

Praxeology:

The Methodology of Austrian Economics

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Praxeology is the distinctive methodology of the Austrian school. The term was first applied to the Austrian method by Ludwig von Mises, who was not only the major architect and elaborator of this methodology but also the economist who most fully and successfully applied it to the construction of economic theory.¹ While the praxeological method is, to say the least, out of fashion in contemporary economics as well as in social science generally and in the philosophy of science it was the basic method of the earlier Austrian school and also of a considerable segment of the older classical school, in particular of J.B. Say and Nassau W. Senior.²

Praxeology rests on the fundamental axiom that individual human beings act, that is, on the primordial fact that individuals engage in conscious actions toward chosen goals. This concept of action contrasts to purely reflexive, or knee-jerk, behavior, which is not directed toward goals. The praxeological method spins out by verbal deduction the logical implications of that primordial fact. In short, praxeological economics is the structure of logical implications of the *fact* that

¹ See in particular Ludwig von Mises, *Human Action: A Treatise on Economics* (New Haven: Yale University Press, 1949); also see Mises, *Epistemological Problems of Economics*, George Reisman, trans. (Princeton, NJ: Van Nostrand, 1960).

² See Murray N. Rothbard, "Praxeology as the Method of the Social Sciences," in *Phenomenology and the Social Sciences*, Maurice Natanson, ed., 2 vols. (Evanston: Northwestern University Press, 1973), 2 pp. 323-35 [reprinted in *Logic of Action One*, pp. 29-58]; also see Marian Bowley, *Nassau Senior and Classical Economics* (New York: Augustus M. Kelley, 1949), pp. 27-65; and Terence W. Hutchinson, "Some Themes from Investigations into Method," in *Carl Menger and the Austrian School of Economics*, J.R. Hicks and Wilhelm Weber, eds. (Oxford: Clarendon Press, 1973), pp. 15-31.

individuals act. This structure is built on the fundamental axiom of action, and has a few subsidiary axioms, such as that individuals vary and that human beings regard leisure as a valuable good. Any skeptic about deducing from such a simple base an entire system of economics, I refer to Mises's *Human Action*. Furthermore, since praxeology begins with a true axiom, A, all the propositions that can be deduced from this axiom must also be true. For if A implies B, and A is true, then B must also be true.

Let us consider some of the immediate implications of the action axiom. Action implies that the individual's behavior is purposive, in short, that it is directed toward goals. Furthermore, the fact of his action implies that he has consciously chosen certain means to reach his goals. Since he wishes to attain these goals, they must be valuable to him; accordingly he must have values that govern his choices. That he employs means implies that he believes he has the technological knowledge that certain means will achieve his desired ends. Let us note that praxeology does not assume that a person's choice of values or goals is wise or proper or that he has chosen the technologically correct method of reaching them. All that praxeology asserts is that the individual actor adopts goals and believes, whether erroneously or correctly, that he can arrive at them by the employment of certain means.

All action in the real world, furthermore, must take place through time; all action takes place in some present and is directed toward the future (immediate or remote) attainment of an end. If all of a person's desires could be instantaneously realized, there would be no reason for him to act at all.³ Furthermore, that a man acts implies that he believes action will make a difference; in other words, that he will prefer the state of affairs resulting from action to that from no action. Action therefore implies that man does not have omniscient knowledge of the future; for if he had such knowledge, no action of his would make any difference. Hence, action implies that we live in a world of an uncertain, or not fully certain, future. Accordingly, we may amend our analysis of action to say that a man chooses to employ means according to a technological plan in the present because he expects to arrive at his goals at some future time.

³ In answer to the criticism that not all action is directed to some future point of time, see Walter Block, "A Comment on 'The Extraordinary Claim of Praxeology' by Professor Gutierrez," *Theory and Decision* 3 (1973): 381-82.

The fact that people act necessarily implies that the means employed are scarce in relation to the desired ends; for, if all means were not scarce but superabundant, the ends would already have been attained, and there would be no need for action. Stated another way, resources that are superabundant no longer function as means, because they are no longer objects of action. Thus, air is indispensable to life and hence to the attainment of goals; however, air being superabundant is not an object of action and therefore cannot be considered a *means*, but rather what Mises called a "general condition of human welfare." Where air is not superabundant, it may become an object of action, for example, where cool air is desired and warm air is transformed through air conditioning. Even with the absurdly unlikely advent of Eden (or what a few years ago was considered in some quarters to be an imminent "postscarcity" world), in which all desires could be fulfilled instantaneously, there would still be at least one scarce means: the individual's time, each unit of which if allocated to one purpose is necessarily not allocated to some other goal.⁴

Such are some of the immediate implications of the axiom of action. We arrived at them by deducing the logical implications of the existing fact of human action, and hence deduced true conclusions from a true axiom. Apart from the fact that these conclusions cannot be "tested" by historical or statistical means, there is no need to test them since their truth has already been established. Historical fact enters into these conclusions only by determining which branch of the theory is applicable in any particular case. Thus, for Crusoe and Friday on their desert island, the praxeological theory of money is only of academic, rather than of currently applicable, interest. A fuller analysis of the relationship between theory and history in the praxeological framework will be considered below.

There are, then, two parts of this axiomatic-deductive method: the process of deduction and the epistemological status of the axioms themselves. First, there is the process of deduction; why are the means verbal rather than mathematical logic?⁵ Without setting forth the comprehensive Austrian case against mathematical economics, one point can immediately be made: let the reader take the implications of the concept of action as developed so far in this paper and try to place them

⁴ See Mises, *Human Action*, pp. 101-2; and esp., Block, "Comment," p. 383.

⁵ For a typical criticism of praxeology for not using mathematical logic, see George J. Schuller, "Rejoinder," *American Economic Review* 41 (March 1951): 188.

in mathematical form. And even if that could be done, what would have been accomplished except a drastic loss in meaning at each step of the deductive process? Mathematical logic is appropriate to physics—the science that has become the model science, which modern positivists and empiricists believe all other social and physical sciences should emulate. In physics the axioms and therefore the deductions are in themselves purely formal and only acquire meaning "operationally" insofar as they can explain and predict given facts. On the contrary, in praxeology, in the analysis of human action, the axioms themselves are known to be true and meaningful. As a result, each verbal step-by-step deduction is also true and meaningful; for it is the great quality of verbal propositions that each one is meaningful, whereas mathematical symbols are not meaningful in themselves. Thus Lord Keynes, scarcely an Austrian and himself a mathematician of note, leveled the following critique at mathematical symbolism in economics:

It is a great fault of symbolic pseudo-mathematical methods of formalizing a system of economic analysis, that they expressly assume strict independence between the factors involved and lose all their cogency and authority if this hypothesis is disallowed: whereas, in ordinary discourse, where we are not blindly manipulating but know all the time what we are doing and what the words mean, we can keep "at the back of our heads" the necessary reserves and qualifications and the adjustments which we have to make later on, in a way in which we cannot keep complicated partial differentials "at the back" of several pages of algebra which assume that they all vanish. Too large a proportion of recent "mathematical" economics are mere concoctions, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols.⁶

Moreover, even if verbal economics could be successfully translated into mathematical symbols and then retranslated into English so as to explain the conclusions, the process makes no sense and violates the great scientific principle of Occam's Razor: avoiding unnecessary multiplication of entities.⁷

⁶ John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harcourt, Brace, 1936), pp. 297-98.

⁷ See Murray N. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," in *On Freedom and Free Enterprise*, Mary Sennholz, Ed. (Princeton, NJ:

Furthermore, as political scientist Bruno Leoni and mathematician Eugenio Frola pointed out,

It is often claimed that translation of such a concept as the maximum from ordinary into mathematical language, involves an improvement in the logical accuracy of the concept, as well as wider opportunities for its use. But the lack of mathematical precision in ordinary language reflects precisely the behavior of individual human beings in the real world.... We might suspect that translation into mathematical language by itself implies a suggested transformation of human economic operators into virtual robots.⁸

Similarly, one of the first methodologists in economics, Jean-Baptiste Say, charged that the mathematical economists

have not been able to enunciate these questions into analytical language, without divesting them of their natural complication, by means of simplifications, and arbitrary suppressions, of which the consequences, not properly estimated, always essentially change the condition of the problem, and pervert all its results.⁹

More recently, Boris Ischboldin has emphasized the difference between verbal, or "language," logic ("the actual analysis of thought stated in language expressive of reality as grasped in common experience") and "construct" logic, which is "the application of quantitative (economic) data of the constructs of mathematics and symbolic logic which constructs may or may not have real equivalents."¹⁰

D. Van Nostrand, 1956), p. 227 [and reprinted in *Logic of Action One*]; Rothbard, *Man, Economy, and State*, 2 vols. (Princeton: D Van Nostrand, 1962), 1:65-66. On mathematical logic as being subordinate to verbal logic, see Rene Poirier, "Logique," in *Vocabulaire technique et critique de la philosophie*, Andre Lalande, ed., 6th ed. Rev. (Paris: Presses Universitaires de France, 1951), pp. 574-75.

⁸ Bruno Leoni and Eugenio Frola, "On Mathematical Thinking in Economics" (unpublished manuscript privately distributed), pp. 23-24; the Italian version of this article is "Possibilita di applicazione della matematiche alle discipline economiche," *Il Politico* 20 (1995).

⁹ Jean-Baptiste Say, *A Treatise on Political Economy* (New York: Augustus M. Kelley, 1964), p. xxvi n.

¹⁰ Boris Ischboldin, "a Critique of Econometrics," *Review of Social Economy* 18, no. 2 (September 1960): 11 N; Ischboldin's discussion is based on the construction of I.M.

Although himself a mathematical economist, the mathematician son of Carl Menger wrote a trenchant critique of the idea that mathematical presentation in economics is necessarily more precise than ordinary language:

Consider, for example, the statements (2) *To a higher price of a good, there corresponds a lower (or at any rate not a higher) demand.*

(2') *If p denotes the price of, and q the demand for, a good, then*

$$q = f(p) \text{ and } dq/dp = f'(p) \leq 0$$

Those who regard the formula (2') as more precise or "more mathematical" than the sentence (2) are under a complete misapprehension... the only difference between (2) and (2') is this: since (2') is limited to functions which are differentiable and whose graphs, therefore, have tangents (which from an economic point of view are not more plausible than curvature), the sentence (2) is more general, but it is by no means less precise: it is of the same mathematical precision as (2').¹¹

Turning from the deduction process to the axioms themselves, what is their epistemological status? Here the problems are obscured by a difference of opinion within the praxeological camp, particularly on the nature of the fundamental axiom of action. Ludwig von Mises, as an adherent of Kantian epistemology, asserted that the concept of action is a priori to all experience, because it is, like the law of cause and effect, part of "the essential and necessary character of the logical structure of the human mind."¹² Without delving too deeply into the murky waters of epistemology, I would deny, as an Aristotelian and neo-Thomist, any such alleged "laws of logical structure" that the human mind necessarily imposes on the chaotic structure of reality. Instead, I would call all such laws "laws of reality," which the mind apprehends from investigating and collating the facts of the real world. My view is that the fundamental

Bochenski, "Scholastic and Aristotelian Logic," *Proceedings of the American Catholic Philosophical Association* 30 (1956): 112-17.

¹¹ Karl Menger, "Austrian Marginalism and Mathematical Economics," in *Carl Menger*, p. 41.

¹² Mises, *Human Action*, p. 34.

axiom and subsidiary axioms are derived from the experience of reality and are therefore in the broadest sense empirical. I would agree with the Aristotelian realist view that its doctrine is radically empirical, far more so than the post-Humean empiricism which is dominant in modern philosophy. Thus, John Wild wrote:

It is impossible to reduce experience to a set of isolated impressions and atomic units. Relational structure is also given with equal evidence and certainty. The immediate data are full of determinate structure, which is easily abstracted by the mind and grasped as universal essences or possibilities.¹³

Furthermore, one of the pervasive data of all human experience is existence; another is consciousness, or awareness. In contrast to the Kantian view, Harmon Chapman wrote that

conception is a kind of awareness, a way of apprehending things or comprehending them and not an alleged subjective manipulation of so-called generalities or universals solely "mental" or "logical" in their provenience and non-cognitive in nature.

That in thus penetrating the data of sense, conception also synthesizes these data is evident. But the synthesis here involved, unlike the synthesis of Kant, is not a prior condition of perception, an anterior process of constituting both perception and its object, but rather a cognitive synthesis in apprehension, that is, a uniting or "comprehending" which is one with the apprehending itself. In other words, perception and experience are not the results or end products of a synthetic process a priori, but are themselves synthetic or comprehensive apprehension whose structured unity is prescribed solely by the nature of the real, that is, by the intended objects in their togetherness and not by consciousness itself whose (cognitive) nature is to apprehend the real—as it is.¹⁴

¹³ John Wild, "Phenomenology and Metaphysics," in *The Return to Reason: Essays in Realistic Philosophy*, John Wild, Ed. (Chicago: Henrey Regnery, 1953), pp. 48, 37-57.

¹⁴ Harmon M. Chapman, "Realism and Phenomenology," in *Return to Reason*, p. 29. On the interrelated functions of sense and reason and their respective roles in human cognition of reality, see Francis H. Parker, "Realistic Epistemology," *ibid.*, pp. 167-69.

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If, in the broad sense, the axioms of praxeology are radically empirical, they are far from the post-Humean empiricism that pervades the modern methodology of social science. In addition to the foregoing considerations, (1) they are so broadly based in common human experience that once enunciated they become self-evident and hence do not meet the fashionable criterion of "falsifiability"; (2) they rest, particularly the action axiom, on universal *inner* experience, as well as on external experience, that is, the evidence is *reflective* rather than purely physical; and (3) they are therefore a priori to the complex historical events to which modern empiricism confines the concept of "experience."¹⁵

Say, perhaps the first praxeologist, explained the derivation of the axioms of economic theory as follows:

Hence the advantage enjoyed by everyone who, from distinct and accurate observation, can establish the existence of these general facts, demonstrate their connection and deduce their consequences. They as certainly proceed from the nature of things as the laws of the material world. We do not imagine them; they are results disclosed to us by judicious observation and analysis....

Political economy...is composed of a few fundamental principles, and of a great number of corollaries or conclusions, drawn from these principles...that can be admitted by every reflecting mind.¹⁶

Friedrich A. Hayek trenchantly described the praxeological method in contrast to the methodology of the physical sciences and also underlined the broadly empirical nature of the praxeological axioms:

The position of man...brings it about that the essential basic facts which we need for the explanation of social phenomena are part of common experience, part of the stuff of our thinking. In the social sciences it is the elements of the complex phenomena which are known beyond the possibility of dispute. In the natural

¹⁵ See Murray N. Rothbard, "In Defense of 'Extreme Apriorism,'" *Southern Economic Journal* 23 (January 1957): 315-18 [reprinted as Volume 1, Chapter 6]. It should be clear from the current paper that the term *extreme apriorism* is a misnomer for praxeology.

¹⁶ Say, *A Treatise on Political Economy*, pp. xxv-xxvi, xlv.

sciences they can only be at best surmised. The existence of these elements is so much more certain than any regularities in the complex phenomena to which they give rise, that it is they which constitute the truly empirical factor in the social sciences. There can be little doubt that it is this different position of the empirical factor in the process of reasoning in the two groups of disciplines which is at the root of much of the confusion with regard to their logical character. The essential difference is that in the natural sciences the process of deduction has to start from some hypothesis which is the result of inductive generalizations, while in the social sciences it starts directly from known empirical elements and uses them to find the regularities in the complex phenomena which direct observations cannot establish. They are, so to speak, empirically deductive sciences, proceeding from the known elements to the regularities in the complex phenomena which cannot be directly established.¹⁷

Similarly, J.E. Cairnes wrote:

*The economist starts with a knowledge of ultimate causes. He is already, at the outset of his enterprise in the position which the physicist only attains after ages of laborious research.... For the discovery of such premises no elaborate process of induction is needed... for this reason, that we have, or may have if we choose to turn our attention to the subject, direct knowledge of these causes in our consciousness of what passes in our own minds, and in the information which our senses convey...to us of external facts.*¹⁸

Nassau W. Senior phrased it thus:

The physical sciences, being only secondarily conversant with mind, draw their premises almost exclusively from observation or hypothesis.... On the other hand, the mental sciences and the mental arts draw their premises principally from consciousness. The subjects with which they are chiefly

¹⁷ Friedrich A. Hayek, "The Nature and History of the Problem," in *Collectivist Economic Planning*, F.A. Hayek ed., (London: George Routledge and Sons, 1935), p 11.

¹⁸ John Elliott Cairnes, *The Character and Logical Method of Political Economy*, 2nd e. (London: Macmillan, 1875), pp. 87-88; italics in the original.

conversant are the workings of the human mind. [These premises are] a very few general propositions, which are the result of observation, or consciousness, and which almost every man, as soon as he hears them, admits, as familiar to his thought, or at least, included in his previous knowledge.¹⁹

Commenting on his complete agreement with this passage, Mises wrote that these "immediately evident propositions" are "of aprioristic derivation...unless one wishes to call aprioristic cognition inner experience."²⁰

To which Marian Bowley, the biographer of Senior, justly comments:

The only fundamental difference between Mises's general attitude and Senior's lies in Mises's apparent denial of the possibility of using any general empirical data, i.e., facts of general observation, as initial premises. This difference, however, turns upon Mises's basic ideas of the nature of thought, and though of general philosophic importance, has little special relevance to economic method as such.²¹

It should be noted that for Mises it is only the fundamental axiom of action that is a priori; he conceded that the subsidiary axioms of the diversity of mankind and nature, and of leisure as a consumers' good, are broadly empirical.

Modern post-Kantian philosophy has had a great deal of trouble encompassing self-evident propositions, which are marked precisely by their strong and evident truth rather than by being testable hypotheses, that are, in the current fashion, considered to be "falsifiable." Sometimes it seems that the empiricists use the fashionable analytic—synthetic dichotomy, as the philosopher Hao Wang charged, to dispose of theories they find difficult to refute by dismissing them as necessarily *either* disguised definitions *or* debatable and uncertain hypotheses.²²

¹⁹ Bowley, *Nassau Senior*, pp. 43, 56.

²⁰ Mises, *Epistemological Problems*, p. 19.

²¹ Bowley, *Nassau Senior*, pp. 64-65.

²² Hao Wang, "Notes on the Analytic-Synthetic Distinction," *Theoria* 21 (1995): 158; see also John Wild and J.L. Cobitz, "On the Distinction between the Analytic and Synthetic," *Philosophy and Phenomenological Research* 8 (June 1948): 651-67.

But what if we subject the vaunted "evidence" of modern positivists and empiricists to analysis? What is it? We find that there are two types of such evidence to either confirm or refute a proposition: (1) if it violates the laws of logic, for example, implies that $A = -A$; or (2) if it is confirmed by empirical facts (as in a laboratory) that can be checked by many persons. But what is the nature of such "evidence" but the bringing, by various means, of propositions hitherto cloudy and obscure into clear and evident view, that is, evident to the scientific observers? In short, logical or laboratory processes serve to make it evident to the "selves" of the various observers that the propositions are either confirmed or refuted, or, to use unfashionable terminology, either true or false. But in that case propositions that are *immediately* evident to the selves of the observers have at least as good scientific status as the other and currently more acceptable forms of evidence. Or, as the Thomist philosopher John J. Toohey put it,

Proving means *making evident* something which is not evident. If a truth or proposition is self-evident, it is useless to attempt to prove it; to attempt to prove it would be to attempt to make evident something which is already evident.²³

The action axiom, in particular, should be, according to Aristotelian philosophy, unchallengeable and self-evident since the critic who attempts to refute it finds that he must use it in the process of alleged refutation. Thus, the axiom of the existence of human consciousness is demonstrated as being self-evident by the fact that the very act of denying the existence of consciousness must itself be performed by a conscious being. The philosopher R.P. Phillips called this attribute of a self-evident axiom a "boomerang principle," since "even though we cast it away from us, it returns to us again."²⁴ A similar self-contradiction faces the man who attempts to refute the axiom of human action. For in doing so, he is *ipso facto* a person making a conscious choice of means in attempting to arrive at an adopted end: in this case the end, or goal, of trying to refute the axiom of action. He employs action in trying to refute the notion of action.

²³ John J. Toohey, *Notes on Epistemology*, rev. ed. (Washington D.C.: Georgetown University, 1937), p. 36.; italics in the original.

²⁴ R.P. Phillips, *Modern Thomistic Philosophy* (Westminster, Maryland: Newman Bookshop, 1934-35), 2, pp. 36-37; see also Murray N. Rothbard, "The Mantle of Science," in *Scientism and Values*, Helmut Schoeck and James W. Wiggins, ed., (Princeton, NJ: D Van Nostrand, 1960), pp. 162-65.

Of course, a person may *say* that he denies the existence of self-evident principles or other established truths of the real world, but this mere saying has no epistemological validity. As Toohey pointed out,

A man may *say* anything he pleases, but he cannot *think* or *do* anything he pleases. He may *say* he saw a round square, but he cannot *think* he saw a round square. He may say, if he likes, that he saw a horse riding astride its own back, but we shall know what to think of him if he says it.²⁵

The methodology of modern positivism and empiricism comes a cropper even in the physical sciences, to which it is much better suited than to the sciences of human action; indeed, it particularly fails where the two types of disciplines interconnect. Thus, the phenomenologist Alfred Schütz, a student of Mises at Vienna, who pioneered in applying phenomenology to the social sciences, pointed out the contradiction in the empiricists' insistence on the principle of empirical verifiability in science, while at the same time denying the existence of "other minds" as unverifiable. But *who* is supposed to be doing the laboratory verification if not these selfsame "other minds" of the assembled scientists? Schütz wrote:

It is...not understandable that the same authors who are convinced that no verification is possible for the intelligence of other human beings have such confidence in the principle of verifiability itself, which can be realized only through cooperation with others.²⁶

In this way, the modern empiricists ignore the necessary presuppositions of the very scientific method they champion. For Schütz, knowledge of such presuppositions is "empirical" in the broadest sense,

provided that we do not restrict this term to sensory perceptions of objects and events in the outer world but include the experiential form, by which common-sense thinking in everyday

²⁵ Toohey, *Notes on Epistemology*, p. 10. italics in the original.

²⁶ Alfred Schütz, *Collected Papers of Alfred Schütz*, vol. 2, *Studies in Social Theory*, A. Brodersen, ed. (The Hague: Nijhoff, 1964), p. 4; see also Mises, *Human Action*, p. 24.

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life understands human actions and their outcome in terms of their underlying motives and goals.²⁷

Having dealt with the nature of praxeology, its procedures and axioms and its philosophical groundwork, let us now consider what the relationship is between praxeology and the other disciplines that study human action. In particular, what are the differences between praxeology and technology, psychology, history, and ethics—all of which are in some way concerned with human action?

In brief, *praxeology* consists of the logical implications of the universal formal fact that people act, that they employ means to try to attain chosen ends. *Technology* deals with the contentual problem of *how* to achieve ends by adoption of means. *Psychology* deals with the question of *why* people adopt various ends and *how* they go about adopting them. *Ethics* deals with the question of what ends, or values, people *should* adopt. And *history* deals with ends adopted in the past, what means were used to try to achieve them—and what the consequences of these actions were.

Praxeology, or economic theory in particular, is thus a unique discipline within the social sciences; for, in contrast to the others, it deals not with the *content* of men's values, goals, and actions—not with what they have done or how they have acted or how they should act—but purely with the fact that they *do* have goals and act to attain them. The laws of utility, demand, supply, and price apply regardless of the type of goods and services desired or produced. As Joseph Dorfman wrote of Herbert J. Davenport's *Outlines of Economic Theory* (1896): The ethical character of the desires was not a fundamental part of his inquiry. Men labored and underwent privation for "whiskey, cigars, and burglars' jimmies," he said, "as well as for food, or statuary or harvest machinery." As long as men were willing to buy and sell "foolishness and evil," the former commodities would be economic factors with

²⁷ Alfred Schütz, *Collected Papers of Alfred Schütz*, vol. 1, *The Problem of Social Reality*, A. Brodersen, ed. (the Hague, Nijhoff, 1964), p. 65. On the philosophical presuppositions of science, see Andrew G. Van Melsen, *The Philosophy of Nature* (Pittsburgh: Duquesne University Press, 1953), pp. 6-29. On common sense as the groundwork of philosophy, see Toohey, *Notes on Epistemology*, pp. 74, 106-13. On the application of a similar point of view to the methodology of economics, see Frank H. Knight, "'What is Truth' in Economics," in *On the History and Method of Economics* (Chicago: University of Chicago Press, 1956), pp. 151-78.

market standing, for utility, as an economic term, meant merely adaptability to human desires. So long as men desired them, they satisfied a need and were motives to production. Therefore economics did not need to investigate the origin of choices.²⁸

Praxeology, as well as the sound aspects of the other social sciences, rests on methodological individualism, on the fact that only individuals feel, value, think, and act. Individualism has always been charged by its critics—and always incorrectly—with the assumption that each individual is a hermetically sealed "atom," cut off from, and uninfluenced by, other persons. This absurd misreading of methodological individualism is at the root of J.K. Galbraith's triumphant demonstration in *The Affluent Society* (Boston: Houghton Mifflin, 1958) that the values and choices of individuals are influenced by other persons, and therefore supposedly that economic theory is invalid. Galbraith also concluded from his demonstration that these choices, because influenced, are artificial and illegitimate. The fact that praxeological economic theory rests on the universal fact of individual values and choices means, to repeat Dorfman's summary of Davenport's thought, that economic theory does "not need to investigate the origin of choices." Economic theory is not based on the absurd assumption that each individual arrives at his values and choices in a vacuum, sealed off from human influence. Obviously, individuals are continually learning from and influencing each other. As F.A. Hayek wrote in his justly famous critique of Galbraith, "The Non Sequitur of the 'Dependence Effect'":

Professor Galbraith's argument could be easily employed, without any change of the essential terms, to demonstrate the worthlessness of literature or any other form of art. Surely an individual's want for literature is not original with himself in the sense that he would experience it if literature were not produced. Does this then mean that the production of literature cannot be defended as satisfying a want because it is only the production which provokes the demand?²⁹

²⁸ Joseph Dorfman, *The Economic Mind in American Civilization*, 5 vols (New York: Viking Press, 1949), 3, p. 376.

²⁹ Friedrich A. Hayek, "The Non Sequitur of the 'Dependence Effect,'" in Friedrich A. Hayek, *Studies in Philosophy, Politics, and Economics* (Chicago: University of Chicago Press, 1967), pp. 314-15.

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That Austrian-school economics rests firmly from the beginning on an analysis of the fact of individual subjective values and choices unfortunately led the early Austrians to adopt the term *psychological school*. The result was a series of misdirected criticisms that the latest findings of psychology had not been incorporated into economic theory. It also led to misconceptions such as that the law of diminishing marginal utility rests on some psychological law of the satiety of wants. Actually, as Mises firmly pointed out, that law is praxeological rather than psychological and has nothing to do with the *content* of wants, for example, that the tenth spoonful of ice cream may taste less pleasurable than the ninth spoonful. Instead, it is a praxeological truth, derived from the nature of action, that the first unit of a good will be allocated to its most valuable use, the next unit to the next most valuable, and so on.³⁰ On one point, and on one point alone, however, praxeology and the related sciences of human action take a stand in philosophical psychology: on the proposition that the human mind, consciousness, and subjectivity exist, and therefore action exists. In this it is opposed to the philosophical base of behaviorism and related doctrines and joined with all branches of classical philosophy and with phenomenology. On all other questions, however, praxeology and psychology are distinct and separate disciplines.³¹

A particularly vital question is the relationship between economic theory and history. Here again, as in so many other areas of Austrian economics, Ludwig von Mises made the outstanding contribution, particularly in his *Theory and History*.³² It is especially curious that Mises and other praxeologists, as alleged "a priorists," have commonly been accused of being "opposed" to history. Mises indeed held not only that economic theory does not need to be "tested" by historical fact but also that it *cannot* be so tested. For a fact to be usable for testing theories, it must be a simple fact, homogeneous with other facts in accessible and repeatable classes. In short, the theory that one atom of copper, one atom of sulfur, and four atoms of oxygen will combine to form a recognizable entity called copper sulfate, with known properties, is easily tested in the laboratory. Each of these atoms is homogeneous, and therefore the test is repeatable indefinitely. But each historical event, as Mises pointed out, is not simple and repeatable; each event is a complex resultant of a shifting variety of multiple causes, none of which

³⁰ Mises, *Human Action*, p. 124.

³¹ See Rothbard, "Toward a Reconstruction," pp. 230-31.

³² Ludwig von Mises, *Theory and History* (New Haven: Yale University Press, 1957).

ever remains in constant relationships with the others. Every historical event, therefore, is heterogeneous, and therefore historical events cannot be used either to test or to construct laws of history, quantitative or otherwise. We can place every atom of copper into a homogeneous class of copper atoms; we cannot do so with the events of human history.

This is not to say, of course, that there are no similarities among historical events. There are many similarities, but no homogeneity. Thus, there were many similarities between the presidential election of 1968 and that of 1972, but they were scarcely homogeneous events, since they were marked by important and inescapable differences. Nor will the next election be a repeatable event to place in a homogeneous class of "elections." Hence no scientific, and certainly no quantitative, laws can be derived from these events.

Mises's radically fundamental opposition to econometrics now becomes clear. Econometrics not only attempts to ape the natural sciences by using complex heterogeneous historical facts as if they were repeatable homogeneous laboratory facts; it also squeezes the qualitative complexity of each event into a quantitative number and then compounds the fallacy by acting as if these quantitative relations remain constant in human history. In striking contrast to the physical sciences, which rest on the empirical discovery of quantitative constants, econometrics, as Mises repeatedly emphasized, has failed to discover a single constant in human history. And given the ever-changing conditions of human will, knowledge, and values and the differences among men, it is inconceivable that econometrics can ever do so.

Far from being opposed to history, the praxeologist, and not the supposed admirers of history, has profound respect for the irreducible and unique facts of human history. Furthermore, it is the praxeologist who acknowledges that individual human beings cannot legitimately be treated by the social scientist as if they were not men who have minds and act upon their values and expectations, but stones or molecules whose course can be scientifically tracked in alleged constants or quantitative laws. Moreover, as the crowning irony, it is the praxeologist who is truly empirical because he recognizes the unique and heterogeneous nature of historical facts; it is the self-proclaimed "empiricist" who grossly violates the facts of history by attempting to reduce them to quantitative laws. Mises wrote thus about econometricians and other forms of "quantitative economists":

There are, in the field of economics, no constant relations, and consequently no measurement is possible. If a statistician determines that a rise of 10 percent in the supply of potatoes in Atlantis at a definite time was followed by a fall of 8 percent in the price, he does not establish anything about what happened or may happen with a change in the supply of potatoes in another country or in another time. He has not "measured" the "elasticity of demand" of potatoes. He has established a unique individual historical fact. No intelligent man can doubt that the behavior of men with regard to potatoes and every other commodity is variable. Different individuals value the same things in a different way, and valuations change with the same individuals with changing conditions. . . .

The impracticability of measurement is not due to the lack of technical methods for the establishment of measure. It is due to the absence of constant relations. . . . Economics is not, as . . . positivists repeat again and again, backward because it is not "quantitative." It is not quantitative and does not measure because there are no constants. Statistical figures referring to economic events are historical data. They tell us what happened in a nonrepeatable historical case. Physical events can be interpreted on the ground of our knowledge concerning constant relations established by experiments. Historical events are not open to such an interpretation. . . .

Experience of economic history is always experience of complex phenomena. It can never convey knowledge of the kind the experimenter abstracts from a laboratory experiment. Statistics is a method for the presentation of historical facts. . . . The statistics of prices is economic history. The insight that, *ceteris paribus*, an increase in demand must result in an increase in prices is not derived from experience. Nobody ever was or ever will be in a position to observe a change in one of the market data *ceteris paribus*. There is no such thing as quantitative economics. All economic quantities we know about are data of economic history. . . . Nobody is so bold as to maintain that a rise of A percent in the supply of any commodity must always—in every country and at any time—result in a fall of B percent in price. But as no quantitative economist ever ventured to define

precisely on the ground of statistical experience the special conditions producing a definite deviation from the ratio A:B, the futility of his endeavors is manifest.³³

Elaborating on his critique of constants Mises added:

The quantities we observe in the field of human action . . . are manifestly variable. Changes occurring in them plainly affect the result of our actions. Every quantity that we can observe is a historical event, a fact which cannot be fully described without specifying the time and geographical point.

The econometrician is unable to disprove this fact, which cuts the ground from under his reasoning. He cannot help admitting that there are no "behavior constants." Nonetheless, he wants to introduce some numbers, arbitrarily chosen on the basis of historical fact, as "unknown *behavior constants*." The sole excuse he advances is that his hypotheses are "saying only that these unknown numbers remain reasonably constant through a period of years."³⁴ Now whether such a period of supposed constancy of a definite number is still lasting or whether a change in the number has already occurred can only be established later on. In retrospect it may be possible, although in rare cases only, to declare that over a (probably rather short) period an approximately stable ratio which the econometrician chooses to call a "reasonably" constant ratio prevailed between the numerical values of two factors. But this is something fundamentally different from the constants of physics. It is the assertion of a historical fact, not of a constant that can be resorted to in attempts to predict future events.³⁵

The highly praised equations are, insofar as they apply to the future, merely equations in which all quantities are unknown.³⁶

³³ Mises, *Human Action*, pp. 55-56, 348.

³⁴ Cowles Commission for Research in Economics, *Report for the Period, January 1, 1948-June 30, 1949* (Chicago: University of Chicago Press, 1949), p. 7, quoted in Mises, *Theory and History*, pp. 10-11.

³⁵ *Ibid.*, pp. 10-11.

³⁶ Ludwig von Mises, "Comments about the Mathematical Treatment of Economic Problems" (Cited as "unpublished manuscript"; published as "The Equations of

In the mathematical treatment of physics the distinction between constants and variables makes sense; it is essential in every instance of technological computation. In economics there are no constant relations between various magnitudes. Consequently all ascertainable data are variables, or what amounts to the same thing, *historical* data. The mathematical economists reiterate that the plight of mathematical economics consists in the fact that there are a great number of variables. The truth is that there are only variables and no constants. It is pointless to talk of variables where there are no invariables.³⁷

What, then, is the proper relationship between economic theory and economic history or, more precisely, history in general? The historian's function is to try to explain the unique historical facts that are his province; to do so adequately he must employ all the relevant theories from all the various disciplines that impinge on his problem. For historical facts are complex resultants of a myriad of causes stemming from different aspects of the human condition. Thus, the historian must be prepared to use not only praxeological economic theory but also insights from physics, psychology, technology, and military strategy along with an interpretive understanding of the motives and goals of individuals. He must employ these tools in understanding both the goals of the various actions of history and the consequences of such actions. Because understanding diverse individuals and their interactions is involved, as well as the historical context, the historian using the tools of natural and social science is in the last analysis an "artist," and hence there is no guarantee or even likelihood that any two historians will judge a situation in precisely the same way. While they may agree on an array of factors to explain the genesis and consequences of an event, they are unlikely to agree on the precise weight to be given each causal factor. In employing various scientific theories, they have to make judgments of relevance on which theories applied in any given case; to refer to an example used earlier in this paper, a historian of Robinson Crusoe would hardly employ the theory of money in a historical explanation of his actions on a desert island. To the economic historian, economic law is

Mathematical Economics" in the *Quarterly Journal of Austrian Economics*, vol. 3, no. 1 (Spring 2000), 27-32.

³⁷ Mises, *Theory and History*, pp. 11-12; see also Leoni and Frola, "On Mathematical Thinking," pp. 1-8; and Leland B. Yeager, "Measurement as Scientific Method in Economics," *American Journal of Economics and Sociology* 16 (July 1957): 337-46.

neither confirmed nor tested by historical facts; instead, the law, where relevant, is applied to help explain the facts. The facts thereby illustrate the workings of the law. The relationship between praxeological economic theory and the understanding of economic history was subtly summed up by Alfred Schütz:

No economic act is conceivable without some reference to an economic actor, but the latter is absolutely anonymous; it is not you, nor I nor an entrepreneur, nor even an "economic man," as such, but a pure universal "one." This is the reason why the propositions of theoretical economics have just that "universal validity" which gives them the ideality of the "and so forth" and "I can do it again." However, one can study the economic actor as such and try to find out what is going on in his mind; of course, one is not then engaged in theoretical economics but in economic history or economic sociology. . . . However, the statements of these sciences can claim no universal validity, for they deal either with the economic sentiments of particular historical individuals or with types of economic activity for which the economic acts in question are evidence. . . .

In our view, pure economics is a perfect example of an objective meaning-complex about subjective meaning-complexes, in other words, of an objective meaning-configuration stipulating the typical and invariant subjective experiences of anyone who acts within an economic framework. . . . Excluded from such a scheme would have to be any consideration of the uses to which the "goods" are to be put after they are acquired. But once we do turn our attention to the subjective meaning of a real individual person, leaving the anonymous "anyone" behind, then of course it makes sense to speak of behavior that is atypical. . . . To be sure, such behavior is irrelevant from the point of view of economics, and it is in this sense that economic principles are, in Mises's words, "not a statement of what usually happens, but of what necessarily must happen."³⁸

³⁸ Alfred Schütz, *The Phenomenology of the Social World* (Evanston, Ill.: Northwestern University Press, 1967), pp. 137, 245; also see Ludwig M. Lachmann, *The Legacy of Max Weber* (Berkeley, California: Clendessary Press, 1971), pp. 17-48.