

Professor Caldwell on Ludwig von Mises' Methodology

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He who addresses fellow men, who wants to inform and convince them, who asks questions, can proceed in this way only because he can appeal to something common to all men—namely, the logical structure of human reason.

—Ludwig von Mises, *Human Action*, p. 35

Bruce Caldwell's recent writings on the Austrian school of economics (1982, chapter 6; 1984) are undoubtedly a positive contribution to economic thought. Caldwell argues correctly that

The usual criticisms of Austrian economics . . . have thus far proven unsuccessful, primarily because they proceed by assuming the validity of a rival epistemological system (e.g., positivism or falsification), then "proving" that the Austrian system does not meet the qualifications of their presumptively true system. (1982, p. 6)

Or, more specifically, he says:

(1) Many of the usual complaints against praxeology, so often considered to be conclusive, are anticipated and answered by Mises, and thus must be considered at this point inadequate, and (2) those that remain fail to take into account that the epistemological and methodological foundations of Austrian and neoclassical economics differ. (1982, p. 119)

These arguments carry considerable force since Caldwell is an "outsider" and is well read. He is familiar with both the most significant so-called economic methodologies and the major works in the philosophy of science and social science. Thus, he is like an informed tourist who has ventured into Austrian territory and returned to tell of his journey. But his journey has not been superficial. By focusing on the fundamental and difficult works of Mises, he is able to observe the best of a consistently Austrian position.

Although Caldwell is sympathetic with what he takes to be Mises' position, he does not go so far as to claim that Mises has been right all along and that other methodologies are wrong. His moderate conclusion is that the door is open for further debate and that such a debate may eventually succeed in resolving some of the contradictions or differences among alternative methodologies (1984, p. 373).

In effect, Caldwell claims that the rivalry between Austrian and alternative methodologies is far from over and he expresses the hope that the outcome of a future debate and cross-fertilization (which will undoubtedly be stimulated by his work) will be greater understanding. Although he keeps an open mind on the subject, his book advocates what he calls methodological pluralism (1982, chapter 13). He does not expect that Austrian methodology will be the "victor."

In both his book and his articles, Caldwell competently shows that Mises anticipated and answered the "external" criticisms of his a priorism. But then, as if to announce that he was able to go beyond Mises, Caldwell offers what he calls internal criticisms—i.e., criticisms that even Austrians (including presumably Mises himself, if he were alive) might accept.

I believe that Caldwell fails to uncover the essence of the Misesian system. As a result, his representation of it, although deeper than that of most of its critics, nevertheless fails to communicate its most fundamental strengths. That Caldwell does not communicate the strengths of Misesian economics is evidenced by the internal criticisms he suggests.

The first section of this article describes Misesian methodology. In the next, three of Caldwell's criticisms are discussed and refuted on the basis of text references. The final section briefly discusses the general problem of comparing Misesian methodology with alternatives.

Misesian Methodology

One cannot successfully evaluate criticisms of "Mises' methodology" without a more complete understanding of *Human Action* than Caldwell provides. It is easy to understand why Caldwell would have chosen not to present the argument in detail. Most economists are not interested in meticulous philosophical argumentation. Unfortunately, without giving the reader an idea of that argumentation, one can neither adequately present Misesian economics nor respond to Caldwell's so-called internal criticisms.¹ Thus, at the expense of taxing the reader's patience, I shall try in this part to summarize the relevant aspects of Misesian methodology.

The Relations in the Logical Structure of the Mind

The foundation of Misesian economic theory is contained in Mises' discussion of the a priori and can be found in *Human Action*. He discusses the a priori

in a section entitled "The Formal and Aprioristic Character of Praxeology," where he introduces what he calls "the problem of the a priori." This problem, he says, "refers to the essential and necessary character of the logical structure of the human mind" (1966, p. 34). Every attempt to prove the presence of the relations in this logical structure "must presuppose their validity. It is impossible to explain them to a being who would not possess them on his own account" (1966, p. 34). Mises says that all (normal, adult) human beings possess these relations: "Everybody in his daily behavior again and again bears witness to the immutability and universality of the categories of thought and action" (1966, p. 35). Mises invents the term *methodological apriorism* to refer to this set of statements: "The fact that man does not have the creative power to imagine categories at variance with the fundamental logical relations and with the principles of causality and teleology enjoins upon us what may be called *methodological apriorism* (p. 35).

What then are the relations that comprise the "essential and necessary character of the logical structure of the human mind" (p. 34)? Mises derives them from his definition of human action. In his section entitled "The Prerequisites of Human Action," he cites three such prerequisites: (1) man's "eagerness to substitute a more satisfactory state of affairs for a less satisfactory [state]," (2) his imagination of "conditions which suit him better," and (3) "the expectation that purposeful behavior has the power to remove or at least alleviate the felt uneasiness" (pp. 13–14).

It is tempting to refer to these statements as Mises' beliefs. But the word belief carries a relativistic connotation that reflects neither Mises' thoughts nor the philosophical tradition from which they stem.² The tradition is fundamentally Cartesian. For Mises, the statement "I am human, therefore I act" carries a degree of forcefulness that is comparable to the statement "I think, therefore I am." One cannot imagine himself being human without implicitly assuming that he acts just as one cannot imagine himself thinking without implicitly assuming that he exists.

Upon reading Mises' description of these prerequisites, an outsider is inclined to think that it is a description of the subjects of his studies—in economics, a description of the economic actors, perhaps with the same status as *homo economicus*. This is not wrong. But it is incomplete. More fundamentally, the description is intended to apply to all normal human beings, including the economist and the comparer of methodologies.³ Because of this, it can be regarded as an appeal to the intuition of the reader. Mises asks the reader whether he would deny that he possesses the three prerequisites. If the reader honestly denies that he possesses them, Mises would presumably have nothing to say to him. As previously quoted, "It is impossible to explain [the logical relations] to a being who [does] not possess them on his own account." The reader could not be called a human actor.

Mises deduces (defines) the relations in the logical structure of the human mind from the previously named three prerequisites of human action. First,

he deduces (defines) the idea of *causality*. The human actor must “know” what it means for his action to cause a state of affairs to be different from what it otherwise would be:

Acting requires and presupposes the category of causality. Only a man who sees the world in the light of causality is fitted to act. In this sense we may say that causality is a category of action. (1966, p. 22)

The concept of causality is not a simple one. In particular, there is the issue of infinite regress. If A is caused by B, what then causes B? One is sometimes inclined to approach this problem by invoking teleology—the idea that there is a first cause. These two ideas, causality and teleology, coexist in the mind, says Mises. He says that both causality and teleology are deducible from the prerequisites of action (pp. 22–25).

Also deducible from the prerequisites of action are the concepts of time and uncertainty. First, consider time.

The notion of change implies the notion of a temporal sequence. . . . The concepts of change and of time are inseparably linked together. . . . Human reason is . . . incapable of conceiving the ideas of timeless existence and of timeless action. (p. 99)

Now consider uncertainty.

The uncertainty of the future is already implied in the very notion of action. . . . [Action and uncertainty are] two different modes of establishing one thing. . . . If man knew the future, he would not have to choose and would not act. (p. 105)

Praxeology

Economics, to Mises, means economic theory. Economic theory, in turn, is said to be a branch of what Mises calls *praxeology*. Thus, it is sensible to define praxeology before defining economics. Praxeology is a theory—a set of deductions based upon assumptions. Praxeology provides a framework that is used to help one explain historical events. (Since all known human events are past events, the term historical can be dropped without any loss in meaning.)⁴

Any historical event may be partly the consequence of nonhuman factors, such as the particular physical environment. It may also be partly the consequence of genetic evolution, the constraints of law, and nonpurposeful behavior. From the perspective of praxeology, however, it is most important that historical events are partly the consequence of human action. Because of this, there is a crucial distinction in Mises’ conception between observing a historical event and understanding the event.

To observe a historical event, one merely records “facts” in a way that can presumably be recalled and perhaps communicated to others. To understand a historical event, by Mises’ definition, one must identify the human beings whose actions in some way helped to cause the facts that are observed. Then he must insert his hypotheses about their actions (i.e., their ends and means) into a theory of interaction. The important point is that he must have a theory of the interactions of human beings, who possess the a priori categories.

It follows that any comprehensive description of particular historical events must be made partly in terms of a language (or theory) for communicating hypotheses that involve human action (the three prerequisites and the concepts Mises calls causality, teleology, time, and uncertainty). The theory that Mises develops to help describe (i.e., understand) the specifically human character of historical events is praxeology.⁵

Economic Theory

Economic theory, as defined by Mises, is one part, or branch, of praxeology. It is designed specifically to enable one to understand human action conducted on the basis of monetary calculation. Everyday economic action is entangled with action not conducted on the basis of monetary calculation. Moreover, human action itself is entangled with nonpurposeful behavior. The physical environment and law may often lead to nonpurposeful behavior. Accordingly, economic theory, by its nature, does not entail the construction of images of an entire historical event. It commands one’s attention to the economic aspects of historical events, i.e., those aspects that are caused by choices made on the basis of monetary calculation.

As theory, economics is a deductive system.⁶ Because it is about the distinctly human (i.e., logical or rational) part of human actors, its deductions are made on the basis of the a priori assumptions stated previously. To construct an economic theory, one combines the a priori assumptions with other, *subsidiary* assumptions. Subsidiary assumptions include the assumptions that groups of individuals use money, that they get disutility from labor, that they use capital, and especially that particular types of entrepreneurship are present. Some subsidiary assumptions are made in order to simplify by abstraction, since economic interaction is so complex. An example is the division of individuals into roles, such as the household, the business firm, and the banker.

In economic theory, subsidiary and simplifying assumptions are separate from the a priori “assumptions” that correspond to the a priori categories. To Mises, the a priori assumptions are necessary because they set apart the distinct phenomena of praxeology and because they are undeniable. Economists, as Mises defines them, must use these assumptions. Since economic subjects are human actors, their actions must manifest the assumptions.

How can one tell whether an assumption is a priori or subsidiary? The answer, according to Mises, is that it is impossible to imagine an alternative to an a priori assumption. For example, with respect to a priori assumptions, Mises says: “[As human beings ourselves, we] cannot think of a world without causality and teleology” (1966, p. 35). Subsidiary assumptions are different: “The disutility of labor is not of a categorial and aprioristic character. We can without contradiction think of a world in which labor does not cause uneasiness, and we can depict the state of affairs prevailing in such a world” (p. 65).

As previously mentioned, the a priori assumptions may give the appearance of being an alternative to *homo economicus*. Thus, it may seem reasonable to compare the “a priori being” with *homo economicus*. To Mises, however, the a priori being is the universal being of which *homo economicus* is one manifestation. The a priori being may, in certain circumstances, act identically to *homo economicus*. But the a priori being also has the option not to act like *homo economicus*. Indeed, all thinkable options must be regarded as being available to the a priori being. *Homo economicus*, however, could never become an a priori being. *Homo economicus* must always maximize his financial wealth in situations specified by the economist. The a priori being can create his own situations. He can even become an economist.

To put this still differently, *homo economicus* is a puppet or robot who is programmed by the economist. The a priori being is his own controller. It is the a priori being who encompasses the humanness in the human being. Economic models must be peopled by individuals who are programmed by the modelbuilder.⁷ They cannot be peopled by a priori beings.

The usefulness of models lies in the fact that they enable the modelbuilder to contrast (1) what he can, through reflection, come to know about the nature of the a priori being with (2) the puppet or robot that he employs in his model. In this way, he can isolate the inventive, creative, programming, controlling, alert aspects of human nature. In the context of economics, this means that by constructing models of an economy, he can set apart the characteristics of his a priori beings. He can also learn to attach more realistic characteristics to his roles. He does this by making reference to entrepreneurship and other catallactic functions.⁸

Discussion

It has been shown that Mises defines the human being in terms of a priori categories derived from the three prerequisites of action. He even goes so far as to suggest that persons who do not possess such categories are not normal human beings. It must now be asked whether there is any justification for defining the normal human being as Mises does.

It seems to the author that the possible viewpoints on this matter can be divided into three categories that would be progressively more agreeable with

Mises. The first viewpoint is that Mises is making a personal judgment about what constitutes humanness. This viewpoint holds that Mises is entitled to his judgment. But there is no reason why another judgment might not be more acceptable. If some other “economist” chooses to define a human being as compassionate, empathetic, status-seeking, driven by a need for companionship, or whatever, his choice is just as legitimate as that of Mises. Similarly, an economics based on the other economist’s definition of humanness ought to be every bit as acceptable as one based on the concept of human action, although it may be unfamiliar and novel.

A second viewpoint is a modified version of the first. It is that Mises’ concept of human action captures part of what it means to be human, but it does not capture all of it. It should be supplemented by an economic theory that recognizes compassion, empathy, and so on. In this view, Mises’ assertion about humanness is at best limited. One should be particularly careful to limit discussions of policy by emphasizing that they only apply to the imaginary world in which the only objective of human beings is to remove uneasiness in ways that can be accomplished by means of markets.

A third viewpoint represents the conviction that Mises was able to isolate a particular set of phenomena that are both important and capable of being analyzed by the methods he suggested. His definition of economics is immanently sensible because it separates this realm from other realms. Deductions in an economic theory so defined cannot yield information about what is best for human beings. But, to the extent that human action (as defined by Mises) is present, the deductions can give one valuable insights about some aspects of everyday interaction. To completely describe interaction, such deductions should be supplemented by what Mises would presumably call nonpraxeological theories. To describe everyday events, one would also have to use knowledge of the natural sciences and knowledge of how coercion is used.

Caldwell’s Misinterpretations

Given that the interpretation of Mises presented in this article is correct, it is not difficult to show that the three “internal criticisms” offered by Caldwell were answered by Mises. Each is discussed in turn.

Nonpurposeful Action

The first of Caldwell’s suggestions is based on the idea that there can be non-purposeful action. Caldwell cites the possibility, also suggested by Nozick (1977), that a type of nonpurposeful action is operantly conditioned behavior. Caldwell comments: “An uninformed observer would interpret such behavior as purposeful, but because it is conditioned behavior it is in fact non-volitional

and hence non-purposeful." Then he says that this may raise a problem for Misesian methodology because Mises "claims" that all human action is purposeful (1984, p. 375).

The answer to this is that Mises does not claim that all human behavior is purposeful. What Mises says is that human action is by definition purposeful. Caldwell confuses behavior with action and a claim with an a priori assumption. Mises says that a theory of human action (praxeology) is a necessary part of any explanation of human behavior. But it is not the only part. A theory of nonpurposeful behavior also is a necessary part of a complete explanation of human behavior. Mises did not conceive of economic theory as a complete theory relating to human behavior. Thus, this particular Nozick criticism is beside the point.⁹

It can be said that Mises claims that purposeful behavior exists and that it is the distinct characteristic of the human being. But the word *claim* seems to greatly understate Mises' view. Mises says that he, the reader, and all normal human beings can recognize the purposefulness of others in the same species by recognizing the purposefulness in themselves. It is difficult to see how such a "claim" could be contradicted.

It is odd that Caldwell considers operantly conditioned behavior a source of possible internal criticism, since he clearly recognizes "that in Mises's system all action is rational because all action is by definition purposeful" (1982, p. 119). The only sensible explanation is that Caldwell failed to realize the difference between a theory of action, as Mises defined it, and a theory of all behavior. It is legitimate to criticize Mises for not being interested in nonrational (nonpurposeful) behavior. One might even argue on ethical grounds that economists should be more concerned with nonrational behavior than with rational behavior. But such a criticism would not be a criticism of Mises' methodology of economics. It would be a criticism of the scope that is encompassed by Mises' definition of economics.¹⁰

Alternative a Priori Assumptions

Caldwell's second suggestion is that there may be alternative a priori assumptions. This possibility is most extensively pursued in his 1982 book, (pp. 130–33), where he contrasts Mises' methodological apriorism with what he calls the apriorism of Hollis and Nell (1975). Hollis and Nell assert that the "reproduction of the system . . . is primary." If I understand Hollis and Nell correctly, they argue that production and reproduction is necessary because otherwise there would be no "system" to discuss.

It is easy to see that Misesian human action implies production in the sense that action itself means production (choice) of a state that is less unsatisfactory to the actor than an alternative state. The Hollis and Nell assumption does not imply human action, however. It applies equally to nonhuman life

and to human life. Animals and plants produce and reproduce “systems,” but we cannot use our self-understanding and intuition to determine with comparable confidence that they can construct images of the behavior or actions of other animals and plants. In any event, we can be fairly certain that animals and plants do not have methodological thoughts or engage in methodological discussions.

It is possible that Hollis and Nell would separate specifically human “systems” of production and reproduction from nonhuman systems. If so, they may identify a specific category of behavior that would correspond to Mises’ concept of action. But there is nothing in their alleged *a priori* assumption to suggest that they would do this. Thus, one might expect that a theory built on the Hollis and Nell assumption would enable the theorybuilders to capture some aspects of all life. However, there would be no reason to expect such a theory to have anything perceptive to say about economic interaction in the Misesian sense.

If there are indeed *a priori* assumptions that can be considered as alternatives to those made by Mises, they must apply to the philosopher, the economist, and the subjects studied by the economist. And, if the assumptions are to deal with the same subject matter that Mises was concerned with, they must relate to human thinking, choosing, and planning.

Theory versus Hypothesis

A third suggestion relates to hypothesis testing. Caldwell says that “Mises’ view that the predictions which emerge from praxeology cannot and should not be used to test the theory directly conflicts with the standard approach” (1984, p. 371). This statement does not adequately represent the “conflict.” Praxeology does not generate predictions. Praxeological and economic models, which are based on *a priori* assumptions and subsidiary assumptions, yield deductions. If subsidiary and simplifying economic assumptions are realistic, the deductions will represent a “real” economic phenomenon, in Mises’ sense. But whether an observer of everyday life can separate that “real” economic phenomenon in Mises’ sense from the noneconomic phenomena with which the economic phenomenon is invariably entangled depends upon his knowledge of the noneconomic phenomena.

The conflict is not over whether predictions can or should be tested. One conflict is over whether an economic deduction in Mises’ sense is the same as the hypotheses that are tested by “the standard approach.” A second conflict is over whether testing an economic deduction can be adequately accomplished when the tester lacks knowledge about noneconomic phenomena and when he cannot directly observe the fundamental economic phenomena.

Thus Caldwell’s conclusion that “Surely, one way to discover whether a mistake in reasoning has been made is to see if the chain of logic leads to predictions that are disconfirmed by evidence” (1984, p. 371) seems misplaced and

confusing. Misesian economic theory, by itself, does not necessarily yield predictions about the phenomena of everyday life. The only way to use Misesian economic theory to generate such predictions is to employ subsidiary assumptions that reflect the “true” preferences, the environmental conditions (i.e., natural science, law, culture, the capital structure, and other resources), and individuals’ knowledge of these conditions.

This is not to deny the significance of fact gathering. Rather, it is to put the task of fact gathering in a separate category from the task of constructing theory. Both are necessary if one wishes to describe historical events or to make predictions in everyday life. But the idea of testing the deductions in a model designed specifically to help one identify the characteristics of human beings that have not or cannot be modeled (e.g., entrepreneurship) is quite a bit different from what most economists have in mind when they speak of testing a hypothesis.^{11,12}

On the Problem of Comparing Methodologies

In an important sense, Caldwell’s work was exploratory. His “internal criticisms” were apparently not meant to denigrate Misesian economics. On the contrary, in his book at least, he issued a “challenge to the Austrians to come up with some means by which their system could be compared with its rivals” (1982, pp. 134–35). Within the context of this challenge, it seems appropriate to devote the final section to the issue of how the various methodologies could be compared.

Caldwell set a difficult task for himself when he sought to compare the “methodology” of Mises with positivism and falsificationism. A crucial part of his comparison should have been to determine whether these methodologies were focused on the same phenomena. Had he done this, I have no doubt that he would have discovered that Mises restricted the definition of economic phenomena to the realm of the purely purposeful and subjective. Mises did not by any means deny the significance of nonpurposeful and objective phenomena. He simply did not regard them as directly relevant to the problem of constructing a pure logic of human action.

Mises presented what, from the perspective of positivism or falsificationism, may be considered a rival definition of the subject matter of economics. In his economic theory, he was not interested in most of the phenomena that modern positivists or falsificationists (i.e., most modern economists) would label economic. His concern was with the choices that cause wants to get satisfied in a capitalist economy. In other words, he was concerned with “entrepreneurial” choices and their consequences and with other factors that individuals regard as instrumental or relevant in the satisfaction of wants.

Positivists or falsificationists are interested at least partly in entrepreneurship and these other factors. But they are also interested in such items as the

rate of statistical unemployment, the purchasing power of money, the size of the GNP, the magnitude of investment spending, the market interest rate, and other statistical figures.

It is true that these numbers are partly caused by entrepreneurship and that they are related to the other factors. But the numbers also reflect the conditions of the natural environment, prevailing law, and the particular preferences, knowledge, and habits that have been transmitted through cultural processes. Because Mises did not regard these latter conditions as economic, the statistics were not so relevant to him. Since Misesian economics focuses on entrepreneurial choices, the presence of which could not often be discovered by means of statistical analysis, Mises regarded positivism and falsificationism as largely irrelevant to economics.¹³

A proper comparison of Misesian methodology with that of positivism or falsificationism requires the comparer to designate the phenomena with respect to which the methodologies are being compared. Misesian economics is mainly concerned with entrepreneurship and its consequences. Modern positivist or falsificationist economics is defined more broadly; yet it includes entrepreneurship and its consequences. It follows that a proper comparison of the two should be based only on the common phenomena—entrepreneurship and its consequences.

This is the comparison that Mises typically made. Unfortunately in the author's view, Mises' terminology was not suitable to the ideas he wished to convey. As a result, too few readers of *Human Action* recognized that his provocative criticisms of the use of positivism, scientism, statistics, and mathematics were based on his view that economics should be defined differently than it was coming to be defined in the mainstream literature and in the universities. It is hoped that this article will succeed in redirecting the interested reader's attention to the definition of economics that Mises had in mind.¹⁴

Notes

1. That a more complete presentation is necessary is apparently substantiated by the more recent criticisms of Caldwell that were published in *History of Political Economy*. In the first, Abraham Hirsch mainly criticizes Caldwell for not providing a more detailed justification for his sympathy with Mises. According to Hirsch, Caldwell should have dealt with what most readers, Austrian or not, would regard as contradictions in *Human Action*. Most importantly, says Hirsch, he should have explained how Mises was able to reach such sweeping normative conclusions about capitalism on the basis of his theory of human action, which ignores "nonrational" behavior.

It would not have been necessary for Caldwell to discuss all of *Human Action* to avoid this criticism. He would only have had to recognize that the issue of methodology is sufficiently divorced from that of application that it is possible to elucidate and evaluate the foundation of praxeology, as well as Mises' justifications

for his methodological apriorism, without referring at all to what Mises thinks or claims such a method implies for the “good of individuals” under capitalism. One can justifiably criticize Mises’ own economic reasoning as well as his apparently normative conclusions without ever mentioning or understanding his methodology.

In the second criticism, Eugene Rotwein criticizes Caldwell for not providing sufficient support for methodological apriorism to justify Caldwell’s conclusion that Mises adequately defended it against the standard criticisms. Whether Caldwell did or did not provide sufficient support, it is evident that Rotwein himself did not come to understand Mises’ arguments either directly by reading Mises’ text or indirectly by reading Caldwell. Of particular significance is Rotwein’s contention that “the general empirical spirit of science operates to check the growth of dogma, and patently so as compared with apriorism, which is the equivalent of a claim to the possession of a pipeline to the Deity” (p. 671). Only someone who had not come to understand the history of subjectivism and its role in the emergence of Mises’ apriorism could reach such a conclusion. It is precisely the fact that “the general empirical spirit of science” (which itself is a manifestation of subjectivism) does not function to check the growth of dogma in the science of human action that compels the scientist to employ a different check—that of subjectivism. However, the employment of subjectivism itself entails the use of a priori assumptions about the nature of subjects and the scientists. The greatest contribution of Mises to social-science methodology was his recognition and elucidation of this.

2. An interesting paper regarding philosophical foundations of Austrian economics has been written by Barry Smith (1986). This should be compared with Mises’ *Notes and Recollections* (1978).

3. For the definition of *normal*, see Mises (1966, p. 14).

4. The word *explain* encompasses (1) personal interpretation and (2) communication of one’s personal interpretation to others.

5. The word *understand*, as used here, is derived from the German concept of *verstehen*. Mises contrasts it with concept formation. See Mises (1981, chapter 3; 1966, pp. 47–59). Also see Lachmann (1971, chapter 1).

6. *Economics* and *economic theory* are synonymous. The synonym for *applied economics* is the economic understanding of history.

7. Mises calls a model an imaginary construction in order to emphasize the point that a model in economics is not intended to be a small representation of a larger reality, like a scale model of an industrial park.

8. Praxeology employs a priori reasoning (Mises, 1966, p. 32). In discussing a priori reasoning, Mises says:

The significant task of aprioristic reasoning is on the one hand to bring into relief all that is implied in the categories, concepts, and premises and, on the other hand, to show what they do not imply. It is its vocation to render manifest and obvious what was hidden and unknown before. (1966, p. 38)

Also see Mises (1966, pp. 251–55).

9. For a thorough, point-by-point critique of Nozick’s Interpretation of Mises, see W. Block, “On Robert Nozick’s ‘On Austrian Methodology’ ” (pp. 397–444).

10. Caldwell also refers in passing to Nozick’s view that methodological individualism as practiced by “Austrians” constitutes reductionism. Nozick says: “The methodological individualist claims that all true theories of social science are *reducible*

to theories of individual human action, plus boundary conditions specifying the conditions under which persons act" (1977, p. 353). He cites Hayek as holding this view. The problem with this statement is the potential ambiguity of the word *theory*. From the context, Nozick really means *hypotheses*. Nozick is not concerned with the problem of building a many-person model from the separate models of individuals (i.e., theories). Instead, he is concerned with the process of interpreting many-person interaction in terms of hypotheses about individuals. The point of methodological individualism in theory has nothing to do with whether actual interaction can be described solely in terms of individuals. Instead, as used by Mises, it deals with the question of whether a model of many-person interaction that is constructed by the economist, who is concerned only with human action, is logical. If it is logical, it must be reducible. If it is not reducible, it is not logical and must be jettisoned. Nozick apparently did not realize the limited scope of praxeology and economics, as Mises defined them.

11. Some of Caldwell's confusion might have been avoided by a more discriminating use of the word *theory*. The practice of equating theory with hypothesis has little to recommend it.

12. For a more complete discussion of Mises' distinction between theory and its application, see Mises' *Theory and History* (1969).

13. Mises did not regard the statistics as irrelevant in general. Indeed, to explain any particular historical event, one should use knowledge of all types, including knowledge of statistics. "In dealing with a historical problem the historian makes use of all the knowledge provided by logic, mathematics, the natural sciences, and especially by praxeology" (1966, p. 49).

14. It is not surprising that Caldwell himself did not recognize the difference in subject matter. *Human Action* is tough going for individuals who are trained in the positivism and falsificationism that has come to be the hallmark of reputable U.S. universities. It is significant to me, however, that the various "Austrians" listed as having commented in some way on Caldwell's paper apparently did not identify the difference in subject matter (1984, p. 377).

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