

The Methodology of the Austrian School Economists

by Lawrence White

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I. Introduction

Until recently the Austrian School of Economics was a topic studied almost solely by historians of economic thought interested in the development of marginal utility theory in the late nineteenth century. Not only has the life span of the school been longer than those few decades, however, but marginalism as such has never been its real focus. Today the tradition of Austrian economics, never completely dormant, is enjoying a resurgence. Austrian economists are engaged in theoretical and applied research on a wide array of topics. What unifies this school of thought—what might be called its theme—is the methodological outlook of its members: subjectivism. The subjective approach to economic phenomena builds economic analysis upon the insight that every individual chooses and acts purposively, i.e. in pursuit of his purposes and in accordance with his perception of his options for achieving them. This approach has been the hallmark of the Austrian School from its inception in the 1870s to the present day, though different members have defended their method in different ways. As a contemporary Austrian economist has put it, "The significance of the Austrian school in the history of ideas perhaps finds its most pregnant expression in the statement that here man as an actor stands at the center of economic events." [1]

The consistent attention to the subjectivist outlook and its implications distinguished the early Austrians from the Jevonian and Walrasian schools, who, of course, were also marginalist in their value theories. Erich Streissler remarks that "the Austrians always stressed, and stressed rightly, I think, that they were the school of subjective value, a school apart." [2] But subjectivism has meant much more than subjective value theory for the Austrians, and especially so for the most recent Austrians. It has marked their approach to every economic question. Subjectivism has been, in short, the distinctive Method of the Austrian School economists. If the Austrians continue to stand apart from mainstream neoclassical economics, the reason lies in their methodological orientation and the implications this has for their theoretical and applied work.

In tracing the development of Austrian economics, we shall concentrate on six authors who have been most notable for their use and defense of the subjectivist approach, and on the themes running through their theoretical and methodological writings. These six are: Carl Menger, the founder of the school; Friedrich von Wieser and Eugen von Böhm-Bawerk, who developed and publicized Menger's

ideas along somewhat separate lines; Ludwig von Mises, a student of Wieser and Böhm-Bawerk who made pathbreaking contributions to both theory and methodology; Friedrich A. Hayek, a student of Wieser and Mises whose well-known theoretical and interdisciplinary studies have earned him the Nobel Prize in economics; and Ludwig Lachmann, who studied with Hayek in the 1930s and has pursued subjectivist themes in the decades since. There have been many lesser-known authors in the Austrian tradition, and well known economists partially influenced by the Austrians [3] but these six may be considered the school's most important past and senior contributors. We shall conclude by noting the contributions of several economists who are actively elaborating and advancing the Austrian viewpoint today, particularly two students of Mises, Israel M. Kirzner and Murray N. Rothbard.

II. Carl Menger

The foundations of the Austrian School of Economics were laid, and the blueprint for its future development drawn, with the publication in 1871 of Menger's *Grundsätze der Volkswirtschaftslehre* (English translation, *Principles of Economics*). [4] In that book Menger offers a gold mine of original and fruitful ideas, as well as a distinctive vision of economics. Elaborating Menger's ideas and especially his distinctive vision has been the primary task of what, due to Menger's nationality, became known as the Austrian school. Hayek says of the school: "[I]ts fundamental ideas belong fully and wholly to Carl Menger." [5]

It is widely acknowledged that Menger's *Grundsätze* has played a major role in the course of the history of economic thought. Knut Wicksell in 1921 wrote that "no book since Ricardo's *Principles* has had such a great influence on the development of economics as Menger's *Grundsätze*." [6] The book had, however, little immediate impact. It was reviewed only in Germany, and there its reception was unenthusiastic. [7] Disenchantment with classical economic theory had turned German economists away from theory of any sort. Dominant in Germany was the Historical School under Gustav Schmoller, who saw little value in abstract deduction. The Historicists were concerned only with the practical questions of administration and with economic history.

Frustrated by the cold reception of the *Grundsätze*, and realizing that the German economists rejected not only his own theory but all theoretical economics, Menger (in Joseph A. Schumpeter's words) "took up the battle to establish the rightful place of theoretical analysis in social matters." [8] Instead of continuing his theoretical research (a planned second volume of the *Grundsätze* never appeared), Menger addressed himself to the vindication of such research. To this end he published in 1883 his second book, *Untersuchungen über die Methode der Socialwissenschaften und der politischen Ökonomie insbesondere* (literally, *Investigations into the Methods of Social Science and Political Economy in Particular*; English translation, *Problems of Economics and Sociology*). [9] This work was to be the opening blast in the *Methodenstreit*, the "battle over methods" between the Austrian School and the German Historical School. It was in the course of this battle that the appellation "Austrian" first became attached to the views of Menger and his followers in Vienna, intended as a smear by the German professors. [10] It was in this battle too that the Austrians

first gained the awareness of the distinctiveness of their position that is so marked in the methodological writings of contemporary members of the school.

While Wieser stayed out of the controversy, Böhm-Bawerk was an effective participant in the *Methodenstreit*. His stance, like Menger's, was essentially defensive in nature, if not in tone. Neither questioned the validity of the historical approach or its usefulness for certain purposes, but both challenged its claim to exclusive validity and primary importance. They wanted to establish that an abstract theoretical approach to economic questions was useful, or rather, that a theoretical economics was in fact possible.

Menger's conception of economic theory was "essentialist," apparently grounded in Aristotelian metaphysics. [11] Menger cites the Greek philosopher several times in the *Grundsätze* [12] In seeking the "essence" of economic relationships, Menger sought the necessary characteristics of those relationships, those features which must be present by nature of the relationship involved. In this manner Menger proposed to discover "exact" laws governing economic phenomena: not laws of mathematical precision, but laws which follow necessarily from the essential nature of the factors involved, and thus are invariably true regardless of time and place [13] For Menger (and for Böhm-Bawerk, who shared in this philosophical orientation) the nature of the physical world (the scarcity of natural resources) together with human nature (the desire for greater satisfaction of wants) determine the essential structure of the economic world.

Menger believed human wants to be largely determined by physiological needs. The content of an individual's needs was considered an objective fact, independent of volition, about which the individual might easily be ignorant or mistaken. While his contemporaries were broadening the concept of utility to meet objections that it was too "psychological" or "hedonistic," Menger, after publication of the *Grundsätze*, was attempting to link it to biology. According to his son's account in the introduction to the second edition of the *Grundsätze*, Menger had turned to the study of biology and physiology with the idea of formulating a theory of needs to complement his theory of value. [14]

Despite these deterministic overtones, Menger's method remained subjectivist due to the consideration that the individual, while desirous of satisfying his needs, is not driven directly by them. He still must act on the basis of his choice, made without full and exact knowledge of his needs. The emphasis on physiology was

thus merely a supplement to Menger's value theory rather than an integral part, and was jettisoned without difficulty by later Austrians. [15]

Menger in the *Grundsätze* first discusses the properties of a useful object, then of a good, then of an economic (scarce) good. He defines and discusses the marketability of goods, sketching how the most marketable becomes the medium of exchange or money. At every step Menger emphasizes and reemphasizes the subjective nature of these properties, their dependence on the knowledge and attitude of the individual concerning his wants and the ability of these objects to satisfy his wants. [16] Menger's consistent subjectivism enabled him to extend his analysis, through the device Wieser was to call "imputation," to the valuation of capital goods, which Menger termed "higher order" goods. Wieser developed this approach more elaborately, Austrian theorists have continued to emphasize that whether a good is to be considered capital depends not on its objective properties but on the way it figures in the production and consumption plans of economizing individuals.

The essentialism of Menger had another important implication for his approach to economics, for it was the basis of his rejection of mathematical methods and the mutual determination of economic "variables." Menger wrote to Walras, whose marginalism was expressed entirely in mathematical notation:

We do not simply study quantitative relationships but also the *nature* [or essence] of economic phenomena. How can we attain to the knowledge of this latter (e.g., the nature of value, rent, profit, the division of labor, bimetallism, etc.) by mathematical methods? [17]

Schumpeter, failing to look beyond the marginalism of the Austrians to their subjectivism, understandably speaks of the "defective technique" of the Austrians and their inability to "understand the meaning of a set of simultaneous equations." [18] The absence of mathematical formulations, however, was by no means the result of ignorance. Not only were the students of the "gymnasium" system in old Austria given a thorough training in mathematics, but Menger also came from an especially mathematically minded family. Fully cognizant of mathematical techniques, the Austrians explicitly and for methodological reasons rejected them. [19]

Menger's concern with the essence or nature of economic phenomena meant attention to the reason for their existence, their origins. This search for genetic-

causal explanations. [20] precluded the employment of mathematical techniques. Menger's son Karl, a mathematician, has pointed out that mathematical economists are limited to functional relations, while the Austrians demand causal explanations. [21] Many more specific explanations have been offered for the rejection of mathematics as a tool of economic investigation by the Austrians, most of which may be subsumed under this general attitude. Austrians are loath to use the equations of indifference analysis in the explanation of exchange, for example, because from their subjective viewpoint marginal values never equate. Looking to the origin of exchange, they see that exchange takes place precisely because each party values the goods possessed by the other more highly than his own. Rather than elaborating a system of timeless general equilibrium prices, which was the goal of the mathematical Walrasian system, Menger wanted to explain the forces and causes behind price formation.

In the task of capturing the basic origins of economic phenomena, Menger and later Austrians have found it appropriate to begin their expositions with the simplest settings in which the phenomena arise. Menger begins his account of price formation with isolated two-party trade. [22] Böhm-Bawerk does the same. [23] Weiser uses a process of "decreasing abstraction" to make the transition from a Robinson Crusoe economy to a complex monetary economy. [24] And *Man, Economy, and State*, a systematic presentation of contemporary Austrian theory by Murray N. Rothbard, follows the Crusoe-to-realworld approach most deliberately. [25] Mises argued in an early work that "the fundamental categories of catallactics, namely, value, good, exchange, price, and costs" are all involved in every act of choice. [26] Yet he later emphasized that some important phenomena can be grasped only by theory going beyond choice in a Crusoe setting, especially the phenomena of economic calculation using money prices. Such calculation is possible neither for Crusoe nor for the managers of an isolated socialist economy. [27] It originates with monetary exchange.

III. Böhm-Bawerk and Wieser

The considered rejection of the mathematical method as sterile, *i.e.*, as incapable of shedding light on the vital questions of economic processes, has been one of the continuing themes of the Austrian School. Böhm-Bawerk, in his monumental work on Capital and Interest, steers clear of any suggestion of functional interdependence between the elements of his theoretical system. [28] He maintains a strictly cause-and-effect analysis. Wieser, like Menger, was particularly critical of the Walrasian system. [29]

Wieser raised the objection to the use of calculus in economic theory that economic phenomena are necessarily discontinuous and discrete. The Austrians, with their focus on the way in which agents perceive and act in the real world, have always been careful to formulate their marginalism in terms of discrete units and discontinuous points rather than infinitesimal units and smooth curves. Menger emphasized discontinuities at many places in the *Grundstätze*. [30] Wieser was especially explicit about the discreteness of changes in marginal utility scales, and in developing the theory of imputation assumed a discontinuity among inputs. Böhm-Bawerk analyzed supply and demand in terms of discontinuous schedule, and used for illustration a market for a particularly indivisible commodity, horses. [31] The discreteness of changes in marginal utility scales in Wieser and Böhm-Bawerk is directly due to their subjectivist concern only with changes that could actually be felt by the valuing individual. Schumpeter thus missed the intent of the Austrian theorists again when he suggested that differential calculus is necessary in order to "formulate their reasoning correctly." [32]

Schumpeter's remark that the Austrians "saw in marginal utility the essence of their innovation" [33] indicates that he was likely misled by statements Böhm-Bawerk made to that effect while propagandizing on behalf of the School. [34] Wieser also made similar statements. Such remarks must today be regarded in the context in which they were made. At the time they were made the theoretical work of the Austrian School had just begun. Since then the School has extended its investigations into many areas other than value theory. More to the point, the remarks had only limited accuracy at the time. Marginalism *per se*, as Streissler

has stressed, is clearly not the keystone of Menger's *Grundsätze* [35] The concept of marginal utility is not introduced until the third chapter.

It is important to remember that, of the three early Austrians, Menger paid the greatest attention to methodological matters. Wieser, according to Hayek, "did not attach much value to scientific methodology as a special discipline." [36] Schumpeter not unfairly notes that Böhm-Bawerk "was no methodological connoisseur." [37]

Neither Wieser nor Böhm-Bawerk found much value in methodological studies or controversies, both feeling that the proper method would emerge through theoretical practice. There were, consequently, some disagreements between Menger and his followers, notably over Böhm-Bawerk's capital and interest theory. [38]

Böhm-Bawerk generally followed Menger in the epistemology of the "exact" method, which he preferred to call "isolating." Wieser, on the other hand, chose to justify theoretical knowledge in his own way. He held that we discover the meaning of economics by listening to our own "inner experience." Though Menger found the essence of economics in the relationship of the economizing human agent to the external world, Wieser, reports Emil Kauder, discovered the "necessary series of action in the mind itself." [39] Wieser called this approach "psychological," and this term was endorsed by Böhm-Bawerk. [40] The psychological orientation of Wieser began a methodologically separate branch of Austrian economists, but in his doctrine of "natural value" (an objective standard value a good would have under hypothetical circumstances) and his insistence on the interpersonal comparability of utility, Wieser developed in directions that were later abandoned. [41]

In his earliest work, *Ursprung und Hauptgesetz des wirtschaftlichen Wertes* in 1884, Wieser paid great tribute to psychology. He referred to subjective value theory, in fact, as "applied psychology." In a later work he expressed misgivings about the phrase, explaining that economic theory acknowledges no dependence on professional or scientific psychology; value theory analyzes psychological material in its own way. [42] Private introspection or inner experience is the source of the material with which the economist works, shaping it by use of "idealizing assumption" in the form of ideal types. Wieser postulated an economic man who takes careful stock of his interests and the means at his disposal and with single-minded purpose maximizes his utility. Gone were the independent needs of Menger's economic agents.

In *Natural Value* (1889), Wieser made extensive use of the method of isolating and idealizing assumption. Deducing the fact of subjective valuation, he proceeds to production and distribution, developing the concepts of opportunity cost (as sacrificed utility is now known) and imputation, the latter a term he introduced. As consumers can value only final goods, he explains, the value of producer goods must be imputed from their marginal contributions to the expected value of their outputs. The costs of production stem from the fact that inputs must be diverted from other (subjectively) valuable uses.

Wieser insisted that subjective value theory is concerned strictly with empirical fact, though it appears deductive. It is empirical, he explains in *Social Economics* (1914), in that it deals with typical phenomena in the guise of ideal types [43] The issue of apriorism—how an *a priori* (deductive) theory can have empirical content—has confronted Austrians from the outset, and Wieser, like the rest, was compelled to explain the applicability of his abstract theory to the real world. He conceded that his statements of theory, as all empirical statements must, do admit of possible exception, and are formulated with empirical testing in mind. Menger, with his essentialist orientation, had held his "exact" laws to be unfalsifiable and without exceptions. They are laws, he explained, "which are not only without exceptions, but according to our laws of thinking *simply cannot be thought of in any other way but as without exceptions.*" Empirical "testing" of exact laws would be methodological absurdity, analogous to testing the principles of geometry by measuring real objects. [44]

Böhm-Bawerk, like Wieser, was unprepared to follow Menger on the issue. In an article responding to the attack by the Historical School on the fanciful apriorism and disregard for empirical realities they thought demonstrated by the Austrians, Böhm-Bawerk, while defending the possibility and worth of theory, concedes that it must be firmly based on empirical observation. He denies that the Austrians' "so-called abstract-deductive method" is unempirical, "spinning abstract conclusions without concern as to their empirical reality," claiming instead that it is "in its very essence a genuinely empirical method." He denies that it confines itself to inferences and deductions from *a priori* axioms, claiming instead that it starts "with observation of actual conditions and endeavors from this empirical material to derive general laws." But, he adds, it also recognizes the usefulness of tracing causal connections from general to special, in order to discover "links in the chain of causes" of events which would have remained hidden from a purely inductive method. [45]

IV. Ludwig von Mises

Perhaps the most noteworthy thing about Böhm-Bawerk's statement is that its methodological prescription was repudiated in almost every point by his intellectual heir, Ludwig von Mises. Following his teacher on many facets of theory, Mises nonetheless developed an entirely different epistemological defense for his views. A neo-Kantian, he denied the possibility of arriving at laws by induction and defended the possibility of a purely *a priori* system of economic theory which he labeled "praxeology." In doing so he meant to free economics from a reliance on "psychological" considerations and sought only logical sanction for economic laws.

The early Austrians formulated their theories to contain actual psychological content. They did not intend that the terms they used be interpreted in such a way as to be free of such content. [46] The third generation of Austrians, however, divided on this issue.

Hans Mayer, Leo Schonfeld, Paul N. Rosenstein-Rodan, and some other "realists" continued the Wieserian tradition and attempted to retain psychology as the basis of economic theory. These economists stressed the deliberateness of economic decisions. Their investigations into certain complex topics, such as utility calculations with complementary goods and the difference between *ex ante* and *ex post* utility, led them to reformulate utility theory into more sophisticated, but still psychologically based statements. [47]

Ludwig von Mises and Richard Strigl, retaining the ontological nature of Austrian theory but placing it on new epistemological foundations, led the "formalist" branch in associating the subjective valuations of individuals only with their actual choices. [48] To Menger's concern with needs and Böhm-Bawerk's and Wieser's with psychology, Mises objects that economics as a science is not concerned with the motives behind human actions but only the implications of action itself. [49] Such terms as "utility" and "satisfaction" are used by economics in a purely formal way devoid of psychological or hedonic content. "Concrete value judgments and definite human actions, he declares, "are not open to further analysis." [50] That is, economics is not concerned with second-guessing the rightness or wrongness of purposes or actions. Mises points out that this neutrality follows from the subjectivist approach of viewing action through the eyes of the actor. [51]

Praxeology, according to Mises, is not concerned with why individuals pursue the specific purposes they do, but only with what can be deduced from the axiom that they do act purposively. From this fundamental axiom of human action, with the aid of certain subsidiary assumptions, the praxeologist deduces the entire body of economic theory. [52] Mises presents this vision of economics comprehensively in *Human Action*. Its first seven chapters, devoted to methodology, keynote and book and provide the groundwork for all that follows. [53]

Mises is concerned not only with methodology in economics, but in the entire range of human studies. Praxeology, concerned with purposeful action and its ramifications whatever they may be, encompasses more than economics, though economics is its most developed branch. [54]

The formalistic approach of Mises is well illustrated by his derivation of the law of marginal utility without recourse to psychology or physiology. An agent having n units of a homogeneous good will employ one unit in a way (called the marginal employment or least urgent want) that he would choose to forego had he only $n-1$ units. The utility (preference ranking) assigned the marginal employment is called marginal utility. As his supply of want-satisfying good increases, the actor by definition chooses to apportion the increments to successively less urgent wants. The law of decreasing marginal utility, Mises thus affirms, is independent of any psychological or physiological statements regarding sensuous enjoyment, such as Gossen's law of the saturation of wants, upon which Wieser had based decreasing marginal utility: "Under the conditions no other result is thinkable. Our statement is formal and aprioristic and does not depend on any experience." The law "is already implied in the category of action. It is nothing else than the reverse of the statement that what satisfies more is preferred to what gives smaller satisfaction." [55]

Mises not only claims that praxeology provides aprioristic truth, but also that it "conveys exact and precise knowledge of real things." As Wieser attempted to do, Mises must forge a bridge from his deductions to the real world. His bridge consists of the argument that "the subject matter of praxeology, human action, stems from the same source as human reasoning. Action and reason are congeneric and homogenous; they may even be called two different aspects of the same thing." [56] The "logical structure of action" is "linked to the logic of our thought," because we act on the basis of rational thought. [57]

While this argument may explain why human action is comprehensible to us, it is insufficient to anchor the chains of praxeological deduction in the real world. Praxeology, like Euclidian geometry, would make explicit what was once only implicit in its axioms, but without some tangible anchor its axioms would remain just as arbitrary. To provide the necessary sanction for the fundamental axiom of human action, Mises returns (in somewhat different fashion) to the foundation claimed by Wieser, namely introspection: "The starting point of praxeological thinking is not arbitrarily chosen axioms, but a self-evident proposition, full, clearly and necessarily present in every human mind.... The starting point of praxeology is a self-evident truth, the cognition of action, that is, the cognition of the fact that there is such a thing as consciously aiming at ends." [58]

Mises further develops a theme of the older Austrians from their debates with the Historical School when he takes pains to distinguish the knowledge provided by praxeology from that provided by history. Praxeology and history form the "two main branches of the sciences of human action." [59] History, which includes economic statistics and descriptive economics, "cannot teach us any general rule, principle, or law." Indeed, the interpretation of statistics and other complex historical evidence presupposes praxeological knowledge in isolating causal relationships and grouping related events. [60] Thus history, which is to say experience or empirical research, can neither prove nor disprove praxeological laws.

What experience *can* do for economic theory in Mises's view is to examine the applicability of the subsidiary assumptions made by the theorist concerning such things as the institutional setting in which action takes place and the perceptions of real-world actors. As an example of a praxeological law whose validity has been wrongly questioned Mises considers Gresham's law, which states that a legally overvalued currency will continue to circulate in payments, while an undervalued legal tender will not ("bad money drives out good"). The phenomena described by Gresham's law could fail to appear if agents were ignorant of their ability to pay in money valued lower by the market, or ignorant of the discrepancy between market and legal exchange values, or desirous for some reason of paying their creditors more than legally necessary. But the failure of the phenomena in question to appear in such cases would not in any way compromise the strict logical validity of the law. [61]

The universal non-appearance of the phenomena described by a praxeological law, because of the universal absence of the contingent conditions it assumes,

would of course render that law uninteresting (though not invalid). The praxeologist must therefore refer to historical or empirical or institutional facts, at least in the broad sense of the facts of everyday experience, if he wishes to avoid irrelevance in developing laws that depend on more than the axiom of action. Nonetheless, Mises argues, this fact "does not alter the purely aprioristic character of praxeology. It merely circumscribes the field that the individual praxeologists customarily choose for their work." [62]

It is worth noting that Mises speaks of two sorts of auxiliary assumptions used in the construction of praxeological laws. One is the class of assumptions regarding environmental or empirical circumstances (e.g., we assume the presence or absence of fractional-reserve banking in developing business-cycle theory) that we have just discussed, whose correspondence to reality is of great importance for historical research. A second class of subsidiary assumptions is not contingent or "falsifiable" in this sense, but consists rather of special *analytical* assumptions or "imaginary constructions," such as the assumption that market equilibrium prevails before and after a change in the data. The value of this sort of assumption does not at all depend on its realism: equilibrium constructs are indispensable for praxeology and hence for our understanding of real-world events even though equilibrium conditions may not (or could not) ever prevail in historical fact. [63]

Mises thus insisted on a strict logical separation of theory from history. This has occasionally been misinterpreted as a denigration of historical or empirical research. [64] Far from having such an intent, Mises declares that "history is not a useless pastime but a study of the utmost practical importance. [65] Its scope is "the study of all the data of experience concerning human action." [66] Any economist must engage in historical research before he can claim that certain praxeological laws apply to or explain concrete historical episodes. [67] Empirical research in economics is not made less important by the fact that its task cannot include "testing" or "falsifying" economic theories in the same way that laboratory experiments test natural-scientific theories.

Elaboration of the differences between social science and natural science is a theme present in Austrian methodology from the beginning. For Menger, Mises, and Hayek the fundamental difference is one of subjectivism versus objectivism. The natural scientists, standing as it were outside of their objects of study, must analyze empirical phenomena by breaking them down into hypothetical (unempirical) constituents. But for the social scientists the situation is reversed;

here the researchers stand within the objects of their study, namely social and economic structures. The ultimate elements of the phenomena to be analyzed, human activities in pursuit of chosen goals, are known, and must be *built up* by theory into models of structures which cannot as a whole be directly observed.

[68] Menger explains:

The ultimate elements to which the exact theoretical interpretation of natural phenomena must be reduced are "atoms" and "forces." Neither is of empirical nature. We cannot imagine "atoms" at all, and natural forces only by a representation, and by these we really understand merely unknown causes of real motion. From this there arise ultimately quite extraordinary difficulties for the exact interpretation of natural phenomena. It is otherwise in the exact social sciences. Here the human *individuals* and their *efforts*, the final elements of our analysis, are of empirical nature, and thus the exact theoretical social sciences have a great advantage over the exact natural sciences. [69]

In arguing that the "final elements" (really, the starting-point) of economic investigations are individuals and their purposes, Menger advances the doctrine of "methodological individualism" common to Austrian theory. This opposes the doctrine of "methodological holism, which thinks it legitimate for theory to operate exclusively at the level of social groups or economic aggregates, devoid of any link to individual behavior. We shall return to this question shortly.

Menger's more basic argument in this passage, that the proper approach of social science to its subject matter is different from the approach of natural science, is strongly seconded by Mises. [70] Following Mises we may call this position "methodological dualism," in contrast with the "methodological monism" preached by behaviorists and positivists who see no basic reason to approach human behavior and social phenomena differently from the way natural scientists approach molecular behavior and physical phenomena.

Mises's well-known strictures against the use of mathematics in economics deserve mention here, as they are related to his methodological dualism. On the one hand, praxeology is like mathematics (and logic) in being an axiomatic or deductive system. On the other hand, as we have already noted, praxeology cannot be pursued as though it were a branch of applied mathematics because its starting point (the fact of human goal-seeking), unlike the axioms of Newtonian physics or other mathematical systems, is not arbitrary. This difference makes the

mathematical methods of physics inappropriate for economics. Here Mises restates and extends Menger's argument:

In physics we are faced with changes occurring in various sense phenomena..... We know nothing about the ultimate forces activating these changes..... What we know from observation is the regular concatenation of various observable entities and attributes. It is this mutual interdependence of data that the physicist describes in differential equations.

In praxeology the first fact we know is that men are purposively intent on bringing about some changes. . . . [T]he economist knows what activates the market process. It is only thanks to this knowledge that he is in a position to distinguish market phenomena from other phenomena and to describe the market process.

Now, the mathematical economist does not contribute anything to the elucidation of the market process [71]

Mises did not deny that mathematical techniques could be used to describe equilibrium conditions. [72] But he argued that description of equilibrium conditions was not the ultimate or even main task of economic theory, which aimed at an understanding of market processes. Mathematical economics cannot yield the sort of causal-genetic explanations that Mises sought:

. . . its equations and formulas are limited to the description of states of equilibrium and nonacting. It cannot assert anything with regard to the *formulation* of such states and their *transformation* into other states as long as it remains in the realm of mathematical procedures. . . . The problems of process analysis, *i.e.*, the only economic problems that matter, defy any mathematical approach. [73]

Mises's principal indictment of mathematical economics was thus that its typical use, in equilibrium theory, is largely beside the point and not worth all the attention devoted to it. But he added that in other contexts, such as the use of mechanical differential equations to portray the process by which markets reach equilibrium, mathematical modeling is apt to be superficial, misleading, and distortive. [74]

V. Friedrich A. Hayek

The member of the Austrian School who has produced the most subtle and detailed critique of the notion that the social sciences should ape the methods of the physical sciences—an idea he calls "scientism"—is F.A. Hayek. The data of the social sciences are of necessity subjective, he writes, for they deal "not with the relations between things, but with the relations between men and things or the relations between man and man." [75] Hayek has developed the insight of Menger into a comprehensive indictment of the objectivism, collectivism, and historicism which stem from the scientistic approach to social phenomena in his lengthy essay "Scientism and the Study of Society," reprinted in *The Counter-Revolution of Science*.

Hayek has also continued Menger's concentration on the role of information and knowledge in the process of economic decision-making. [76] Menger, despite the "exact" nature of economic laws, suggests the impossibility of a "strict regularity of economic phenomena, what we would call equilibrium, due to the fact that economic men are so often "in error about their economic interest, or in ignorance of economic conditions." [77] Menger's concept of "error about their economic interest" stems from his consideration of needs as an objective factor. But by pointing out the implications of incomplete information for equilibrium analysis, he clearly inspired Hayek's analysis, in the 1936 address "Economics and Knowledge, of limited knowledge and divergent expectations.

Menger continues his last-quoted statement: "The presupposition of a strict regularity in economic phenomena, and with this of a theoretical economics in the full sense of the word, includes not only the dogma of ever-constant self-interest, but also the dogma of the 'infallibility' and 'omniscience' of men in economic matters." [78] The formalism of Mises supplies the "dogma" of ever-constant self-interest by interpreting self-interest in a subjectivist way. [79] But Hayek is sharply critical of the assumption of perfect information, which he recognizes as "just another way of saying that equilibrium exists but does not get us any nearer an explanation of when and how such a state will come about. It is clear that, if we want to make the assertion that, under certain conditions, people will approach that state, we must explain by what process they will acquire the necessary knowledge." [80]

The market economy for Hayek is an information-gathering process, and this concept springs directly from his subjectivist outlook. In the task of using "available" resources to satisfy "existing" needs, "neither the 'available' resources nor the 'existing' needs are objective facts." Resources and needs "exist for practical purposes only through somebody knowing about them." The fact that each individual's knowledge is limited and specialized means that "a successful solution . . . must be based on a method of utilizing the knowledge dispersed among all members of society. . . . This is precisely the function which the various 'markets' perform." [81] This analysis forms the basis for the Mises-Hayek argument concerning the impossibility of efficient socialism.

To assume perfect information is thus to assume away the very phenomenon supposedly under study, the market process. For the market process, Hayek points out, is a process of discovery unfolding through time. [82]

The subjectivism of Austrian theory, writes Lachmann, "needs the dimension of time, since all human action is only possible in time. The Lausanne theory of equilibrium not only does not require time; it requires time's exclusion." [83] Time as an important factor was an innovation in economic theory by the Austrian theorists. Neither the classicists nor the Marxists had given it an important role. Menger views economic activity as planning for the future and discusses the range and scope of human forethought. [84] In Böhm-Bawerk's capital theory, time is of central importance. Hayek finds the passage of time impossible to exclude from a meaningful equilibrium theory, "since equilibrium is a relationship between actions, and since the actions of one person must necessarily take place successively in time." [85]

Hayek spins out yet another important strand of Menger's thought in his explanation of social institutions as the "results of human action but not of human design." [86] In this explanation he adopts the "compositive method" of "methodological individualism" that both he and Menger advance in their distinction between the natural and the social sciences. This distinction for Hayek springs directly from the subjective approach:

While in (the social sciences) it is the attitudes of individuals which are the familiar elements and by combination of which we try to reproduce the complex phenomena, the result of individual actions, which are much less known—a procedure which often leads to the *discovery* of principles of structural coherence of the complex phenomena which had not (and perhaps could not) be established by direct observation—the physical sciences necessarily begin with

the complex phenomena and work backwards to infer the elements from which they are composed.... While the method of the natural sciences is in this sense analytic, the method of the social sciences is better described as compositive or synthetic. It is the so-called wholes, the groups of elements which are structurally connected, which we learn to single out from the totality of observed phenomena only as a result of our systematic fitting together of the elements with familiar properties, and which we build up or reconstruct from the known properties of the elements. [87]

The familiarity of these elements, being subjective in nature, is the result of that procedure common to Austrian economists, introspection. Hayek emphasizes that, unless we adopt a purely behavioristic stance, such a procedure is unavoidable. The nature of social phenomena is such that they "are accessible to us only because we can understand what other people tell us and can be understood only by interpreting other people's intentions and plans. They are not physical facts, but the elements from which we reproduce them are always familiar categories of our own mind." [88]

While sharing the subjectivist and methodological dualist positions of Menger and Mises, Hayek diverges from them on matters of epistemology. In particular, Hayek has distanced himself from Mises's apriorism by accepting the philosopher of science Karl Popper's principle that the hallmark of any scientific theory is its openness to empirical falsification. [89] In "Economics and Knowledge" Hayek defers to Mises on the *a priori* validity of the "Pure Logic of Choice" (praxeology) applied to *individual* plans, but argues that praxeology cannot explain interactive *social* processes without empirical or "ideal type" assumptions concerning the way in which individuals acquire knowledge, form expectations, and learn from their social experiences. Such empirical assumptions are to Hayek's view particularly necessary for an economist who wishes to assert that market equilibrium will tend to come about. It is only by asserting the existence of a tendency toward equilibrium "that economics ceases to be an exercise in pure logic and becomes an empirical science." [90]

Hayek's divergence from the praxeological viewpoint has not been so complete or so sudden that "Economics and Knowledge" may accurately be said to mark the emergence of a "Hayek II" who has rejected the bulk of the Misesian ideas on method that had influenced "Hayek I." [91] Yet Hayek's methodological writings since the 1930s have undeniably shifted toward Popper and away from Mises.

VI. Ludwig M. Lachmann

That the Austrian School's subjectivism bears a resemblance to Max Weber's sociological-historical method of *Verstehen* (understanding) has been emphasized by economist Ludwig M. Lachmann, a contemporary of Hayek who has developed subjectivist themes in his own personal way. Lachmann finds this element implicit in Menger's writings, [92] and in the ends-seeking inherent in the Misesian concept of action. In his review of *Human Action* Lachmann states that "it is the work of Max Weber that is being carried on here." Weber "strove to uphold the methodological independence of the theoretical social sciences of the natural sciences by stressing the cardinal importance of *means* and *ends* as fundamental categories of human activity." [93]

The concept of human action is certainly much broader in scope than that of means and ends. [94] And, as Lachmann himself points out, the concept of *Verstehen* was originally introduced as a method of history. Nevertheless, he considers the members of the Austrian School, "perhaps unconsciously," to have been using *Verstehen* as a *theoretical method*; that is, "the significance of typical courses of action is interpreted with the aid of schemes of thought, such as the logic of choice." [95]

Lachmann proposes that one of the tasks of economics "is to make the world around us intelligible in terms of human action and the pursuit of plans. [96] The social scientist "not merely *describes* but *explains* social phenomena by reducing them to acts of the mind. We may therefore say that the 'causes' of these phenomena are our choices, coordinated in the form of plans." [97]

The concentration on plans and expectations is the particular variation on the subjectivist theme which is Lachmann's chief contribution. He has attempted to fuse with the Austrian tradition not only Max Weber, but also economist G.L.S. Shackle, whose work has been primarily on the role of expectations. [98]

By adopting *the plan* as the fundamental concept of interpretation, Lachmann supplants the starting point of Weber (and Wieser), the ideal type: "All human action, if it is to be successful, requires a plan to guide it. To understand an action means to understand the plan which is being carried out here and now." [99] Here Lachmann draws upon the Misesian idea that the logic of chosen action corresponds to the logical structure of the choosing mind. This provides the basis for intelligibility. The applicability of the logic of choice to the real world comes,

for Lachmann, in the recognition that plans are necessary to successful action and the empirical fact that "in economic life most people seek success." In treating "striving for success" as the empirical "meaning of economic action" [100] rather than as an *a priori* category of self-evident validity, the *verstehende Methode* diverges from the praxeological approach.

Taking his lead from Hayek, Lachmann notes that different economic agents in a world of imperfect knowledge, and thus uncertainty, "will each pursue plans prompted by certain expectations about future events. These expectations will diverge; hence, so will the plans prompted by them." This divergence guarantees that some or even most of the expectations will be faulty, and the plans based on them unsuccessful to some degree. Then "some of the capital invested in accordance with these plans will turn out to have been malinvested. Hence there can be no such thing as 'equilibrium growth,' which is of course incompatible with malinvestment." [101] The radical subjectivism of Lachmann has led him to question, even more strongly than Hayek, whether the equilibrating forces in the economy (the transmission of knowledge about economic conditions) will be stronger than the disequilibrating forces (the divergence of expectations); whether the economy can in fact be said to harbor any tendency toward equilibrium. [102] Other Austrian economists have in turn criticized Lachmann for apparently denying the general validity of the concept of spontaneous order, a concept to the development of which Menger and Hayek in particular have made great contributions. [103]

The inconceivability of equilibrium has been the springboard for Lachmann's criticism of what he terms macro-economic "Formalism." He defines this formalism (not to be confused with the praxeological formalism of Mises) as "a style of thought according to which abstract entities are treated as though they were real." This methodological holism (which corresponds to the "objectivism" criticized by Hayek) he contrasts with "Subjectivism—The postulate that all economic and social phenomena have to be made intelligible by explaining them in terms of human choices and decisions." [104]

Subjectivist explanations by Lachmann, in the Austrian fashion, are framed according to the compositive method. In his essay "On Institutions" he develops further the theories of Menger and Hayek by blending them with Weberian ideas. [105]

In dealing with dynamic processes Lachmann deals with cause-and-effect. Mises noted that the axiom of action implies causality, since individuals act only

with the expectation of causing an improvement in their conditions. This outlook by individuals must be taken into account by the subjective theorist, for it sheds light on the meaning of human action. Lachmann draws together the themes of causality, purpose, and the compositive method in his conception of economics as a means of understanding social phenomena:

The task of the economist is not merely, as in equilibrium theory, to examine the logical consistency of various modes of action, but to make human action intelligible, to let us understand the nature of the logical structure called "plans," to exhibit the successive modes of thought which give rise to successive modes of action. In other words, all true economics is not "functional" but "causal-genetic." [106]

Individuals and their endeavors, as in Menger's original vision, are seen as the source and the final cause of all that economics studies. But subjectivism is not only the starting point of economic analysis for the Austrians; in his insistence on rendering human action intelligible, Lachmann suggests that economics must also conclude on the subjective levels. [107] Here are but two aspects of a single procedure, namely interpretation of economic activity in the terms in which we think because they are the terms in which others think and the terms in which all of us act. This correspondence is grasped intuitively or introspectively.

VII. Kirzner, Rothbard, and the Modern Austrian School

The relationship of the Weberian *verstehende Methode* (interpretive or empathetic method) endorsed by Lachmann to the praxeological method propounded by Mises has been analyzed at length by the contemporary Austrian economist Israel M. Kirzner. While the concept of *Verstehen* emphasizes the teleological or economizing character of human action, praxeology is grounded in the broader notion of purposiveness. [108] The Austrian approach, Kirzner explains, views the individual decision-maker as actively alert and searching, rather than only as passively allocating means to ends according to given constraints. [109]

Kirzner identifies alertness as the entrepreneurial element in action. In his *Competition and Entrepreneurship*, a work that has contributed importantly to the recent resurgence of Austrian economics, he draws out the implications of this element for price theory. He builds upon the conception of entrepreneurship set forth by his teacher, Mises, and stresses, as Hayek has, that competition must be viewed as an ongoing process rather than as a timeless situation. [110]

In a more recent collection of essays, *Perception, Opportunity, and Profit*, Kirzner extends in many directions a subjectivist analysis based on his theory of entrepreneurship. The essay "Hayek, Knowledge, and the Market Process" makes a powerful case for amending the Hayekian position (in "Economics and Knowledge") that the *a priori* part of economic theory must be supplemented by empirical assumptions regarding knowledge-acquisition in order to explain the market process toward equilibrium. Kirzner argues that praxeological theory can make use of non-empirical insight into knowledge-acquisition or what we might call the "pure logic of discovery" in addition to the "pure logic of choice." The Misesian notion of human action already gives us "the recognition that people possess a propensity to discover what is useful to them." This propensity plays a vital role in the context of disequilibrium. Because price dispersion offers arbitrage profit opportunities, and because surpluses or shortages create opportunities to gain by adjusting asking prices downward or bid prices upward, we can be sure that "a process is set in motion by disequilibrium conditions as these opportunities are gradually noticed and exploited." In this way, though it alone cannot tell us the specific course of events in an actual market, "our insight into the general propensity of people to be alert to opportunities nonetheless

provides us with an understanding of the overall tendencies governing these sequences of market events." By this argument Kirzner aims to repair the epistemological division Hayek had made between the Pure logic of choice and the theory of equilibrating market forces. [111]

Another student of Mises, Murray N. Rothbard, has also elaborated the methodological tenets of praxeology, explaining its epistemology and defending its "extreme a priorism" in economic journals early in his career. [112] Where Mises in neo-Kantian fashion held the axiom of human action (i.e., that men do act to attain goals) to be a truth *a priori* to human experience, Rothbard returns to the Aristotelian epistemology of Menger to find the axiom based in empirical reality yet just as certainly true. [113]

Rothbard has also been a chief expositor of the Austrian theory of the business cycle. Building upon the Misesian theory of money, Hayek offered a methodological discussion of the problems of business cycle theory in *Monetary Theory and the Trade Cycle* (1929). Hayek there argued that a theoretical investigation of this phenomenon must be integrated into a broader corpus of economic theory, and that theoretical deduction must precede consideration of statistical evidence. [114] Rothbard follows this methodological prescription in his study *America's Great Depression*. The central problem which a theory of the business cycle must explain, he points out is the cluster of entrepreneurial error which is revealed by the "crash." [115] In the historical application of the Austrian theory of the business cycle the School's many theoretical insights built up through subjectivist methods—insights into capital, interest, entrepreneurship, and expectations—join together in the explanation of complex real world phenomena.

The current revival (however modest it may be) of professional interest in Austrian economics, which has been centered in the United States, may be dated from 1974. In that year a conference was held featuring lectures, many of them on methodology, by Lachmann, Kirzner, and Rothbard. These lectures have since been published as a book. [116] Several subsequent conferences have produced volumes featuring the theoretical and methodological writings of younger Austrian economists, many of whom attended the 1974 conference. [117] A complete survey of these and other recent contributions would go beyond our task here. The list of professionally active members of the younger generation of Austrians, almost all of whom have written some on methodological topics, at this date includes at least the following names: D.T. Armentano, [Walter Block](#),

Stephan Boehm, Richard M. Ebeling, John B. Egger, [Roger W. Garrison](#), Richard Fink, Jack High, Richard N. Langlois, Don C. Lavoie, S. C. Littlechild, [Gerald P. O'Driscoll, Jr.](#), Mario J. Rizzo, [Joseph T. Salerno](#), Sudha R. Shenoy, [Karen L. Vaughn](#), and Lawrence H. White. Though all presumably share a subjectivist perspective on the nature of economic discourse, we can expect the future development of Austrian views on the proper methods of economics to be marked by disagreements both between generations and within the younger generation on the finer points involved. Such controversy is merely a healthy sign of intellectual progress. It is also, as we have seen with respect to the earlier generations, very much a part of the Austrian tradition.

VIII. Notes

- [1] Ludwig M. Lachmann, "The Significance of the Austrian School of Economics in the History of Ideas," in *Capital, Expectations, and the Market Process*, ed. by Walter E. Grinder (Kansas City: Sheed, Andrews and McMeel, 1977), p. 51.
- [2] Erich Streissler, "To What Extent Was the Austrian School Marginalist?," *History of Political Economy* 4 (Fall 1972): 427. See also William Jaffe, "Menger, Jevons, and Walras De-homogenized," *Economic Inquiry* 14 (Dec. 1976): 511–524.
- [3] Examples of the former: Emil Sax, Robert Zuckerkandl, Eugen Phillipovitch von Phillipsberg, Hans Mayer, Paul N. Rosenstein-Rodan, Emil Kauder, and Richard Strigl, to name just a few. Examples of the latter: Joseph A. Schumpeter, Fritz Machlup, Gottfried Haberler, Oskar Morgenstern, Lionel Robbins, G.L.S. Shackle, and John Hicks. See *The International Encyclopedia of the Social Sciences*, 1968 ed., s.v. "Economic Thought: The Austrian School," by Friedrich A. Hayek.
- [4] Carl Menger, *Principles of Economics*, ed. by James Dingwall and Bert F. Hoselitz (New York: New York University Press, 1981).
- [5] F. A. Hayek, "Carl Menger," introduction to Menger, *Principles of Economics*, p. 12.
- [6] Knut Wicksell, *Selected Papers on Economic Theory* (Cambridge: Harvard University Press, 1958), p. 191.
- [7] For an account of these reviews see R. S. Howey, *The Rise of the Marginal Utility School 1870–1889* (Lawrence: University of Kansas Press, 1960), pp. 139–140.
- [8] Joseph A. Schumpeter, *Ten Great Economists* (New York: Oxford University Press, 1951), P. 88.

[9] Carl Menger, *Problems of Economics and Sociology*, ed. by Louis Schneider (Urbana: University Illinois Press, 1963).

[10] See Ludwig von Mises, *The Historical Setting of the Austrian School of Economics* (New Rochelle: Arlington House, 1969) pp. 40-41.

[11] See Emil Kauder, "Intellectual and Political Roots of the Older Austrian School," *Zeitschrift für Nationalökonomie* 17 (Dec. 1957): 413–415.

[12] This is perhaps an appropriate place to comment on the relationship of methodology to philosophy, particularly epistemology. Methodology, as the study of methods, is part of the philosophy of science. Hence the introduction of "philosophical issues" into methodology, be it more or less explicit, is unavoidable. Methodology cannot attempt only to find the most pragmatic or heuristic methods of research. If it could we would have no disagreement with Böhm-Bawerk's statement that one can pass just judgment on a method only after seeing its application ["The Historical vs. the Deductive Method in Political Economy" *Annals of the American Academy of Political and Social Sciences*, 1 (Oct. 1890)]. Methodology must attempt to assess the appropriateness of various approaches to a subject and the validity of their theoretical conclusions. This attempt involves epistemological and other philosophical considerations. The approach to methodology which values only the empirical content or sheer quantity of conclusions a method enables one to reach involves philosophical presuppositions no less than any other.

[13] See Leland B. Yeager, "The Methodology of Henry George and Carl Menger," *American Journal of Economics and Sociology* (April 1954): 233–238.

[14] Alan R. Sweezy, "The Austrian School and the Interpretation of Subjective Value Theory" (Ph.D. dissertation, Harvard University, 1934), p. 9.

[15] See Ludwig von Mises, *Epistemological Problems of Economics*, trans. by George Reisman (New York: New York University Press, 1981), ch. 4.

[16] See Friedrich A. Hayek, "The Place of Menger's *Grundsätze* in the History of Economic Thought," in J. R. Hicks and W. Weber, eds., *Carl Menger and the Austrian School of Economics* (Oxford: Clarendon Press, 1973), p. 6.

[17] See T. W. Hutchison, "Some Themes from *Investigations into Method*," in Hicks and Weber, eds., *Carl Menger and the Austrian School of Economics*, p. 17.

[18] Joseph A. Schumpeter, *History of Economic Analysis* (New York: Oxford University Press, 1968), p. 918.

[19] Kauder, "Intellectual and Political Roots," p. 412; Streissler, "To What Extent Was the Austrian School Marginalist?," p. 440; Jaffe, "Menger, Jevons, and Walras Dehomogenized," p. 521.

[20] A term developed by Hans Mayer in "Die Erkenntniswert der Funktionellen Preistheorien," in *Die Wirtschaftstheorie der Gegenwart*, v. 2 (Vienna, 1932). I am indebted to Richard M. Ebeling for this reference.

[21] Karl Menger, "Austrian Marginalism and Mathematical Economics," in Hicks and Weber, eds., *Carl Menger and the Austrian School of Economics*, p. 54.

[22] Carl Menger, *Principles of Economics*, p. 194.

[23] Eugen von Böhm-Bawerk, *Capital and Interest*, 3 vols., trans. by George D. Huncke and Hans Sennholz (South Holland, IL: Libertarian Press, 1959), v. 2, p. 217.

[24] Friedrich von Wieser, *Social Economics*, trans. by A. F. Hinrichs (New York: Adelphi, 1927), pp. 10, 12, 160.

[25] Murray N. Rothbard, *Man, Economy, and State* (Los Angeles: Nash Publishing, 1970).

[26] Mises, *Epistemological Problems of Economics*, p. 148. See also Richard M. Ebeling, "Action Analysis and Economic Science: Ludwig von Mises and the Austrian School" (Ph.D. dissertation, :University of Cork, forthcoming), ch. 5.

[27] Ludwig von Mises, *Human Action*, 3rd ed. (Chicago: Henry Regnery, 1966), pp. 205–206.

[28] Böhm-Bawerk, *Capital and Interest*, V. 1, p. 354, states it as his goal "to trace the phenomenon of interest back to beginnings which are among the simplest natural and psychological fundamentals of our economic system." But for a mathematical-functional restatement of his theory see Robert E. Kuenne, *Eugen von Böhm-Bawerk* (New York: Columbia University Press, 1971), pp. 51–63.

[29] See Howey, *The Rise of the Marginal Utility School*, p. 148.

[30] Menger, *Principles of Economics*, pp. 117–118, 140, 145, 162. Also see Howey, *The Rise of the Marginal Utility School*, p. 45.

[31] Böhm-Bawerk, *Capital and Interest*, v. 2, p. 217.

[32] Schumpeter, *History of Economic Analysis*, p. 18n.

[33] Schumpeter, *History of Economic Analysis*, p. 918.

[34] See, for example, Eugen von Böhm-Bawerk, "The Austrian Economists," *Annals of the American Academy of Political and Social Sciences* 1 (Jan. 1891): 365.

[35] Streissler, "To What Extent Was the Austrian School Marginalist?" p. 427. Also see Erich Streissler, "Structural Economic Thought: On the Significance of the Austrian School Today," *Zeitschrift für Nationalökonomie und Statistik* 29 (Aug.–Dec. 1969): 248.

[36] Hayek, "Friedrich von Wieser," *Jahrbucher für Nationalökonomie und Statistik* (1926), translated and abridged in Henry William Spiegel, *The*

Development of Economic Thought: Great Economists in Perspective (New York: John Wiley & Sons, 1952), p. 560.

[37] Schumpeter, "Eugen von Böhm-Bawerk," *Neue Oesterreichische Biographie* (Vienna: Amalthea Verlag, 1925), translated and abridged in Spiegel, op. cit., p. 578. See also Schumpeter, *Ten Great Economists*, pp. 157–161.

[38] Schumpeter reports, in *History of Economic Analysis* (p. 847, n. 8), that Menger considered Böhm-Bawerk's capital and interest theory "one of the greatest errors ever committed." It is Lachmann's view that Menger found Böhm-Bawerk too eager to simplify and objectify in order to achieve results. See Lachmann, *Capital, Expectations, and the Market Process*, pp. 27, 264. This view is shared by Steissler, "To What Extent was the Austrian School Marginalist?," p. 435.

[39] Kauder, "Intellectual and Political Roots," pp. 415–416.

[40] See Böhm-Bawerk, "The Historical vs. the Deductive Method in Political Economy."

[41] Hayek, "Economic Thought: The Austrian School," p. 460.

[42] Wieser, *Social Economics*, p. 3.

[43] *Social Economics*.

[44] Menger, *Problems of Economics and Sociology*, pp. 61, 69.

[45] Böhm-Bawerk, "The Historical vs. the Deductive Method in Political Economy." p. 263.

Additional Books and Articles by Ludwig von Mises

[Mises Bibliography](#)

[46] Alan R. Sweezy, "The Interpretation of Subjective Value Theory in the Writings of the Austrian Economists," *Review of Economic Studies* 1 (June 1934).

[47] "The Interpretation of Subjective Value Theory in the Writings of the Austrian Economists."

[48] Strigl, in *Die ökonomischen Kategorien und die Organisation der Wirtschaft* (1923) distinguishes the categories from the data of economic science. The categories are derived from the fundamental fact of choice in the face of scarcity, and their validity is as general. From these categories all the laws of pure economics, which reveal the forms or qualitative relationships present in economic events, can be deduced. Statistical or other historical facts enter only as the "particularizing content" or reference of the laws. Sweezy, op. cit. On the realist-formalist split see also Sweezy, "The Austrian School and the Interpretation of Subjective Value Theory."

[49] Mises, *Human Action*, p. 488. For Mises's critique of Menger's and Böhm-Bawerk's insufficient subjectivism see *Epistemological Problems of Economics*, ch. 5.

[50] Mises, *Human Action*, p. 18.

[51] Mises, *Epistemological Problems of Economics*, pp. 93–94.

[52] See Murray N. Rothbard, "In Defense of 'Extreme A Priorism,'" *Southern Economic Journal* 23 (Jan. 1957): 314–320.

[53] See the review by Lachmann, "The Science of Human Action," in *Capital, Expectations, and the Market Process*, esp. p. 95.

[54] For an outline of the branches of praxeology, see Murray N. Rothbard, "Praxeology: Reply to Mr. Schuller," *American Economic Review* 41 (Dec. 1951): 943–946.

[55] Mises, *Human Action*, p. 124. For a critical discussion of this and other claims see Robert Nozick, "On Austrian Methodology," *Synthese* 36 (Dec. 1980): 353–392.

[56] Mises, *Human Action*, p. 39.

[57] Lachmann, "The Science of Human Action," p. 416.

[58] Ludwig von Mises, *The Ultimate Foundation of Economic Science: An Essay on Method*, (Kansas City: Sheed, Andrews and McMeel, 1978), pp. 4–6.

[59] Mises, *Human Action*, p. 30. On history also see Mises, *Theory and History* (Washington, D.C.: Ludwig von Mises Institute, 1985)

[60] Mises, *The Ultimate Foundation of Economic Science*, p. 41.

[61] Mises, *Epistemological Problems of Economics*, pp. 87–88. For another example, Mises acknowledged that the Austrian theory of the trade cycle depended on a particular empirical assumption concerning the expectations of entrepreneurs, namely that they misinterpret what are merely the results of an easy money policy. This assumption need not hold true in every historical case: "It may be that businessmen will in the future react to credit expansion in another manner than they did in the past." Mises, " 'Elastic Expectations' and the Austrian Theory of the Trade Cycle," *Economica* 10 (N.S.) (Aug. 1943): 251.

[62] Mises, *The Ultimate Foundation of Economic Science*, p. 41.

[63] Contrast *The Ultimate Foundation of Economic Science*, p. 41 with p. 44. Admittedly Mises is less than perfectly explicit on this distinction.

[64] Ben B. Seligman, *Main Currents in Modern Economics* (Chicago: Quadrangle Paperbacks, 1971), v. 2, p. 330, protests that Mises "blithely cast out historical investigation of economic phenomena and reduced them to mere forms of economic history, not especially useful for the art of discursive reasoning. . . . The truth of the matter would seem to be that historical approaches are valuable to economists as well as other social scientists."

[65] Mises, *Theory and History*, p. 291.

[66] Mises, *Human Action*, p. 47.

[67] This task of historical verification is undertaken, for example, by Murray N. Rothbard, *America's Great Depression* (Kansas City: Sheed and Ward, 1975), chs. 4–5, to show that credit expansion really did take place prior to 1929.

[68] See Hayek, "The Place of Menger's Grundsätze," p. 8.

[69] Menger, *Problems of Economics and Sociology*, p. 142n.

[70] Mises, *The Ultimate Foundation of Economic Science*, pp. 23, *The Ultimate Foundation*, pp. 36, *The Ultimate Foundation*, pp. 40, *The Ultimate Foundation*, pp. 115.

[71] Mises, *Human Action*, p. 355.

[72] *Human Action*, P. 354.

[73] *Human Action*, p. 356, emphasis added. For the argument that this statement has not yet been falsified by a counter-example see Lawrence H. White, "Mises, Hayek, Hahn, and the Market Process," in Israel M. Kirzner, ed., *Method, Process, and Austrian Economics: Essays in Honor of Ludwig von Mises* (Lexington, MA: Lexington Books, 1982), p. 108.

[74] Mises, *Human Action*, pp. 354, 356–357. Hayek, we might note, takes a rather less negative view of mathematical economics, in particular viewing Walrasian general equilibrium systems as useful explanations of economic patterns: Hayek, "The Theory of Complex Phenomena," in *Studies in Philosophy, Politics, and Economics* (New York: Simon and Schuster, 1969), p. 35.

[75] F.A. Hayek, *The Counter-Revolution of Science* (Glencoe, IL: The Free Press, 1952), p. 25. Hayek continues the attack on scientism in his Nobel lecture, "The Pretence of Knowledge", in *New Studies in Philosophy, Politics, Economics, and the History of Ideas* (Chicago: University of Chicago Press, 1978), pp. 23–34.

[76] See E. Streissler and W. Weber, "The Menger Tradition," in Hicks and Weber, eds., *Carl Menger and the Austrian School of Economics*, p. 231.

[77] Menger, *Problems of Economics and Sociology*, p. 84.

[78] *Problems of Economics and Sociology*, p. 84.

[79] Mises, *Epistemological Problems of Economics*, ch. 4.

[80] Hayek, "Economics and Knowledge," in *Individualism and Economic Order* (Chicago: Henry Regnery, 1972), p. 46.

[81] Hayek, *The Counter-Revolution of Science*, p. 99. Also see Hayek, "The Use of Knowledge in Society," in *Individualism and Economic Order*.

[82] Hayek, "Competition as a Discovery Procedure," in *New Studies*, pp. 179–190; "The Meaning of Competition," in *Individualism and Economic Order*, pp. 92–106. See also Israel Kirzner, "Methodological Individualism, Market Equilibrium, and Market Process," *Il Politico* 32 (Dec. 1967).

[83] Lachmann, "The Significance of the Austrian School," p. 54.

[84] See Hayek, "Carl Menger," p. 18.

[85] Hayek, "Economics and Knowledge," pp. 36–37.

[86] Hayek, "The Results of Human Action but Not of Human Design," in *Studies*, pp. 96–105.

[87] Hayek, *The Counter-Revolution of Science*, pp. 38–39.

[88] Hayek, "The Facts of the Social Sciences," in *Individualism and Economic Order*, p. 75.

[89] See, for example, "The Theory of Complex Phenomena," in *Studies*, p. 41, where Hayek identifies "scientific" with "theoretical and falsifiable" and cites Popper. See also his praise of the Popperian demarcation principle in "The Pretence of Knowledge," p. 31. Mises, in *The Ultimate Foundation of Economic Science*, pp. 69–70, argues that the falsifiability criterion is not relevant to the theoretical sciences of human action, where there are no experimentally established facts. He adds that if its *a priorism* makes praxeology "unscientific," the same may be said of mathematics. This is another instance of Mises's strict separation of theory from history.

[90] Hayek, "Economics and Knowledge," p. 44; see also pp. 33–36, 46–47. For an illuminating discussion see Israel M. Kirzner, "Hayek, Knowledge, and Market Processes," in *Perception, Opportunity, and Profit* (Chicago: University of Chicago Press, 1979), pp. 13–33. If we are right in attributing to Mises the position that hypotheses concerning agents' perceptions are among those empirical auxiliary assumptions whose applicability must be verified in any historical (or "empirical") work using the praxeological laws based on them, then Mises and Hayek are perhaps not so far apart on this issue.

[91] This suggestion is made by T. W. Hutchison, *The Philosophy and Politics of Economics: Keynesians, Marxists, and Austrians* (New York: New York University Press, 1981), p. 215 *et seq.* Hutchison neglects, the fact that Hayek has continued even since 1937 to uphold subjectivism, methodological dualism (though less categorically), and methodological individualism, particularly in "The Facts of the Social Sciences" and *The Counter-Revolution of Science*.

[92] Lachmann, "The Significance of the Austrian School," p. 49.

[93] Lachmann, "The Science of Human Action," p. 95.

[94] Israel M. Kirzner, *The Economic Point of View* (Kansas City: Sheed and Ward, 1976), pp. 161–163.

[95] Lachmann, "The Significance of the Austrian School," p. 58; see also pp. 46–47. Mises, however, denies that economic theory has anything to do with typicality *Epistemological Problems of Economics*, p. 78.

[96] Lachmann, "Sir John Hicks as a Neo-Austrian," in *Capital, Expectations, and the Market Process*, p. 261.

[97] Lachmann, "Economics as a Social Science", in *Capital, Expectations, and the Market Process*, p. 170.

[98] See especially Lachmann, "From Mises to Shackle: An Essay on Austrian Economics and the Kaleidic Society," *Journal of Economic Literature* 14 (March 1976): 54–62; "An Austrian Stocktaking: 'Unsettled Questions and Tentative Answers,'" in Louis M. Spadaro, ed., *New Directions in Austrian Economics* (Kansas City: Sheed Andres and McMeel, 1978), pp. 1–18; and "Ludwig von Mises and the Extension of Subjectivism," in Kirzner, ed., *Method, Process, and Austrian Economics*, pp. 31–40.

[99] Lachmann, *The Legacy of Max Weber* (London: Heinemann, 1970), p. 12.

[100] Lachmann, "The Significance of the Austrian School," p. 58.

[101] Lachmann, *The Legacy of Max Weber*, pp. 5–6.

[102] See Lachmann, "From Mises to Shackle."

[103] Gerald P. O'Driscoll, Jr., "Spontaneous Order and the Coordination of Economic Activities," in Spadaro, ed., *New Directions in Austrian Economics*, pp. 128–134. See also Lawrence H. White, "[The Austrian School and Spontaneous Order: Comment on O'Driscoll](#)," *Austrian Economics Newsletter* 2 (Spring 1979): 6–7, and the resulting exchange between Lachmann and myself, "[On the Recent Controversy Concerning Equilibration](#)," *Austrian Economics Newsletter* 2 (Fall 1979): 6–7.

[104] Lachmann, *Macro-Economic Thinking and the Market Economy* (London: Institute of Economic Affairs, 1973), pp. 9–10.

[105] Lachmann, *The Legacy of Max Weber*, pp. 49–91.

[106] Lachmann, "The Science of Human Action," p. 100. Though he offers this as an interpretation of Mises's outlook it is clearly Lachmann's own view of economics.

[107] This conception of the task of economics is similar to that of Wieser: "Our theory finds in the consciousness of every economically active being a wealth of experiences which are common property of all.... The sphere of economic theory has the same limits as this common experience" Wieser, *op. cit.*, p. 4.

[108] Kirzner, *The Economic Point of View*, p. 161 *et seq.*

[109] Kirzner, "Methodological Individualism, Market Equilibrium, and Market Process," pp. 791–792.

[110] Kirzner, *Competition and Entrepreneurship* (Chicago; University of Chicago Press, 1973).

[111] Kirzner, "Hayek, Knowledge, and the Market Process," pp. 29, 30, 31, 34.

[112] See Murray N. Rothbard, "In Defense of 'Extreme A Priorism,'" *Southern Economic Journal* 23 (Jan. 1957): 314–320 and for an outline of the branches of praxeology, see Murray N. Rothbard, "Praxeology: Reply to Mr. Schuller," *American Economic Review* 41 (Dec. 1951): 943–946.

[113] Rothbard, "In Defense of 'Extreme A Priorism,'" p. 318. See also his recent, and valuable expository essay "Praxeology as the Method of Economics," in Maurice Natanson, ed., *Phenomenology and the Social Sciences*, vol. 2 (Evanston, IL: Northwestern University Press, 1973). Here Rothbard discusses the writings of phenomenologist Alfred Schutz, which have also been cited by Lachmann.

[114] Hayek, *Monetary Theory and the Trade Cycle* (Clifton, NJ: Augustus M. Kelley, 1975), reprint of the 1933 translation by N. Kaldor and H. M. Croome from the 1929 German edition, pp. 27–32.

[115] Rothbard, *America's Great Depression* (Kansas City: Sheed and Ward, 1975), pp. 16–17. See also Rothbard, *Man, Economy and State*, p. 746 and pp. 846 *et seq.*, and Hayek's essay "Price Expectations, Monetary Disturbances and Malinvestment" (1933), *Profits, Interest, and Investment* (Clifton, N.J.: Augustus M. Kelley, 1975), p. 141.

[116] Edwin O. Dolan, ed., *The Foundations of Modern Austrian Economics* (Kansas City: Sheed and Ward, 1976).

[117] Spadaro, ed., *New Directions in Austrian Economics* (1978); Mario J. Rizzo, ed., *Time, Uncertainty, and Disequilibrium: Exploration of Austrian Themes* (Lexington, MA: Lexington Books, 1979); Kirzner, ed., *Method, Process, and Austrian Economics* (1982). An essay by Mario J. Rizzo in this last-named volume, "Mises and Lakatos: A Reformulation of Austrian Methodology," is particularly noteworthy.