

Praxeology as the Method of the Social Sciences By Murray N. Rothbard

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The Praxeological Method

During the past generation, a veritable revolution has taken place in the discipline of economics. I am referring not so much to the well-known Keynesian revolution, but to the quieter yet more profound revolution in the methodology of the discipline. This change has not occurred simply in the formal writings of the handful of conscious methodologists; it has spread, largely unnoticed, until it now permeates research and study in all parts of the field. Some effects of this methodological revolution are all too apparent. Let the nonspecialist in economics pick up a journal article or monograph today and contrast it with one of a generation ago, and the first thing that will strike him is the incomprehensibility of the modern product. The older work was written in ordinary language and, with moderate effort, was comprehensible to the layman; the current work is virtually all mathematics, algebraic or geometric. As one distinguished economist lamented, "Economics nowadays often seems like a third-rate sub-branch of mathematics," and one, he added, that the mathematician himself does not esteem very highly.

Of course, economics shares this accelerated mathematization with virtually every other field of knowledge, including history and literature. But, laboring under the common notion that it is a science with a special focus on *quantities*, economics has proceeded farther and faster than any of its sister disciplines down the mathematical and statistical road.

The emphasis on mathematics is a symptom of a deeper change in the discipline: the rapid adoption of what we may broadly call "positivism" as the guide for research and the criterion for the successful construction of economic theory. The growing influence of positivism has its source in the attempt of all social sciences to mimic the (allegedly) supremely successful science, physics. For social scientists, as for almost all intellectuals, physics has unfortunately all but replaced philosophy as the "queen of the sciences." In the hands of the positivists, philosophy has almost come to be an elaborate running commentary on and explication of physics, too often serving as the handmaiden of that prestigious science. What positivists see as the methodology of physics has been elevated, at theft hands, to be *the* scientific method, and any deviant approach

has been barred from the status of science because it does not meet the rigorous positivist test. At the risk of oversimplification, the positivist model of the scientific method may be summarized as follows:

Step 1. The scientist observes empirical regularities, or "laws," between variables.

Step 2. Hypothetical explanatory generalizations are constructed, from which the empirically observed laws can be deduced and thus "explained."

Step 3. Since competing hypotheses can be framed, each explaining the body of empirical laws, such "coherence" or consistent explanation is not enough; to validate the hypotheses, other deductions must be made from them, which must be "testable" by empirical observation.

Step 4. From the construction and testing of hypotheses, a wider and wider body of generalizations is developed; these can be discarded if empirical tests invalidate them, or be replaced by new explanations covering a still wider range of phenomen.

Since the number of variables is virtually infinite, the testing in Step 3, as well as much of the observation in Step 1, can only be done in "controlled experiments," in which all variables but the ones under study are held constant. Replicating the experimental conditions should then replicate the results.

Note that in this methodology we proceed from that which is known with *certainly*—the empirical regularities—up through even wider and more tentative hypotheses. It is this fact that leads the layman to believe erroneously that Newton "overthrew" his predecessors and was in his turn "overthrown" by Einstein. In fact, what happens is not so much substitution as the addition of more general explanations for a wider range of phenomena; the generalizations of a Newton or an Einstein are far more tentative than the fact that two molecules of hydrogen combine with one molecule of oxygen to produce water.

Now, I am not expert enough in the philosophy of science to challenge this positivist model of the methodology of physics, although my reading in the philosophy of nature leads me to suspect that it is highly inadequate.¹ My contention is rather that the wholesale and uncritical application of this model to economics in recent decades has led the entire discipline badly astray.

There is, however, unbeknownst to most present-day economists, a competing methodological tradition. This tradition, the method of most of the older classical economists, has been called "praxeology" by Ludwig von Mises, its most eminent modern theorist and practitioner. Praxeology holds that in the social sciences where human beings and human choices are involved, Step 3 is impossible, since even in the most ambitious totalitarian society, it is

¹ On this, see Andrew G. Van Melsen, *The Philosophy of Nature* (Pittsburgh, Penn.: Duquesne University Press, 1953)

impossible to hold *all* the variables constant. There *cannot* be controlled experiments when we confront the real world of human activity.

Let us take a recent example of a generally unwelcome economic phenomenon: the accelerated price inflation in the United States in the last few years. There are all manner of competing theoretical explanations for this, ranging from increases in the money supply to a sudden increase in greed on the part of the public or various segments thereof. There is no positivist empirical way of deciding between these various theories; there is no way of confirming or disproving them by keeping all but one supposedly explanatory variable constant, and then changing that variable to see what happens to prices. In addition, there is the well-known social science analogue of the Heisenberg uncertainty principle: positivist science contains predictions, but how can predictions be tested when the very act of prediction itself changes the forces at work? Thus, economist A predicts a severe recession in six months; acting on this, the government takes measures to combat the supposedly imminent recession, the public and the stock market react, and so on. The recession then never takes place. Does that mean that the economist was basing his prediction on erroneous theories, or that the theories were correct but inappropriate to the actual data, *or* that he was "really" right but that prompt action forestalled the dreaded event? There is no way to decide.

One further example: Keynesian economists hold that depressions can be cured by massive doses of deficit spending by the government. The United States government engaged in large-scale deficit-spending to combat the depression in the late 1930s, but to no avail. The anti-Keynesians charge that this failure proves the incorrectness of Keynesian theory; the Keynesians reply that the doses were simply not massive enough, and that far greater deficits would have turned the tide. Again, there is no positivist-empirical way to decide between these competing claims.

Praxeologists share the contention of the impossibility of empirical testing with other critics of positivism, such as the institutionalists, who for this reason abandon economic theory altogether and confine themselves to purely empirical or institutional economic reportage. But the praxeologist does not despair; he turns instead to another methodology that *can* yield a correct body of economic theory. This methodology begins with the conviction that while the economist, unlike the physicist, cannot test his hypotheses in controlled experiments, he is, in another sense, in a *better* position than the physicist. For while the physicist is certain of his empirical laws but tentative and uncertain of his explanatory generalizations, the economist is in the opposite position. He begins, not with detailed, quantitative, empirical regularities, but with broad explanatory generalizations. These fundamental premises he knows with certainty; they have the status of apodictic axioms, on which he can build deductively with confidence. Beginning with the certain knowledge of the basic explanatory axiom A, he deduces the implications of A: B, C, and D. From these he deduces further implications, and so on. If he knows that A is true, and if A implies B, C, and D, then he knows with certainty that B, C, and D are true as well. The positivist, looking through the blinders imposed by his notion of physics, finds it impossible to understand how a science can possibly begin with the explanatory axioms and work downward to the more concrete empirical laws. He therefore dismisses the praxeological approach as "mythical" and "apriorist."

What are these axioms with which the economist can so confidently begin? They are the existence, the nature, and the implications of human action. Individual human beings exist. Moreover, they do not simply "move," as do unmotivated atoms or molecules; they *act*, that is, they have goals and they make choices of means to attain their goals. They order their values or ends in a hierarchy according to whether they attribute greater or lesser importance to them; and they have what they believe is technological knowledge to achieve their goals. All of this action must also take place through time and in a certain space. It is on this basic and evident axiom of human action that the entire structure of praxeological economic theory is built. We do not know, and may never know with certainty, the ultimate equation that will explain all electromagnetic and gravitational phenomena; but we do know that people act to achieve goals. And this knowledge is enough to elaborate the body of economic theory.²

There is considerable controversy over the empirical status of the praxeological axiom Professor Mises, working within a Kantian philosophical framework, maintained that like the "laws of thought," the axiom is a *priori* to human experience and hence apodictically certain. This analysis has given rise to the designation of praxeology as "extreme apriorism." Most praxeologists, however, hold that the axiom is based squarely in empirical reality, which makes it no less certain than it is in Mises's formulation. If the axiom is empirically true, then the logical consequences built upon it must be empirically true as well. But this is not the sort of empiricism welcomed by the positivists, for it is based on universal reflective or inner experience, as well as on external physical experience. Thus, the knowledge that human beings have goals and act purposively to attain them rests, not simply on observing that human beings exist, but also on the introspective knowledge of what it means to be human possessed by each man, who then assents to this knowledge. While this sort of empiricism rests on broad knowledge of human action, it is also prior to the complex historical events that economists attempt to explain.

Alfred Schütz pointed out and elaborated the complexity of the interaction between the individual and other persons, the "interpretive understanding" or *Verstehen,* upon which this universal, prescientific understanding rests. The common-sense knowledge of the universality of motivated, intentional human action, ignored by positivists as "unscientific," actually provides the indispensable groundwork on which science itself must develop.³ For Schütz this knowledge

² Thus the fact that people act to achieve their goals implies that there is a scarcity of means to attain them; otherwise the goals would already have been attained. Scarcity implies costs, which in a monetary system (developed much later in the logical elaboration) are reflected in prices, and so forth. For a consciously praxeological development of economic theory, see Ludwig von Mises, *Human Action* (New Haven: Yale University Press, 1949); and Murray N. Rothbard, *Man, Economy, and* State, 2nd ed. (Kansas City: Sheed Andrews and McMeel, 1970).

³ "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 by mutual control." Alfred Schütz, *Collected Papers*, vol. 2, *Studies in Social Theory*, A. Brodersen, ed. (The Hague: Nijhoff, 1964). p. 4.

is empirical, "provided that we do not restrict this term to sensory perceptions of objects and events in the outer world but include the experimental form, by which common-sense thinking in everyday life understands human actions and their outcome in terms of their underlying motives and goals."⁴

The nature of the evidence on which the praxeological axiom rests is, moreover, fundamentally similar to that accepted by the self-proclaimed empiricists. To them, the laboratory experiment is evidence because the sensory experience involved in it is available to each observer; the experience becomes "evident" to all. Logical proof is in this sense similar; for the knowledge that B follows from A becomes evident to all who care to follow the demonstration. In the same way, the fact of human action and of purposive choice also becomes evident to each person who bothers to contemplate it; it is just as evident as the direct sense experience of the laboratory.

From this philosophical perspective, then, all disciplines dealing with human beings—from philosophy to history, psychology, and the social sciences-must take as their starting point the fact that humans engage in motivated, purposive action and are thus different from the unmotivated atoms and stones that are the objects of the physical sciences. But where, then, does praxeology or economics differ from the other disciplines that treat human beings? The difference is that, to the praxeologist, economic *theory* (as distinct from applied economics, which will be treated below) deals, not with the content of human valuations, motivations, and choices, but with the formal fact that people engage in such motivated action. Other disciplines focus on the content of these values and actions. Thus, psychology asks how and why people adopt values and make choices; ethics deals with the problem of what values and choices they should adopt; technology explains how they should act in order to arrive at chosen ends; and history tries to explain the content of human motives and choices through recorded time. Of these disciplines, history is perhaps the most purely *verstehende*, for the historian is constantly attempting to describe, understand, and explain the motivations and choices of individual actors. Economic theory, on the other hand, is the least verstehende, for while it too begins with the axiom of purposive and intentional human action, the remainder of its elaborated structure consists of the deduced logical—and therefore true—implications of that primordial fact.

An example of the formal structure of economic theory is the well-known economic law, built up from the axiom of the existence of motivated human action, that if the demand for any product increases, given the existing supply, the price of that product will rise. This law holds regardless of the ethical or aesthetic status of the product, just as the law of gravity applies to objects regardless of their particular identity. The economic theorist is not interested in the content of what is being demanded, or in its ethical meaning—it may be guns or butter or even textbooks on philosophy. It is this universal, formal nature of economic law that has earned it among

⁴ Alfred Schütz, *Collected Papers*, vol. 1, *The Problem of Social Reality*, Maurice Natanson, ed. (The Hague: Nijhoff, 1962), p. 65; see also pp. 1-66, as well as Peter Winch, "Philosophical Bearings," in *Philosophy of the Social Sciences: A Reader*, Maurice Natanson, ed. (New York: Random House, 1963). On the importance of the commonsense, prescientific presuppositions of science from a slightly different philosophical perspective, see Van Melsen, *Philosophy of Nature*, pp. 6-29.

laymen, the reputation of being cold, heartless, and excessively logical.

Having discussed the nature of the axiom on which the praxeological view of economics is grounded, we may now turn to examine the deductive process itself, the way in which the structure of economic laws is developed, the nature of those laws, and, finally, the ways in which the praxeological economist applies these economic laws to the social world.

One of the basic tools for the deduction of the logical implications of the axiom of human action is the use of the *Gedankenexperiment*, or "mental experiment." The *Gedankenexperiment* is the economic theorist's substitute for the natural scientist's controlled laboratory experiment. Since the relevant variables of the social world cannot actually be held constant, the economist holds them constant in his imagination. Using the tool of verbal logic, he mentally investigates the causal influence of one variable on another. The economist finds, for example, that the price of a product is determined by two variables, the demand for it and its supply at any given time. He then mentally holds the supply constant, and finds that an increase in demand—brought about by higher rankings of the product on the value scales of the public—will bring about an increase in price. Similarly, he finds, again using verbal deductive logic, that if these value scales, and therefore public demand, are mentally held constant, and the supply of the product increases, its price will fall. In short, economics arrives at *ceteris paribus* laws: *Given* the supply, the price will change in the same direction as demand; *given* the demand, price will change in the opposite direction from supply.

One important aspect of these economic laws must be pointed out: they are necessarily *qualitative*. The fact that human beings have goals and preferences, that they make choices to attain their goals, that all action must take place over time, all these are qualitative axioms. And since only the qualitative enters into the logical process from the real world, only the qualitative can emerge. One can only say, for example, that an increase in demand, given the supply, will raise the price; one *cannot* say that a 20 percent increase in demand will bring about a 25 percent increase in price. The praxeologist must reject all attempts, no matter how fashionable, to erect a theory consisting of alleged quantitative laws. In an age that tries desperately to imitate prestigious physics, with its emphasis on mathematics and its quantitative laws, many social scientists, including many economists, have ignored the praxeological method because of this very insistence on the qualitative bounds of the discipline.

There is a basic reason for the quantitative—qualitative dichotomy between the physical and the social sciences. The objects of physical science do not act; they do not choose, change their minds, and choose again. Their natures may therefore be investigated, and the investigations replicated indefinitely, with quantitative precision. But people do change their minds, and their actions, all the time; their behavior cannot be predicted with exact and therefore scientific precision. Among the many factors helping to determine the demand and the supply of butter, for example, are the valuations placed by each consumer on butter relative to all other products available, the availability of substitutes, the climate in the butter-producing areas, technological methods of producing buffer (and margarine), the price of cattle feed, the supply of money in the country, the existence of prosperity or recession in the economy, and the public's expectations of

the trend of general prices. Every one of these factors is subject to continuing and unpredictable change. Even if one mammoth equation could be discovered to "explain" all recorded prices of butter for the past 50 years, there is no guarantee, and not even the likelihood, that the equation would have anything to do with *next* month's price.

In fact, if empirical success is the test, it is surely noteworthy that all the determined efforts of quantitative economists, econometricians, and social scientists have not been able to find one single quantitative constant in human affairs. The mathematical laws in the physical sciences contain numerous constants; but the imitative method in the social sciences is proven vain by the fact that not a single constant has ever emerged. Moreover, despite the use of sophisticated econometric models and high-speed computers, the success rate of forecasting economic quantities has been dismal, even for the simplest of aggregates such as Gross National Product, let alone for more difficult quantities; the record of GNP forecasting by economists has been poorer than a simple layman's extrapolation of recent trends.⁵ In fact, the federal government has had notably poor success even in forecasting the one variable under its own absolute control—its *own* expenditure in the near future. Perhaps we will revise our critical opinion of econometric science if and when the econometricians prove themselves able to make flawless predictions of activity on the stock market—and make themselves vast fortunes in the process.

Except for the fact that they are not quantitative, however, the predictions of the praxeologist are precisely the same kind as those of the natural scientist. The latter, after all, is not a prophet or soothsayer; his successful prediction is not what *will* happen in the world, but that *would* happen if such and such should occur. The scientist can predict successfully that if hydrogen and oxygen are combined in proportions of two to one, the result will be water; but he has no way of predicting scientifically how many scientists in how many laboratories will perform this process at any given period in the future. In the same way, the praxeologist can say, with absolute certainty, that if the demand for butter increases, and the supply remains the same, the price of butter will rise; but he does not know whether the public's demand for butter will in fact rise or fall, let alone by how much it will change. Like the physical scientist, the economist is not a prophet, and it is unfortunate that the econometricians and quantitative economists should have so eagerly assumed this social role.⁶

The English economist John Jewkes suggests the properly limited role for economic forecasting, as well as for applied economics generally:

⁵ See Victor Zamowitz, *An Appraisal of Short-Tenn Economic Forecasts* (New York: National Bureau of Economic Research, 1967). For a record of the problems of forecasting see "Bad Year for Econometrics," *Business Week* (December20, 1969): 36-40.

⁶ The English economist Peter T. Bauer properly distinguishes between scientific prediction and forecasting: "Prediction, in the sense of the assessment of the results of specified occurrences or conditions, must be distinguished from the forecasting of future events. Even if the prediction that the producers of a particular crop respond to a higher price by producing more is correct, this prediction does not enable us to forecast accurately next year's output (still less the harvest in the more distant future), which in the event will be affected by many factors besides changes in price." Peter T. Bauer, *Economic Analysis and Policy in Underdeveloped Countries* (Durham, N.C.: Duke University Press, *1957*), pp. 10-11; see also pp. 28-32.

I submit that economists cannot, without stepping outside their discipline, predict in the sense of telling us what will happen in the future....

In the most general sense, there is, indeed, no such thing as the *economic* future. There is only *the* future in which economic factors are bound together, inextricably and quite without hope of separate identification, with the whole universe of forces determining the course of events. . . Anyone who proposes to look at it [the future] before the event must take as his province the whole of experience and knowledge. He must cease to behave as a specialist, which means that he must cease to behave as an economist.

The economist's claim to predictive authority must be false in that it leads to a palpable absurdity. If the economic future can, indeed, be described, why not also the scientific future, the political future, the social future, the future in each and every sense? Why should we not be able to plumb all the mysteries of future time?⁷

What, then, is the praxeological view of the function of applied economics? The praxeologist contrasts, on the one hand, the body of qualitative, nomothetic laws developed by economic theory, and on the other, a myriad of unique, complex historical facts of both the past and the future. It is ironic that while the praxeologist is generally denounced by the positivist as an "extreme apriorist," he actually has a far more empirical attitude toward the facts of history. For the positivist is always attempting to compress complex historical facts into artificial molds, regarding them as homogeneous and therefore manipulable and predictable by mechanical, statistical, and quantitative operations in the attempt to find leads, lags, correlations, econometric relations, and "laws of history." This Procrustean distortion is undertaken in the belief that the events of human history can be treated in the same mechanistic way as the movements of atoms or molecules-simple, unmotivated, homogeneous elements. The positivist thereby ignores the fact that while atoms and stones have no history, man, by virtue of his acts of conscious choice, creates a history. The praxeologist, in contrast, holds that each historical event is the highly complex result of a large number of causal forces, and, further, that it is unique and cannot be considered homogeneous to any other event. Obviously, there are similarities between events, but there is no perfect homogeneity and therefore no room for historical "laws" similar to the exact laws of physical science.

While accepting that there are no mechanical laws of history, however, the praxeologist holds that he can and must use his knowledge of other nomothetic sciences as part of his *verstehende* attempt to understand and explain the idiographic events of history. Let us suppose that the economic historian, or the student of applied economics, is attempting to explain a rapid rise in the price of wheat in a certain country during a certain period. He may bring many nomothetic sciences to bear: agronomy and entomology may help reveal that an insect mentioned in the

⁷ John Jewkes, "The Economist and Economic Change," in *Economics and Public Policy* (Washington, D.C.: Brookings Institution, 1955), pp. 82-83.

historical record was responsible for a drastic fall in wheat production; meteorological records may show that rainfall was insufficient; he may discover that during the periods people's taste for bread increased, perhaps imitating a similar preference by the king; he may discover that the money supply was increasing, and learn from economic theory that an increase in the supply of money tends to raise prices in general, including therefore the price of wheat. And, finally, economic theory states that the price of wheat moves inversely with the supply and directly with the demand. The economic historian combines all of his scientific knowledge with his understanding of motives and choices to attempt to explain the complex historical phenomenon of the price of bread.

A similar procedure is followed in the study of such infinitely more complex historical problems as the causes of the French Revolution, where, again, the historian must blend his knowledge of causal theories in economics, military strategy, psychology, technology, and so on, with his understanding of the motives and choices of individual actors. While historians may well agree on the enumeration of all the relevant causal factors in the problem, they will differ on the weight to be attached to each factor. The evaluation of the relative importance of historical factors is an art, not a science, a matter of personal judgment, experience, and *verstehende* insight which will differ from one historian to another. In this sense, economic historians, like economists (and indeed other historians), can come to qualitative but not quantitative agreement.

For the praxeologist, forecasting is a task very similar to the work of the historian. The latter attempts to "predict" the events of the past by explaining their antecedent causes; similarly, the forecaster attempts to predict the events of the future on the basis of present and past events already known. He uses all his nomothetic knowledge, economic, political, military, psychological, and technological; but at best his work is an art rather than an exact science. Thus, some forecasters will inevitably be better than others, and the superior forecasters will make the more successful entrepreneurs, speculators, generals, and bettors on elections or football games.

The economic forecaster, as Professor Jewkes pointed out, is only looking at part of a tangled and complex social whole. To return to our original example, when he attempts to forecast the price of butter he must take into consideration the qualitative economic law that price depends directly on demand and inversely on supply; it is then up to him, using knowledge and insight into general economic conditions as well as the specific economic, technological, political, and climatological conditions of the butter market, as well as the values people are likely to place on butter, to try to forecast the movements of the supply and demand of butter, and therefore its price, as accurately as possible. At best, he will have nothing like a perfect score, for he will run aground on the fact of free will altering values and choices, and the consequent impossibility of making exact predictions of the future.⁸

⁸ We may mention here the well-known refutation of the notion of predicting the future by Karl Popper, namely, that in order to predict the future, we would have to predict what knowledge we will possess in the future. But we cannot do so, for if we knew what our future knowledge would be, we would *already* be in possession of that knowledge at the present time. See Karl R. Popper, *The Poverty of Historicism* (New York: Harper and Row, 1964), pp. vi-viii.

The Praxeological Tradition

The praxeological tradition has a long history in economic thought. We will indicate briefly the outstanding figures in the development of that tradition, especially since these economic methodologists and their views have been recently neglected by economists steeped in the positivist world view.

One of the first self-conscious methodologists in the history of economics was the earlynineteenth-century French economist Jean-Baptiste Say. In the lengthy introduction to his *magnum opus*, *A Treatise on Political Economy*, Say laments that people

are too apt to suppose that absolute truth is confined to the mathematics and to the results of careful observation and experiment in the physical sciences; imagining that the moral and political sciences contain no invariable facts of indisputable truth, and therefore cannot be considered as genuine sciences, but merely hypothetical systems.

Say could easily have been referring to the positivists of our day, whose methodology prevents them from recognizing that absolute truths can be arrived at in the social sciences, when grounded, as they are in praxeology, on broadly evident axioms. Say insists that the "general facts" underlying what he calls the "moral sciences" are undisputed and grounded on universal observation.

Hence the advantage enjoyed by every one 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... That can be admitted by every reflecting mind.

These general facts, according to Say, are "principles," and the science of

political economy, in the same manner as the exact sciences, is composed of a few fundamental principles, and of a great number of corollaries or conclusions drawn from these principles. It is essential, therefore, for the advancement of this science that these principles should be strictly deduced from observation; the number of conclusions to be drawn from them may afterwards be either multiplied or diminished at the discretion of the inquirer, according to the object he proposes.⁹

Here Say has set forth another important point of the praxeological method: that the paths in which the economist works out the implications of the axioms and the elaborated system which results will be decided by his own interests and by the kind of historical facts he is examining.

⁹ Jean-Baptiste Say, *A Treatise on Political Economy*. C.C. Biddle, trans. (New York: Augustus Kelley, 1964), pp. xxiv, xxv, xlv, xxvi.

Thus, it is theoretically possible to deduce the theory of money even in an economy of primitive barter, where no money exists; but it is doubtful whether a primitive praxeologist would have bothered to do so.

Interestingly enough, Say at that early date saw the rise of the statistical and mathematical methods, and rebutted them from what can be described as a praxeological point of view. The difference between political economy and statistics is precisely the difference between political economy (or economic theory) and history. The former is based with certainty on universally observed and acknowledged general principles; therefore, "a perfect knowledge of the principles of political economy may be obtained, inasmuch as all the general facts which compose this science may be discovered." Upon these "undeniable general facts," "rigorous deductions" are built, and to that extent political economy "rests upon an immovable foundation." Statistics, on the other hand, only records the ever changing pattern of particular facts, statistics "like history, being a recital of facts, more or less uncertain and necessarily incomplete." Furthermore, Say anticipated the praxeologist's view of historical and statistical data as themselves complex facts needing to be explained. "The study of statistics may gratify curiosity, but it can never be productive of advantage when it does not indicate the origin and consequences of the facts it has collected; and by indicating their origin and consequences, it at once becomes the science of political economy." Elsewhere in the essay, Say scoffs at the gullibility of the public toward statistics: "Sometimes, moreover, a display of figures and calculations imposes upon them; as if numerical calculations alone could prove anything, and as if any rule could be laid down, from which an inference could be drawn without the aid of sound reasoning."¹⁰

Say goes on to question sharply the value of mathematics in the construction of economic theory, once again referring back to the structure of the basic axioms, or general principles, for his argument. For political economy is concerned with men's values, and these values being "subject to the influence of the faculties, the wants and the desires of mankind, they are not susceptible of any rigorous appreciation, and cannot therefore furnish any data for absolute calculations. In political science, all that is essential is a knowledge of the connection between causes and their consequences." Delving deeper into the then only embryonic use of the mathematical method of economics, Say points out that the laws of economics are strictly qualitative: "We may, for example, know that for any given year the price of wine will infallibly depend upon the quantity to be sold, compared with the extent of the demand." But "if we are desirous of submitting these two data to mathematical calculation," then it becomes impossible to arrive at precise quantitative forecasts of the innumerable, ever changing forces at work: the climate, the quantity of the harvest, the quality of the product, the stock of wine held over from the previous vintage, the amount of capital, the possibilities of export, the supply of substitute beverages, and the changeable tastes and values of the consumers."¹¹

Say offers a highly perceptive insight into the nature and probable consequences of the application of mathematics to economics. He argues that the mathematical method, with its

¹⁰ lbid., pp. xix-xx, li.

¹¹ lbid., pp. xxvi, xxvi n.

seeming exactitude, can only gravely distort the analysis of qualitative human action by stretching and oversimplifying the legitimate insights of economic principles:

Such persons as have pretended to do it, 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; so that no other inference can be deduced from such calculations than from formula arbitrarily assumed.¹²

In contrast to the physical sciences where the explanatory laws or general principles are always in the realm of the hypothetical, in praxeology it is fatal to introduce oversimplification and falsehood into the premises, for then the conclusions deduced from them will be irredeemably faulty as well.¹³

If mathematics and statistics do not provide the proper method for the political economist, what method is appropriate? The same course that he would pursue in his daily life. "He will examine the immediate elements of the proposed problem, and after having ascertained them with certainty... will approximately value their mutual influences with the intuitive quickness of an enlightened understanding."¹⁴ In short, the laws of the political economist are certain, but their blending and application to any given historical event is accomplished, not by pseudo-quantitative or mathematical methods, which distort and oversimplify, but only by the use of *Verstehen*, "the intuitive quickness of an enlightened understanding."

The first economists to devote their attention specifically to methodology were three leading economists of mid-nineteenth century Britain: John E. Cairnes, Nassau W. Senior, and John Stuart Mill. Cairnes and Senior, at least, may be considered as proto-praxeologists. Cairnes, after agreeing with Mill that there can be no controlled experiments in the social sciences, adds that they have, however, a crucial advantage over the physical sciences. For, in the latter,

mankind have no direct knowledge of ultimate physical principles. The law of gravitation and the laws of motion are among the best established and most certain of such principles; but what is the evidence on which they rest? We do not find them in our

¹² lbid.,p. xxvi n.

¹³ One of the most pernicious aspects of the current dominance of positivist methodology in economics has been precisely this injection of false premises into economic theory. The leading extreme positivist in economics, Milton Friedman, goes so far as to extol the use of admittedly false premises in the theory, since, according to Friedman, the *only* test of a theory is whether it predicts successfully. See Milton Friedman "The Methodology of Positive Economics," in *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), pp. 3—46. Of the numerous critiques and discussions of the Friedman thesis, see in particular Eugene Rotwein, "On The Methodology of Positive Economics," *Quarterly Journal of Economics* 73 (November *1959*): 554—75; Paul A. Samuelson, "Discussion," *American Economic Review: Papers and Proceedings* 53 (May 1963): 231—36; Jack Maltz, "Friedman and Machlup on the Significance of Testing Economic Assumptions," *Journal of Political Economy* 73

⁽February 1965): 37-60.

¹⁴ Say, *Treatise on Political Economy*, p. xxvi n.

consciousness, by reflecting on what passes in our minds; nor can they be made apparent to our sense the proof of all such laws ultimately resolving itself into this, that, assuming them to exist, they account for the phenomena.

In contrast, however,

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. If any one doubt this, he has only to consider what the ultimate principles governing economic phenomena are . . . : certain mental feelings and certain animal propensities in human beings; [and] the physical conditions under which production takes place.... 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. Every one who embarks in any industrial pursuit is conscious of the motives which actuate him in doing so. He knows that he does so from a desire, for whatever purpose, to possess himself of wealth; he knows that, according to his lights, he will proceed toward his end in the shortest way open to him.¹⁵

Cairnes goes on to point out that the economist uses the mental experiment as a replacement for the laboratory experiment of the physical scientist.

Cairnes demonstrates that deduced economic laws are "tendency," or "if-then," laws, and, moreover, that they are necessarily qualitative, and cannot admit of mathematical or quantitative expression. Thus, he too makes the point that it is impossible to determine precisely how much the price of wheat will rise in response to a drop in supply; for one thing, "it is evident that the disposition of people to sacrifice one kind of gratification to another—to sacrifice vanity to comfort, or decency to hunger—is not susceptible of precise measurement."¹⁶ In the preface to his second edition, two decades later in 1875, Cairnes reiterated his opposition to the growing application of the mathematical method to economics, which, in contrast to its use in the physical sciences, cannot produce new truths; "and unless it can be shown either that mental feelings admit of being expressed in precise quantitative forms, or, on the other hand, that economic phenomena do not depend upon mental feelings, I am unable to see how this conclusion can be avoided."¹⁷

¹⁵ J.E. Cairnes, *The Character and Logical Method of Political Economy*, 2nd ed. (London: Macmillan, [1857] 1875, repr. 1888), pp. 83, 87-88 (italics in the original). The emphasis of Cairnes and other classical economists on wealth as the goal of economic action has been modified by later praxeological economists to include all manner of psychological satisfactions, of which those stemming from material wealth are only a subset. A discussion similar to that of Cairnes can be found in FA. Hayek, "The Nature and History of the Problem," in Hayek, ed., *Collectivist Economic Planning* (London: Routledge, 1935), pp. 10-11.

¹⁶ Cairnes, Character and Logical Method, p. 127.

¹⁷ Ibid., p. v.

Cairnes's older contemporary, Nassau Senior, was the most important praxeologist of that era. Before Senior, classical economists such as John Stuart Mill had placed the fundamental premises of economics on the shaky ground of being hypotheses; the major hypothesis was that all men act to obtain the maximum of material wealth. Since this is clearly not always true, Mill had to concede that economics was only a hypothetical and approximate science. Senior broadened the fundamental premise to include immaterial wealth or satisfaction, a complete, apodictic, and universally true principle based on insight into the goal-seeking nature of human action.

In stating that every man desires to obtain additional wealth with as little sacrifice as possible, we must not be supposed to mean that everybody... wishes for an indefinite quantity of everything. What we mean to state is that no person feels his whole wants to be adequately supplied; that every person has some unsatisfied desires -which he believes that additional wealth would gratify. The nature and urgency of each individual's wants are as various as the differences in individual character.¹⁸

In contrast to the physical sciences, Senior pointed out, economics and the other "mental sciences" draw their premises from the universal facts of human consciousness:

The physical sciences, being only secondarily conversant with mind, that their premises almost exclusively from observation or hypothesis. Those which treat only of magnitude or number,... the pure sciences, draw them altogether from hypothesis.... They disregard almost entirely the phenomenon of consciousness....

On the other hand, the mental sciences and the mental arts thaw their premises principally from consciousness. The subjects with which they are chiefly conversant are the workings of the human mind.¹⁹

These latter 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, as included in his previous knowledge."²⁰

During the 1870s and 1880s, classical economics was supplanted by the neoclassical school. In this period the praxeological method was carried on and further developed by the Austrian school, founded by Carl Menger of the University of Vienna and continued by his two most eminent disciples, Eugen von Böhm-Bawerk and Friedrich von Wieser. It was on the basis of their work that Böhm-Bawerk's student Ludwig von Mises later founded praxeology as a selfconscious and articulated methodology.²¹ As it was outside the increasingly popular intellectual

¹⁸ Nassau William Senior, An Outline of the Science of Political Economy (New York: Augustus Kelley, [1836], n.d.), p. 27.

¹⁹ Marian Rowley, Nassau Senior and Classical Economics (New York: Augustus Kelley, 1949), p. 56.

²⁰ Ibid., p. 43. See also p. 64, where Rowley points out the similarity between Senior's methodological views and the praxeology of Ludwig von Mises. ²¹ The outstanding example is Mises, *Human Action*. See also his *Theory and History* (New Haven, Conn.: Yale

fashion of positivism and mathematics, however, the Austrian school has been greatly neglected in recent years and dismissed as an unsound approximation of the positivist-mathematical theory of the Lausanne school, founded by Leon Walras of Lausanne and continued by the Italian economist and sociologist Vilfredo Pareto.

A few followers or sympathetic observers, however, have carried on investigations into the methodology of the early Austrian school. Leland B. Yeager notes what we now see as the typically praxeological view of the unique advantage of economic theory over the physical sciences: "While the basic elements of theoretical interpretation in the natural sciences, such, he [Menger] says, as forces and atoms, cannot be observed directly, the elements of explanation in economics—human individuals and their strivings—are of a direct empirical nature." Furthermore, "The facts that economists induce from the behavior of themselves and other people serve as axioms from which a useful body of economic theory can be logically deduced, much as in geometry an impressive body of theorems can be deduced from a few axioms." In short, "Menger conceived of economic theory as a body of deductions from basic principles having a strong empirical foundation." Referring to the dominant positivist economists of our own day, Yeager adds perceptively,

Not sharing...Menger's understanding of how empirical content gets into so-called "armchair theory," many economists of our own day apparently regard theoretical and empirical work as two distinct fields. Manipulation of arbitrarily-assumed functional relationships is justified in the minds of such economists by the idea that empirical testing of theories against the real world comes afterward.²²

Other writers have discovered links between the Austrian method and various strands of the *philosophia perennis*. Thus, Emil Kauder finds a close relationship between this method and Aristotelian philosophy, which was still influential in Austria at the end of the nineteenth century. Kauder points out that all the Austrians were "social ontologists," and that as such they believed in a structure of reality "both as a logical starting point and as a criterion of validity." He notes Mises's statement that economic laws are "ontological facts," and he characterizes as both ontological and Aristotelian the concern of Menger and his followers to uncover the "essences" of phenomena, rather than to treat superficial and complex economic quantities. Kauder also points out that for Menger and the Austrians, economic theory deals with types and typical relations, which provide knowledge that transcends the immediate, concrete case and is valid for all times and places. Concrete historical cases are thus the Aristotelian "matter" which contains potentialities, while the laws and types are the Aristotelian "forms" which actualize the

University Press, 1957); The Ultimate Foundation of Economic Science (Kansas City: Sheed Andrews and McMeel, 1978); and Epistemological Problems of Economics (Princeton, N.J.: Van Nostrand, 1960). See also LA. Hayek, The Counter-Revolution of Science (Glencoe, Ill.: Free Press, 1955); Lionel Robbins, An Essay on the Nature and Sign *jflcance of Economic Science*, 2nd ed. (London: Macmillan, 1949); and Israel M. Kirzner, The Economic Point of View, 2nd ed. (Kansas City: Sheed Andrews and McMeel, 1976).

²² Leland B. Yeager, "The Methodology of Henry George and Carl Menger," *American Journal of Economics and Sociology* 13 (April 1954): 235, 238.

potential. For the Austrians, and especially for Böhm-Bawerk, furthermore, causality and teleology were identical. In contrast to the functional-mutual determination approach of Wairas and of contemporary economists, the Austrians traced the causes of economic phenomena back to the wants and choices of consumers. Wieser especially stressed the grounding of economic theory on the inner experience of the mind.²³

Furthermore, Ludwig M. Lachmann, in contrasting the Austrian and Lausanne schools, shows that the Austrians were endeavoring to construct a "*verstehende* social science," the same ideal that Max Weber was later to uphold. Lachmann points out that the older Ricardian economists adopted the "objective" method of the natural sciences insofar as their major focus was upon the quantitative problem of income distribution. In their analysis, factors of production (land, labor, and capital goods) react mechanically to external economic changes. But, in contrast, "Austrian theory is 'subjective' also in the sense that individuals . . . perform acts and lend the imprint of their individuality to the events on the market." As for the contrast between Austria and Lausanne

it is the contrast between those [Lausanne] who confine themselves to determining the appropriate magnitudes of the elements of a system (the conditions of equilibrium) and those [the Austrians] who try to explain events in terms of the mental acts of the individuals who fashion them. Most Austrian thinkers were dimly aware of this contrast, but before Hans Mayer, Mises and Hayek were unable to express it concisely. The validity of the Lausanne model is limited to a stationary world. The background of the Austrian theory, by contrast, is a world of continuous change in which plans have to be conceived and continually revised.²⁴

We may conclude this sketch of the history of the praxeological tradition in economics by treating an important but much neglected debate on economic methodology which occurred at the turn of the twentieth century between Pareto and the philosopher Benedetto Croce. Croce, from his own highly developed praxeological position, opened the debate by chiding Pareto for having written that economic theory was a species of mechanics. Vigorously rejecting this view, Croce points out that a fact in mechanics is a mere fact, which requires no positive or negative comment; whereas words of approval or disapproval can appropriately be applied to an *economic* fact. The reason is that the true data of economics are not "physical things and objects, but actions. The physical object is merely the brute matter of an economic act."²⁵ Economic data,

²³ Emi1 Kauder, "Intellectual and Political Roots of the Older Austrian School," *Zeitschrift fur Nationalokonomie* 17, *no.4*(1958): 411-25.

²⁴ English abstract of Ludwig M. Lachmann, "Die geistesgeschichtliche Bedeutung der osterreichischen Schule in der Volkwirtschaftslehre," *Zeitschrift für Nationalokonomie* 26. nos. 1-3 (1966): 152-67, in *Journal of Economic Abstracts* 5 (September 1967): 553—54. See also Lachmann, "Methodological Individualism and the Market Economy," in *Roads to Freedom: Essays in Honor of Friedrich A. von Hayek*, B. Streissler, ed. (New York: Augustus M. Kelley, 1969), pp. 89—103; and Israel M. Kirzner, "Methodological Individualism, Market Equilibrium, and Market Process," *Il Politico* 32, no. 4 (December 1967): 787-99.

²⁵ Benedetto Croce, "On the Economic Principle: I" (1990), International Economic Papers, no. 3 (1953): 173, 195.

then, are acts of man, and these acts are the results of conscious choice.

In his lengthy reply, Pareto reiterates the similarity between economics and mechanics, and, like the positivists of today, defends unrealistic mechanistic assumptions as simple abstractions from reality, in the supposed manner of the natural sciences. Professing, in a typical positivist gambit, not to "understand" the concept of value, Pareto writes: "I see ... that you employ the term value I no longer use it as I do not know what it would convey to other people." The concept of value is vague and complex and not subject to measurement; therefore, "the equations of pure economics establish relations between quantities of things, hence objective relations, and not relations between more or less precise concepts of our minds."²⁶ Criticizing Croce's evident concentration on the essences of economic action, as exemplified in his insistence that "one ought to study not the things which are the result of actions but the actions themselves," Pareto complains that this method is an ancient scientific fallacy. "The ancients conjured up cosmogonies instead of studying astronomy, wondered about the principles of the elements water and fire ..., instead of studying chemistry. Ancient science wanted to proceed from the origin to the facts. Modern science starts from the facts and proceeds towards the origin at an extremely slow pace." Typically, Pareto sets forth the objectivist, positivist position by arguing from the analogy of the method of the natural sciences, thus completely begging the question of whether the methodologies of the natural and the social sciences should or should not be similar. Thus he concludes that "science proceeds by replacing the relationships between human concepts (which relationships are the first to occur to us) by relationships between things."²⁷

Croce replies by criticizing Pareto's restriction of economics to measurable quantities as arbitrary; for what of those economic situations where the objects of action or exchange are not measurable? Croce suggests that it is Pareto who is really being metaphysical, while Croce is the true empiricist. For "your implied metaphysical postulate is . . . this: that the facts of man's activity are of the same nature as physical facts; that in the one case as in the other we can only observe regularity and deduce consequences therefrom, without ever penetrating into the inner nature of the facts. . . . How would you defend this postulate of yours except by a metaphysical monism?" In contrast, writes Croce, "I hold to experience. This testifies to me of the fundamental distinction between external and internal, between physical and mental, between mechanics and teleology, between passivity and activity." As for value, it is really a simple term wrapped up in human activity: "Value is observed immediately in ourselves, in our consciousness."²⁸

On Croce's views on economics, see Giorgio Tagliacozzo, "Croce and the Nature of Economic Science," *Quarterly Journal of Economics* 59 (May 1945): 307-29. On the Croce-Pareto debate, see Kirzner, *Economic Point of View*, pp. 155-57. It is of interest that the Walrasian economist Joseph Schumpeter, in his only untranslated work, *Das Wesen und der Hauptinhalt der theoretischen Nationalokonomie* (Leipzig: Duncker and Humblot, 1908), specifically declared that the economist must only treat changes in "economic quantities" as if they were caused automatically, without reference to the human beings who may have been involved in such changes. In that way, causality and purpose would be replaced in economic theory by functional, mathematical relationships. See Kirzner, *Economic Point of View*, pp. 68—70.

²⁶ Vilfredo Pareto, "On the Economic Phenomenon" (1900), *International Economic Papers*, no. 3(1953): 187.

²⁷ Ibid., pp. 190, 196.

²⁸ Croce, "On the Economic Principle II" (1901), International Economic Papers, no.3 (1953): 198-99.

In his rejoinder, Pareto begins with a typical example of metaphysical obtuseness: He does *not* believe that "the facts of man's activity are of the same nature as physical facts" because he doesn't know what "nature" may be. He goes on to reiterate various examples from physical science to demonstrate the proper methodology for all disciplines. He wishes to follow the "masters of positive science" rather than mere philosophers. Pareto concludes with a concise summation of the differences between the two men and the two methodologies:

We experimentalists . . . accept hypotheses not for any intrinsic value they may have but only in so far as they yield deductions which are in harmony with the facts. You, considering the nature of things independently from the rest, establish a certain proposition A, and from it come down to the concrete facts B. We may accept proposition A, but only as a hypothesis, therefore making not the slightest attempt to prove it.. . Then we see what can be deduced from it. If those deductions agree with the facts we accept the hypothesis, for the time being of course, because we hold nothing as final or absolute.²⁹

Methodological Individualism

Only an individual has a mind; only an individual can feel, see, sense, and perceive; only an individual can adopt values or make choices; only an individual can *act*. This primordial principle of "methodological individualism," central to Max Weber's social thought, must underlie praxeology as well as the other sciences of human action. It implies that such collective concepts as groups, nations, and states do not actually exist or act; they are only metaphorical constructs for describing the similar or concerted actions of individuals. There are, in short, no "governments" as such; there are only individuals acting in concert in a "governmental" manner. Max Weber puts it clearly:

These collectivities must be treated as solely the resultants and modes of organization of the particular acts of individual persons, since these alone can be treated as agents in a course of subjectively understandable action... For sociological purposes... there is no such thing as a collective personality which "acts." When reference is made in a sociological context to... collectivities, what is meant is ... only a certain kind of development of actual or possible social actions of the individual persons.³⁰

Ludwig von Mises points out that what differentiates purely individual action from that of individuals acting as members of a collective is the different *meaning* attached by the people involved.

²⁹ Pareto, "On the Economic Principle" (1901), International Economic Papers, no. 3 (1953): 206.

³⁰ Max Weber, *The Theory of Social and Economic Organization* (Glencoe, Ill.: Free Press, 1957), quoted in Alfred Schlitz, *The Phenomenology of the Social World* (Evanston, Ill.: Northwestern University Press, 1967), p. 199. For an application of methodological individualism to foreign policy, see Parker T. Moon, *Imperialism and World Politics* (New York Macmillan, 1930), p. 58. For a more general political application, see Frank Chodorov, "Society Are People," in *The Rise and Fall of Society* (New York: Devin-Adair, *1959*), pp. 29-37.

It is the meaning which the acting individuals and all those who are touched by their action attribute to an action, that determines its character. It is the meaning that marks one action as the action of the state or of the municipality. The hangman, not the state, executes a criminal. It is the meaning of those concerned that discerns in the hangman's action an action of the state. A group of armed men occupies a place. It is the meaning of those concerned which imputes this occupation not to the officers and soldiers on the spot, but to their nation.³¹

In his important methodological work, Mises's disciple F.A. Hayek has demonstrated that the fallacy of treating collective constructs as directly perceived "social wholes" ("capitalism," "the nation," "the class") about which laws can be discovered stems from the objectivist—behaviorist insistence on treating men from the outside, as if they were stones, rather than attempting to understand their subjectively determined actions.

It [the objectivist view] treats social phenomena not as something of which the human mind is a part and the principles of whose organization we can construct from the familiar parts, but as if they were objects directly perceived by us as wholes....

There is the rather vague idea that since "social phenomena" are to be the object of study, the obvious procedure is to start from the direct observation of these "social phenomena," where the existence in popular usage of such terms as "society" or "economy" is naively taken as evidence that there must be definite "objects" corresponding to them.³²

Hayek adds that emphasis on the meaning of the individual act brings out that, "what of social complexes is directly known to us are only the parts and that the whole is never directly perceived but always reconstructed by an effort of our imagination."³³

Alfred Schütz, the outstanding developer of the phenomenological method in the social sciences, has reminded us of the importance of going back "to the 'forgotten man' of the social sciences, to the actor in the social world whose doing and feeling lies at the bottom of the whole system. We, then, try to understand him in that doing and feeling and the state of mind which induced him to adopt specific attitudes towards his social environment." Schütz adds that "for a theory of action the subjective point of view must be retained in its fullest strength, in default of which such a theory loses its basic foundations, namely its reference to the social world of everyday life and experience." Lacking such a foundation, social science is likely to replace the "world of social reality" by a fictional nonexisting world constructed by the scientific observer. Or, as Schütz puts it succinctly: "I cannot understand a social thing without reducing it to human activity which has created it, and beyond it, without referring this human activity to the motives

³¹ Mises, *Human Action*, p.42.

³² Hayek, Counter-Revolution of Science, pp. 53-54.

³³ Ibid., p. 214.

out of which it springs."³⁴

Arnold W. Green has recently demonstrated how the use of invalid collective concepts has damaged the discipline of sociology. He notes the increasing use of "society" as an entity which thinks, feels, and acts, and, in recent years, has functioned as the perpetrator of all social ifis. "Society," for example, and not the criminal, is often held to be responsible for all crime. In many quarters "society" is considered almost demonic, a "reified villain" which "may be attacked at will, blamed at random, derided and mocked with self-righteous fury, [and] may even be overturned by fiat or utopian yearning—and somehow, in some way, buses will still run on time." Green adds that "if on the other hand, society is viewed as people whose insecure social relationships are preserved only by the fealty paid their common store of moral rules, then the area of free choice available in which with impunity to demand, undermine, and wreck, is sharply restricted." Moreover, if we realize that "society" does not itself exist, but is made up only of individual people, then to say that only those members of society who do not commit crime can be held responsible for crime. Nonsense this obvious can be circumvented only by conjuring up society as devil, as evil being apart from people and what they do."³⁵

Economics has been rife with fallacies that arise when collective social metaphors are treated as if they were existent objects. Thus, during the era of the gold standard there was occasionally great alarm that "England" or "France" was in mortal danger because "it" was losing gold. What actually happened was that Englishmen and Frenchmen were voluntarily shipping gold overseas and thus threatening the people who ran the banks of those countries with the necessity of meeting obligations to pay in gold which they could not possibly fulfill. But the use of the collective metaphor converted a grave problem of banking into a vague national crisis for which every citizen was somehow responsible.

Similarly, during the 1930s and 1940s many economists proclaimed that in contrast to debts owed overseas, the size of the domestic public debt was unimportant because "we only owe it to ourselves." The implication was that the collective national person owed "himself" money from one pocket to another. This explanation obscured the fact that it makes a substantial difference for every person whether he is a member of the "we" or the "ourselves."

Sometimes the collective concept is treated unabashedly as a biological organism. Thus, the popular concept of economic growth implies that every economy is somehow destined, in the manner of a living organism, to "grow" in some predetermined manner. The use of such analogical terms is an attempt to overlook or even negate individual will and consciousness in social and economic affairs. As Edith Penrose has written in a critique of the use of the "growth" concept in the study of business firms:

³⁴ Schütz, Collected Papers, 2., pp. 7,8, 10.

³⁵ Arnold W. Green, "The Reified Villain," *Social Research 35* (Winter 1968): 656, 664. On the concept of "society," see also Mises, *Theory and History*, pp. 250 ff.

Where explicit biological analogies crop up in economics they are drawn exclusively from that aspect of biology which deals with the unmotivated behavior of organisms... have no reason whatever for thinking that the growth pattern of a biological organism is willed by the organism itself. On the other hand, we have every reason for thinking that the growth of a firm is willed by those who make the decisions of the firm...and the proof of this lies in the fact that no one can describe the development of any given firm... except in terms of decisions taken by individual men.³⁶

There is no better summary of the nature of praxeology and the role of economic theory in relation to concrete historical events than in Alfred Schütz's discussion of the economic methodology of Ludwig von Mises:

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."³⁷

³⁶ Edith Tilton Penrose, "Biological Analogies in the Theory of the Firm," *American Economic Review* (December 1952): 808.

³⁷ Schütz, Phenomenology of the Social World, pp. 137, 245.