a sense of skepticism towards inductive reasoning and the associated preoccupation with facts as the inspiration for inquiry: (3) explicitly states that an a posteriori method, where the inquiry process directly induces facts, was “inappropriate as a starting point in economics”. (5) further states that “political economy” was a “science of tendencies only, not of matters of facts”. This skepticism was brought to the extreme with the Austrian school in this period, which has a “firm disavowal of quantitative testing of economic predictions and, in particular, the categorical rejection of anything that smacks of mathematical economics and econometrics”. Here, they envision that the realism of assumptions is irrelevant to economics as a discipline.\(^4\) The Austrian school, founded in the late nineteenth century by Carl Menger (1840-1921),\(^5\) was an important bastion for the aprioristic assumption of the rational economic individual. This was particularly conditioned by the fact that the school defended the superiority of markets over central planning, in the 1920s Calculation Debate against the Marxists,\(^6\) and the assumption that individuals were best positioned to rationally allocate resources on a societal scale was crucial to their argument. Hence, we see how various intellectual actors from different traditions independently laid the foundations for the basis of epistemic virtue in economics in this period.

The practice of these constructed methods in intellectual spheres further cemented their legitimacy. This passing relationship with empiricism and reliance on introspection as a starting point was evident in the work of political economists of the time. Mark Blaug characterises Ricardian economics of the 19th century propelled by Ricardo and supported by Mill, as one that showed a significant gulf between “theory and the facts”, only bridged by “various immunizing stratagems”. Ricardo’s reliance on introspection and universal experience is evident from how he produces his assumptions. In his “theory of rent”, written between 1815-7, he assumes that land is subject to the law of diminishing marginal returns, since fertile land is inherently scarce. He further assumes the impossibility of technical progress overcoming this scarcity, since landlords were deemed to lack incentives to invest in land improvements. These axioms were built upon his personal, untested assumptions on agriculture. Ricardo’s defence of these assumptions, which will be later shown, reveals his unerring belief in apriorism, that his models and assumptions were impervious to evidence. Furthermore, Ricardo’s lack of emphasis on empirical

\(^6\) Ibid.
evidence is evident from his response to his theory being disproved. For instance, Ricardo’s theory of rent implied that wheat prices will rise, as population growth leads to both a rise in demand for wheat, and a fall in supply due to diminishing returns on increasingly overtaxed plots of inferior land. However this de facto prediction was disproved by subsequent developments, where technical progress counteracted these diminishing returns, “as evidenced by steadily declining wheat prices from the high levels of 1818”\(^8\). Yet, his treatment of this theory, now falsified by evidence, was not to revise his assumption on diminishing marginal returns and the deterministic nature of agricultural output over time, but to apply the “immunizing strategem” of the short-run, claiming that it would take “twenty-five years to exemplify the long-run effects of the causes he postulated”\(^9\). Technological progress simply “postponed”\(^10\) the overwhelming fundamental force of diminishing returns. In effect, the a priori assumptions were impervious to empirical evidence, since they were deemed to be self-evident. Cairnes in his 1888 essay *Character and Logical Method of the Political Economy* supports this, claiming that economics, unlike the “natural sciences” has the “ultimate constituents of our fundamental generalisations...known to us by immediate acquaintance”, whereas the natural sciences only has it known “inferentially”.\(^11\) Mill further expresses the imperviousness of these assumptions to falsification and facts, suggesting that “if a theory fails to predict accurately...a search should be made for sufficient supplementary causes to close the gap between the facts and the causal antecedents”, since the “theory is true in any case as far as it goes by the nature of its true assumptions”\(^12\).

Our analysis of epistemic belief in economics in the nineteenth century has thus alluded to points two and three set out in the introduction. We have shown that economics methods are dependent on the discourse generated by individuals in the profession. For instance, Senior, Mill, Cairnes’ individual theses on aprioristic economic reasoning were crucial in creating an economic climate that validated the use of “self-evident” assumptions, as well as the imperviousness of theory to contradicting evidence. Ricardo’s defense of his theory, even in front of the British parliament, further legitimised these theories and epistemic beliefs. Next, we have also demonstrated the historically-specific nature of these economic methods. The tide of apriorism and verificationism aligns with larger philosophical trends of the period. For instance, Nassau William Senior, John Stuart Mill, and John Elliot Cairnes echoed the dominance of verificationist thinking in this period. Whilst Mill in his other writings on philosophy explicitly criticised a priorism in favour of naturalism, he recognises its importance in generating stable assumptions for the evaluation of the naturally normative political economy. We have also alluded to possible

---

\(^8\) Ibid, p.65.

\(^9\) Ibid, p.66.

\(^10\) Ibid.


\(^12\) Blaug, *The Methodology of Economics*. 1980. p.65
historical motivations for the aprioristic assumption of the rational man championed by the early Austrian school, since they required that assumption for their argument against the planned economy in the Calculation Debate of the 1920s.

The change in epistemic beliefs and methods by the mid-twentieth century demonstrates the variability and therefore normative nature of methodology over time. Economics by the twentieth century came to favour empiricism and falsifiability as a means of determining the validity of their models, and by extension intellectual methods that had greater predictive power than its predecessors’ methods did. This very much mirrored the shift to falsificationism in adjacent fields of study in this period, with the publication of Karl Popper’s *The Logic of Scientific Discovery* (1934). Falsifiability holds that a theory is only valid if it produces propositions that can be tested by empirical evidence, and therefore “rejected” or “not rejected”. For instance, falsificationists in reaction to the falling wheat prices 1818, may argue that those prices were sufficient grounds to invalidate Ricardo’s theory of rent. This is in contrast to verificationists, such as Mill, who did not view contradicting evidence as a repudiation of theory, but that the theory should be improved upon. Evidently, this new emphasis on falsifiability placed empirical observation front and centre in economic analysis, instead of an afterthought in formulating theory. These epistemic beliefs in empiricism and falsifiability thus gave rise to two opposing schools in methodology: instrumentalism and realism.

The consolidation of instrumentalism in economic methodology can be attributed to the scholarship of Milton Friedman. Instrumentalism held that the theory and assumptions were only a heuristic tool to generate economic predictions that cohered with reality, relegating the realisticness of the explanatory process to auxiliary importance. The most radical version of this intellectual philosophy was synthesised in Milton Friedman’s *Essay on the Methodology of Positive Economics* (1953). The central idea to his early intellectual philosophy was the “irrelevance-of-assumptions thesis”\(^\text{13}\). He posits that assumptions are but a heuristic tool to generating good predictions. His emphasis on heuristics reveals the epistemic virtue of simplicity — “a significant theory will always account for complex reality by something simpler than itself.” In fact this was to the extent of accepting inaccurate descriptions as a necessity to modelling, that “to be important . . . a hypothesis must be descriptively false in its assumptions”.\(^\text{14}\) To him, the ultimate test for validity of a theory was the “predictive power for the class of phenomena which it is intended to ‘explain’”, subordinating the idea of realism. Whilst this new doctrine of instrumentalism departed from the 19th century method of anti-empiricism and apriorism with its strong emphasis on factual data, there were still undertones of apriorism carried over from the preceding century. As evident from Friedman’s early radical belief that assumptions need not be realistic, there was still the Ricardian idea that the postulates underlying models were impervious to testing. However, the justification for this

---


\(^\text{14}\) Ibid, p.91.
imperviousness was not that the postulates were so “self-evident” that they should not be questioned, but that they were simply heuristic tools, which renders the question of whether it is valid or not an irrelevant one.

This belief in the method of instrumentalism, and the supremacy of predictiveness over other intellectual goals, was perhaps most evident in the postulates used by Friedman and the subsequent neoclassical school. These postulates assumed methodological individualism, that economic phenomena as a result of individual motivations, rather than group or class dynamics. They also assumed the motive of utility and profit maximisation, as well as the ability to rank preferences and rational expectations (later in the 1980s), as fundamental precepts that “rule[s] out even contradiction by testimony”\(^{15}\). However, this is not to say that inaccurate assumptions invalidate the usefulness or legitimacy of these models—Blaug points out that “the realism or plausibility of assumptions is a highly subjective and historically conditioned reason for rejecting any theory”\(^{16}\). Friedman even argues that unrealistic postulates are necessary to good theory. There is thus a necessary gulf between fact and theory, in the stage of assumption-making. However, this gap is narrowed with the predictive capacities of the models, thus aligning with overarching epistemic beliefs in empiricism. This is evident in Milton Friedman and Anna Schwartz’s seminal writing, *A Monetary History of the United States, 1867–1960* (1963), which made the novel argument that money supply fundamentally affected economic activity in the country. Here, the instrumentalist method of empirical emphasis, with a leeway for unrealistic by heuristic assumptions, is evident: they assiduously compile empirical evidence, such as changing bank portfolios and yields on different assets. These pieces of data were then slotted into models, with heuristic assumptions such as a “stable demand for money function”\(^{17}\), which Friedman and Schwartz acknowledge is a “theoretical entity”.\(^{18}\)

Our analysis of instrumentalist methodology in the twentieth century has thus demonstrated the importance of intellectual conditions as well as agents in determining the types of epistemic virtues elevated. Friedman epitomises the impact of individual agents in turning methodological tides—his vision of economics being a positive science, and his ability to implement said vision, marked a decisive break from his predecessors in the discipline. Furthermore, the intellectual conditions of this period also aided the transition from apriorism, into greater empiricism. Friedman’s emphasis on empirics mirrored the prevailing intellectual trend of falsificationism. This period saw the popularisation of Karl Popper’s method of falsification in intellectual circles, with the publishing of his book, *The Logic of Scientific Discovery* (1934). Academic gatherings such as

\(^{15}\) Ibid, p.94-5.


\(^{18}\) Ibid.
that of the Mont Pelerin society in Switzerland, where Friedman and Popper had met in 1947\textsuperscript{19}, aided in the interdisciplinary pollination of methods and epistemic biases.

Within the empiricist climate of the twentieth century, there emerged a methodological slant that was distinct from instrumentalism. This was realism. The rise of realist economic methods exemplifies how new methods are often a product of dissatisfaction with prevailing intellectual trends, thus showing the time-contingent nature of methodology. But first, what does this realist school hold and how is it different from instrumentalism? Realist economic methods were similar to instrumentalism, in that they both fundamentally believe in the importance of bridging the gap between theory and fact by placing empirical data front and centre in its process of inquiry. However, the two camps differed in their view of how important realistic assumptions were to modelling. Realist economics held that it is more crucial that the models and assumptions themselves had empirical truth, rather than simply its predictions. An extreme version of it was attributable to Paul Samuelson, who advocated for the idea of “descriptivism”. He directly argues against Friedman’s irrelevance-of-assumption thesis, that “the lack of realism of a theory’s assumptions is relevant to its validity”. Here, the validity of a model should not only be founded upon its predictive ability, but also its verisimilitude, the closeness of its constituent parts to reality. This was not a rejection of predictiveness as an epistemic merit, but a call to elevate the importance of realistic assumptions in modelling. There are many reasons why realism in assumptions is important. For one, the types of assumptions made have policy-making implications— assumptions and models that falsely ascribe causal power to a certain agent can prevent society from being cognizant of the levers of change. This point was continuously made by institutionalist economist Ronald Coase throughout his academic career. In a 1974 article “The Lighthouse in Economics”, he points out flagrantly untrue assumptions on the ownership of lighthouses in mainstream economics. Before then, lighthouses, which helped with navigation in public waters, had been upheld as a prime example of a pure public good. This is a good that had to be produced by the state, as it is assumed that there lacked private incentive to do so. However, instead of theorising on the alleged properties of general lighthouses and deducing a larger law, Coase utilised a more inductive approach in constructing models—through localised and careful analysis of lighthouses in Britain, he pointed out that lighthouses were in fact privately owned, and constructed alternative models to explaining the production of goods like navigation infrastructure. The policy implication from a more realist approach is clear—by fleshing out that lighthouses were privately owned, this diminished the possible role of the state in the production of such goods. This careful construction of models that closely resembled reality carried on through Coase’s career. As a testament to his commitment to realism, he crafted a suite of case studies on various sectors in Britain—'Bacon Production and the Pig-Circle in Great Britain' (1935) (with R. F. Flower), 'British Broadcasting' (1950), 'The Federal Communication Commission' (1959), 'The Lighthouse in Economics' (1974), 'Payola in Radio and Television Broadcasting' (1979), and 'The

\textsuperscript{19} Ibid.
Acquisition of Fishery Body by General Motors’ (2000)’. Here, there was a great methodological emphasis to the “the careful collection of detailed information and its assembly”\(^{20}\), which often “lead to nowhere”\(^{21}\). The work of Coase in particular was crucial in inspiring later schools of New Institutionalist economists. Here, the new institutionals placed greater methodological focus on constructing realistic assumptions about human behaviour. Like Coase’s method, this also required a huge empirical focus in the construction of assumptions themselves. As a result of this method, this gave the school the leeway to relax the assumption of individual rationality, and proposes the importance of social institutions in explaining economic behaviours instead.\(^{22}\)

If we rewind to the beginning of the Keynesian school in the 1930s, we also see a similar dynamic of a more realist camp emerging against prevailing instrumentalism. Economist Ha Joon-Chang describes the Keynesian school as a “rejoinder to Smith’s idea that individual action leads to societal gain”\(^{23}\). Here, Keynesian macroeconomic theory was opposed to the simplifying equilibrium model proposed by the classical (and subsequent neoclassical school), positing the impossibility of the idealised equilibrium in the short term, which is in effect a means of better fitting the model to reality. The emergence of realist Keynesian ideas in response to instrumentalist theory can be demonstrated through the debate on Business Cycles. Business cycle theory seeks to account for fluctuations in economic output—what best accounts for regular cyclical booms and busts in the economy. This area of research was motivated by the poor predictive track record of forecasting models in the 1970s\(^{24}\). One of the first empirically robust theories on business cycles was thus put forth in 1982 by Finn E. Kydland and Edward C. Prescott, in their landmark article “Time to build and aggregate fluctuations”. Here, they undertook a strong instrumentalist approach, building a model with the single intention of predicting statistical trends, such as the volatility and comovements of economic indicators. These indicators included output, consumption and unemployment. They used output trends to motivate the modelling, rather than getting to the root of the explanatory impulses that generated the outcomes. Sacrifices in realism were made in pursuit of this goal. Unrealistic assumptions such as perfect equilibrium at every point in the cycle were put forth—fluctuations were not due to shortfalls in the market, but instead because households and firms consistently re-optimised production in response to shocks. An extension of this assumption was thus that there was no involuntary unemployment at any stage in the business cycle, since households willingly withdraw hours spent in the labour market in a bid to optimise their own. This clearly went against observed trends of involuntary unemployment, with job seekers willing to work yet unable to find job


\(^{23}\) Ibid.

vacancies. Nonetheless, this model had immense predictive power, despite its assumptions and proposed causes being unrealistic. The New Keynesian business cycle model emerged after the RBC theory was put forth, utilising more realistic assumptions. For instance, a year after the RBC model was published, Guillermo Calvo published the article, “Staggered prices in a utility-maximizing framework” (1983), where he introduced price stickiness in real business cycle models. Price stickiness refers to the unresponsiveness of prices to changes in supply and demand, which causes momentary disequilibrium. Here, he injects greater realism in the assumption of constant equilibrium, by suggesting that sticky prices prevent the economy from reaching equilibrium. Subsequent developments of New Keynesian business cycle theory also generated greater realism in assumptions, replacing the assumption that all agents are homogeneous, with a “heterogeneous agent” assumption. This allows the business cycle theory to model differences in wealth and income risk observed in real life. Therefore, with the examples of Samuelson, Coase’s and New Keynesian critiques, we see how the methods of the realist camp was refined against its dissatisfaction with prevailing instrumentalist methods.

At this point, we have demonstrated the fluctuation of methodological standards in the economics discipline after the nineteenth century. Realism consistently acted as a bulwark against the generalising tendencies of instrumentalism, balancing the epistemic emphasis of prediction with explanatory truthfulness. This constant uncertainty and discourse surrounding what method best served the discipline, therefore plainly demonstrates the first proposition set out by this essay, that economic methods are constantly evolving, even equilibrating—the lack of a constant method and epistemic virtue thus points towards the inherently normative nature of economic methods. The second proposition of this essay, that economic methods respond to historical conditions is also demonstrated here—Coase and the institutionalist school’s search for verisimilitudinous assumptions clearly responded to prevailing disillusionment with instrumentalist tides in the discipline. So did the New Keynesian school, in tweaking implausible assumptions to account for market imperfections and heterogeneity. The third proposition, that economic methods are affected by the mediation of individual economists is also illustrated here. Coase throughout his career advocated for a more inductive method in crafting assumptions, calling for a closer examination of economic phenomena for what it is. This commitment to the method generated momentum for the establishment of the subsequent New Institutionalist school. The emergence of the instrumentalist method in business cycle theory was also contingent upon the pioneering efforts of Kydland and Prescott in the 1980s, who broke free of contemporary intellectual methods that created unreliable models in the preceding decade.
3. Conclusions

This essay has thus made the simple, but non-trivial observation that economic methodology is highly variable across time and intellectual schools. There exist three loosely defined methods that economists choose from. The founding of the economics discipline was built upon an aprioristic and anti-empirical method. By the later half of the twentieth century, the epistemic bias of the discipline came to favour empiricism and a focus on aligning facts with reality. The instrumentalist camp that emerged out of this interpreted this new focus on facts as the elevation of predictive capability as a modelling virtue, which in its most radical case viewed that empiricism need not apply to its postulates, but only to its predictive outcomes. In contrast, the realist camp was more concerned with aligning the assumptions and mechanisms of its models to observed reality, subordinating the epistemic goal of simplicity and prediction. This observation that methods were variable in itself therefore shows that there does not exist a single method to economic inquiry. The selection of the method is thus a normative process. This essay has proposed that the methods and epistemic beliefs favoured was a function of two factors: intellectual conditions and intellectual agents. Intellectual conditions, such as dissatisfaction with a prevailing method, often spurred research that utilised a diametrically opposed method. The preference for certain epistemic values in parallel disciplines such as philosophy also influenced methods used in economics. Intellectual agents were also capable of this process of method selection. This was accomplished through specific economists making methodological contributions that broke free of prevailing conventions in their field, or serving as mediators between conflicting methodological camps.
Bibliography


© 2020 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).