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Misesian Critique of Rothbard on the Method of Economics

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Appendix: Methodological Dualism

Rothbard's earliest successes in achieving professional recognition were on the subject of economic method. His first foray was a set of comments on a book review of the 1949 edition of Mises's HA (Rothbard 1951a, 1951b). He critiqued the reviewer partly on the grounds that he misunderstood Mises's method of doing economics. Later in the decade, he wrote an article entitled "In Defense of 'Extreme Apriorism'" (Rothbard 1957 – DEA), in which he sought to bring the "method of praxeology" to bear on a contemporary controversy in professional economics. During the 1960s, he published practically nothing relating to Mises's methodology, except for an appendix in his book *Man, Economy and State* (MES). He returned to writing about this subject in the 1970s after Mises passed away. First, he wrote an essay for the profession in 1973 (1973c). Then he targeted (1) philosophers of science and (2) young would-be Austrian economists who he hoped to persuade to follow his ideas (1973b; 1976a).

In his writings on method, he was mainly concerned with two subjects relating to Mises. The first is how economists deduce theorems. He wrote that Austrian economists deduce theorems by logically combining the concept of action with subsidiary assumptions. The second is economic positivism, which he criticized, as Mises had done.

This chapter discusses both subjects. In the case of theorem building, I show that he displayed little understanding of how to build the theorems that had been produced by the individualist economists and Mises. Part of the reason for this may be that he really did not do economics at all. His aim was to do ethics, as I pointed out in my essay on the noninvasive society. Ethical theorems are very different from economic theorems. The latter require a particular class of subsidiary assumptions and imaginary constructions. Nevertheless, a comparison is warranted for two reasons.

First, a number of Rothbard's writings are ostensibly concerned with the subject of economic method in which he uses the term "theorem." Second, in two of these writings, he described a relationship between assumptions and deductions that can be can be compared with Mises.

In the case of economic positivism, the comparison is easier. Whereas Mises's critique was based on two pillars, Rothbard's was based on only one. Rothbard disregarded the division of labor law. Part One compares the two authors on the method used to build economic theorems. Specific examples of his confusion on how theorems are built are presented in my essay The Methodology of Economics: Mises vs. Rothbard. Part Two compares them on their treatment of economic positivism. Part Three briefly summarizes the differences.

1. ECONOMIC THEOREMS AND THE PROCEDURE FOR BUILDING THEM

An economic theorem is a statement that tells the sequence of actions undertaken by a number of individual actors under the conditions of capitalism and the effects of those actions. Its endpoint is a state of rest. Rothbard assumes that market interaction would occur in his noninvasive society. It follows that if he wanted to build theorems to depict market interaction under capitalism, he would have to employ a method that is similar to, or even identical to, that employed by Mises. For him to do this, however, he would have had to be committed either to the task of interpreting historical events or to the task of evaluating intervention arguments. Rothbard's primary aim was different. He wanted to derive theorems that would enable him to conclude that all voluntary action is beneficial and that all coercive action is harmful to at least one person. He wanted support for his anarcho-capitalism agenda. He achieved his goal by assuming that individuals do not perform invasive acts and that market interaction under the conditions of capitalism could exist without government, as pointed out in my noninvasive society essay. As a result, to compare the two on theorem production is like comparing apples and oranges. A comparison of how to build theorems to support an ethical system with how to build theorems to help interpret historical events or to evaluate intervention arguments provides no information about Rothbard's understanding of how to build economic theorems.

There is nevertheless a basis for comparison. As I stated, Rothbard asserted that market interaction under the conditions of capitalism would take place in his noninvasive society. Moreover, he sought to maintain the facade that his work was based on that of Mises. In doing so, he at least implied that he knew how to produce theorems for market interaction under capitalism.

If, in fact, he built an image of interaction under capitalism, he would have had to begin with and image of interaction under *pure capitalism*, as Mises had done. In addition, he would have had to produce
the vocabulary required to make the transition from the prerequisites and necessary characteristics of action in pure praxeology to the depiction of action under the special conditions of pure capitalism. It follows that if Rothbard had described market interaction accurately for his noninvasive society, he would have had to also describe a method and theorem-building process. Part One of this chapter and all of the next chapter show that he seems to have copied the most superficial parts of Mises's theorem-building process, while failing to comprehend how Mises had actually built the theorems.

It is worth reviewing that process. The economist begins by wearing the hat of the pure praxeologist. He uses aprioristic reasoning in a ratiocination procedure that employs counterfactual imaginary constructions to derive the prerequisites and necessary characteristics of action. Second, the economist *deduces* a theorem for economics by combining these prerequisites and necessary characteristics of action with assumptions about the conditions that he aims to build theorems about. There can be no dispute on these points. Rothbard seems to have appreciated the importance of beginning with the prerequisites and necessary characteristics of action and of employing subsidiary assumptions. This is evident from the discussion in appendix A of his chapter 1 in MES. That discussion is a follow up to his statement in the preface of his book, where he writes that his aim is to add a "few bricks to the noble structure of economic science that has reached its most modern and developed form in the pages of *Human Action*." He writes:

> The present work deduces the entire corpus of economics from a few simple and apodictically true axioms: the Fundamental Axiom of *action* – that men employ means to achieve ends, and two subsidiary postulates: that there is a *variety* of human and natural resources, and that leisure is a consumers' good (MES: xciv).

In the appendix, he writes:

> This analysis takes as its fundamental premise the existence of human action. Once it is demonstrated that human action is a necessary attribute of the existence of human beings, the rest of praxeology (and its subdivision, economic theory) consists of the elaboration of the logical implications of the concept of action. Economic analysis is of the form:
>
> (1) Assert A – action axiom.
> (2) If *A*, then *B*; if *B*, then *C*; if *C*, then *D*, etc. – by rules of logic.
> (3) Therefore, we assert (the truth of) *B*, *C*, *D*, etc. (MES: 72)

At best, this is only a sketch. He writes nothing about how the user of "economic analysis" can deduce economic theorems from the "action axiom." Later in the appendix he writes of the relationship between praxeology and economics (MES: 74). But he adds nothing significant about the character of the additional assumptions or postulates that are needed to deduce economic theorems.

Nor is it helpful to examine his theorems for the noninvasive society. One can certainly identify such theorems in MES. But he does not trace them back to the prerequisites and necessary characteristics of action. He only traces them to his assumption that the noninvasive society contains no invasive actions.

In order to find anything approaching a recipe for producing economic theorems in Rothbard's writings, the reader has only one option. He must refer to DEA. In that article, he cited specific subsidiary assumptions and made assertions, at least in a general sense, about how the economist uses these assumptions to produce concepts and theorems pertaining to market interaction. These statements or theorems can be compared with those of Mises, although such a comparison is tedious. I devote my article The Myth of Extreme Apriorism in Austrian Economics to this task. In the rest of this part, I briefly discuss three general issues relating to Rothbard's depiction of the theorem-producing process. The first is his claim in his DEA article that the economist does not test assumptions. The second is the relationship between ratiocination and what Rothbard called the "*gedankenexperiment*" in his 1973b article. Third, I examine his proposition in a 1976 article that praxeology is the method of economics.

The Economist Does Not Test Assumptions

The 1957 article refers to what Rothbard believed was Mises's method of building economic theorems. He writes the following:

> [A] *praxeologist*...believes (a) that the fundamental axioms and premises of economics are absolutely true; (b) that the theorems and conclusions deduced by the laws of logic from these postulates are therefore absolutely true; (c) that there is consequently no need for empirical "testing," either of the premises or the conclusions; and (d) that the deduced theorems could not be tested even if it were desirable (DEA: 2).

Since the first person to use the term "praxeology" in relation to economics is Mises, Rothbard must be referring to him. It is evident, however, that Rothbard is dead wrong about what Mises believed about this subject. Mises wrote that to reduce the prospect for error in building his theorems, the builder must

> submit all his theories again and again to the most critical reexamination. This means for the economist to *trace back all theorems to* their unquestionable and certain ultimate basis, *the category of human action*, and to *test* by the most careful scrutiny *all assumptions and inferences* leading from this basis to the theorem under examination (Mises 1966 : 68)

Of course, the economist does not use experiments or observations of physical relationships to test whether his assumptions are realistic. Nevertheless, he does try to match the assumptions made in his theorems with the conditions of impure capitalism that either prevail in reality or that some proponent of an intervention argument assumes to prevail. In addition, the economist, by virtue of his being an economist, assumes that individuals acquire money and engage in economic calculation. If he is uncertain that individuals acted in these ways, he could hardly be confident that his theorems are relevant to achieving his goals as an economist. Whatever one may think of Rothbard's claim about the absence of a need to test, there is no doubt that it contradicts Mises's recommendation for producing realistic theorems.

Ratiocination and the *Gedankenexperiment*

I used the term "ratiocination" to refer to the method of studying action as a category and of producing economic theorems. Mises wrote that the method of praxeology and economics is the method of imaginary constructions. The pure praxeologist and the economic theorem-builder surely must use imaginary constructions. But the builder of theorems must choose which imaginary constructions to build. The choices she makes dictate the subsidiary assumptions she adds to the prerequisites and necessary characteristics of action. The the "*gedankenexperiment*" refers to the procedure of ratiocination and to the choice of subsidiary assumptions. It corresponds to the procedure Mises described when he wrote that there

> is no means of studying the complex phenomena of action other than first to abstract from change altogether, then to introduce an isolated factor provoking change, and ultimately to analyze its effects under the assumption that other things remain equal (Mises 1966: 248).

Rothbard writes the following about the *Gedankenexperiment*:

> The *Gedankenexperiment* is the economic theorist's substitute for the natural scientist's controlled laboratory experiment. Since the relevant variables of the social world cannot actually be held constant, the economist holds them

> constant in his imagination. Using the tool of verbal logic, he mentally investigates the causal influence of one variable on another. The economist finds, for example, that the price of a product is determined by two variables, the demand for it and its supply at any given time. He then mentally holds the supply constant, and finds that an increase in demand – brought about by higher rankings of the product on the value scales of the public – will bring about an increase in price. Similarly, he finds, again using verbal deductive logic, that if these value scales, and therefore public demand, are mentally held constant, and the supply of the product increases, its price will fall. In short, economics arrives at *ceteris paribus* laws: *given* the supply, the price will change in the same direction as demand; given the demand, price will change in the opposite direction from supply (Rothbard 1973b: 318).

Several things are noteworthy in this paragraph. First, discussions about the difference between real and mental experiments and about variables do not help to distinguish the two sciences. Natural scientists also do mental experiments. Moreover, since the phenomena they study is different, the term "variable" also has a different meaning. The comparison between the "economic theorist" and the natural scientist on these counts is mistaken.

Second, instead of using Mises's term "ratiocination," Rothbard refers to verbal logic. One might surmise that his purpose is to distinguish the economist's ratiocination from the logic contained in the mathematician's symbols and equations. This is a false comparison. Representing economic theorems by mathematical symbols is not an error. The error made by those who use mathematical symbols arises when the mathematician disregards the fact that the symbols must refer to the prerequisites and necessary characteristics of action, the assumed conditions of capitalism and a final state of rest.

Third, his example is also not helpful. He does not tell the reader how the theorist discovers that an increase in demand would "bring about" an increase in price. The theorist builds theorems about the effects of a change in demand on price by combining, through long chains of reasoning, knowledge of the prerequisites and necessary characteristics of action with subsidiary assumptions about the conditions of capitalism under which action occurs. He also must make definitions that correspond to the conditions of capitalism that he assumes. An example is profit maximization based on the image of integrated functions.

Rothbard's failure to inform his readers about how the praxeology-based economist builds the "ceteris paribus laws" (i.e., economic theorems) is particularly disconcerting in light of the fact that most readers of this passage will have learned demand and supply analysis from textbooks written by modern professional economists. It is essential to realize that the praxeology-based economist's approach to this subject is quite different from the approach taken in the textbooks. First, it requires the subsidiary assumption of the higher physical productivity of the division of labor, which enables the economist to deduce the division of labor law. In addition, it requires building a definition of the entrepreneur role based on the imaginary construction of integrated functions. Finally, it entails the use of initial and final states of rest. These requirements are seldom explained sufficiently in the textbook presentations for students to understand the method. Rothbard also does not present them in his treatise or in this article. As a result his broad reference to the *gedankenexperiment* does not lead a reader in the right direction.

One can only conclude that nothing of significance can be learned from Rothbard's reference to the *Gedankenexperiment*.

Confusion about Praxeology Being the Method of Economics

Rothbard's statement that praxeology is the method of economics is puzzling. He first mentioned praxeology as a "methodological viewpoint" in two articles he published in 1956: UWE: 226; DEA:

5. In MES, he used the term "praxeological" numerous times. However, in none of these cases did he try to support his use of these words by carefully defining his terms. He often referred his readers to pages in HA. Yet he used this term differently from Mises. Praxeology is not a methodological viewpoint. It is the theory of action in the abstract. Its study provides the foundation upon which economics – the theory of action under particular circumstances – is built.

Over a decade later he wrote two articles with similar titles: "Praxeology as the Method of Economics" (1973b – PME) and "Praxeology: the Methodology of Economics" (1976a). A close reading shows that he does not mean that praxeology is a method of producing economic theorems. He only means that the methods of studying the subject matter of economic history differ from the methods of studying the subject matter of the natural sciences. Because the subject matter is different, he argues, it must be studied in a different way. Specifically, the starting point is different. Since the economic historian studies purposeful action, its starting point is the derivation of the prerequisites and necessary characteristics of action – pure praxeology. Since the natural scientist studies non-purposeful phenomena, his starting point is observation and the conception of an experiment. The study of pure praxeology is not a method of building economic theorems. It is the starting point that enables the economist to build the theory-of-action foundation for the study of market interaction. To say that praxeology is the method of economics is to neglect the method of imaginary constructions which is required to build theorems.

Economic Theorems vs. Ethical Theorems

He is correct to maintain that the *logical process* of building theorems in ethics to evaluate government actions in his noninvasive society and theorems in economics are value free. Both employ methods that are revealed when one tries to conceive of the logical structure of the human mind. The error lies in his conflation of his ethical theorems with theorems about market interaction that have traditionally been studied by economists and that were elucidated by Mises.

2. POSITIVISM IN ECONOMICS

Positivism in economics, or *economic positivism*, is related to what Mises called "panphysicalism" in his 1966 treatise *Human Action* (23-4 – HA). It is an ideology held by many professional economists even today about how best to make economic policy judgments and to interpret historical events. These professionals believe that the phenomena that they call "economic" should be studied in the same way as the phenomena of the natural sciences. They maintain first that professional economists should try to describe all economic phenomena by referring to quantities. They should convert classes of economic phenomena into measurable "variables." They maintain second that, once they have identified the measurable variables, they should use meticulous observation and the meth-

Positivism in modern professional economics: an ideology held by some economists that the phenomena of economics should be studied in the same way as phenomena of the natural sciences.

1. Economists should define phenomena quantitatively, converting observed phenomena into "variables" that they can organize according to the principles of the science of statistics.
2. Economists should use meticulous observation and experiment, when possible, in order to test hypotheses about the relationships among the different variables.

ods that statisticians have devised for organizing their data to test hypotheses about the relationships among the different variables. When possible, they should conduct experiments.

This part presents Rothbard's view of positivism by exploring statements he made in three articles that span a period of two decades. It pays special attention to his references to Mises. It shows that when Rothbard interpreted Mises's statements about positivism, he disregarded an essential element that did not fit his agenda. Specifically, he disregarded all references to the special knowledge of the division of labor law. By doing this, he misled readers about Mises's critique of positivism in economics. The part begins with an overview of the difference between the two writers.

The Difference Between Mises and Rothbard

Mises's critique of economic positivism stands on two pillars, so to speak: the economist's special knowledge of the division of labor law and that the phenomena of economics are the consequence of purposeful action.

Like Mises, Rothbard criticized positivism. However, his critique rests only on the first pillar. He neglected the special knowledge discovered by the classical economists. His neglect of this special knowledge is a characteristic of his dismissal of Mises's treatment of economics as a value-free science of the means.

Difference between Mises and Rothbard on their critiques of economic positivism:

1. Mises's critique was based on:
   a. The special knowledge possessed by the economist of the division of labor law.
   b. The phenomena studied by economists, which result from distinctly human action.
2. Rothbard's critique was based only on the difference in the nature of the phenomena.

The difference between Mises and Rothbard can be traced to the different goals of their respective works. In my essay "How the Mises Institute Promotes Progressivism, I showed that Mises's main goal was to evaluate intervention arguments. To achieve this goal, he had to compare the conditions of capitalism faced by individuals in the absence of an intervention with those faced in its presence. The division of labor law provides the basis for this comparison. Rothbard neglected this law. It is true that the capitalism that he assumed would exist in his noninvasive society contains a division of labor. But it plays no part in his use of that image as a foil for evaluating the actions of government agents.

Having neglected the division of labor law in his evaluations of all government actions, he also neglected it in his interpretations of historical events and in his critiques of positivism. His neglect in these endeavors was a huge mistake.

Rothbard in the 1950s

Rothbard set the stage for all of his future treatments of positivism in his 1956 article, UWE, with his statement that "modern methodologists...have adopted the epistemology of positivism (now dubbed 'logical empiricism' or 'scientific empiricism' by its practitioners), which uncritically applies the procedures appropriate in physics to the sciences of human action". The scientists of human action study "historical 'facts' which are complex phenomena." Their aim is to explain these facts. Such facts are composites of the separate choices of numerous individuals. To explain the choices that cause the observable facts, the scientists assume that individuals think and choose. Their use of the positivist methods of the natural sciences cannot contribute to such an explanation (UWE: 226-7).

A year later, Rothbard entered a discussion with modern professional economists. In the 1950s, the subject of "method" had become a hot topic. The impetus for this was the publication of an article in 1953 by Milton Friedman entitled "The Methodology of Positive Economics." The subject was the method that economists ought to use in order to predict future economic phenomena. The disputants assumed that such phenomena could be measured, or quantified. They were concerned with how to produce hypotheses that could be reliably used to predict the quantitative measures of such phenomena in the future. Friedman had proposed that in the production of such hypotheses, it does not matter whether the assumptions made by the economist are realistic or can be verified as factual. If unrealistic assumptions enable the economist to accurately predict the phenomena, they should be used. This assertion prompted a cluster of articles and commentary.

One debate, which was published by the *Southern Economics Journal,* provided a perfect opportunity for Rothbard to make a mark. It was between Terence Hutchison and Fritz Machlup. In response to an article by Machlup, Hutchison had referred to Mises's methodology apparently because Machlup had previously been a colleague of Mises. Rothbard decided to enter the debate with his DEA article. Early in the essay, he implied that his purpose is to defend Mises's apriorism against attacks from modern professional economists. I discussed this article extensively in Part One of this chapter on method. The concern here is with the narrower issue of Rothbard's critique of positivism. I begin by referring to what Rothbard identified as the difference between Machlup and Hutchison.

> The crucial difference is that Professor Machlup adheres to the orthodox positivist position that the *assumptions* need not be verified so long as their deduced consequents may be proven true – essentially the position of Professor Milton Friedman – while Professor Hutchison, wary of shaky assumptions takes the more empirical – or institutionalist – approach that the assumptions had better be verified as well (DEA: 2).

Rothbard supported "Professor Hutchison's charge that the positivists [like Friedman] rest their case on misleading analogies from the epistemology of physics."

Assuming that the goal of building economic theorems is to explain historical facts (DEA: 2, 4, 6), he says that both the assumption that individuals choose and the assumptions about the conditions under which they choose must be realistic. With regard to the assumption that individuals choose, he refers to Mises. He writes that Mises "'assumes' only that men *act*, that is, that they have *some* ends, and use *some* means to try to attain them" (DEA: 5).[1]

Rothbard on Scientism

Rothbard elaborates somewhat in his 1960a article "The Mantle of Science," which was not aimed at an audience of professional economists. Substituting the term "scientism" for "positivism,"

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[1]The question arises of how we know that this assumption corresponds to reality. This is where Rothbard invokes apriorism. He says that this assumption is "self-evidently true." We cannot conceive of a world "where human beings exist but do not act" (*ibid*.). What he means is that the assumption is true because we define our subject matter (the historical facts) in such a way that it must be true.

He is not committed, however, to the *term* "apriorism." Whether the assumption that people act is called a priori or empirical is merely a matter of how one defines these terms (DEA: 6).

he describes it as "the profoundly unscientific attempt to transfer uncritically the methodology of the physical sciences to the study of human action" (Rothbard 1960a: 1). He refers to

> the critical attribute of human action: that, alone in nature, human beings possess a rational consciousness. Stones, molecules, planets cannot *choose* their courses; their behavior is strictly and mechanically determined for them. Only human beings possess free will and consciousness: for they are conscious, and they can, and indeed must, choose their course of action. To ignore this primordial fact about the nature of man – to ignore his volition, his free will – is to misconstrue the *facts of reality* and therefore to be profoundly and radically unscientific (*ibid*., some italics added).

Two points in this statement are of interest here. The first is the distinction between the two classes of phenomena, which suggests methodological dualism (see the Appendix to this essay). The second is his reference to the "facts of reality." This term means the same thing as historical facts, which he used in his earlier article.

The Function of Economics Is to Describe Historical Events

The meaning of these "facts of reality" becomes crystal clear in his PME article, which he wrote thirteen years later. In that article, he makes a distinction between economic theory and "applied economics." He writes that to build economic theory, the economist deduces "laws." A more accurate term would be "theorems." In any case, it is evident that he is referring to the process of deducing a theorem.[2] He says that economic theory refers to "the way in which the structure of economic laws is developed [and] the nature of those laws." Doing applied economics refers to "the ways in which the praxeological economist applies these economic laws to the social world" (PME: 318). The term "praxeological economist" refers to a person who aims to describe or explain the "facts of reality" by contrasting, or matching, what Rothbard calls "economic laws" with reality. Thus Rothbard writes:

> The praxeologist [i.e., the praxeological economist] *contrasts*, on the one hand, the body of qualitative, nomothetic laws developed by economic theory, and on the other, a myriad of unique, complex historical facts of both the past and the future (PME: 321, italics added).

The term "contrast" means "compare." One must presume that if there is no corresponding law to explain the reality, the "praxeological economist" recognizes a gap between his set of laws and the reality he aims to explain. To close this gap, he goes back to the drawing board and produces another law.[3] He conducts what Rothbard calls mental experiments (*gedankenexperiments*) that enable him to deduce *ceteris paribus* laws that are suitable for the explanation (PME: 318). These are necessary.

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[2]Also see his use of the term "deduced theorems" in DEA, which is discussed below.

[3]Mises had written that

> If a contradiction appears between a theory and experience, we always have to assume that a condition presupposed by the theory was not present, or else that there is some error in our observation (EP: 31).

> The disagreement between the theory and the facts of experience consequently forces us to think through the problems of the theory again. But so long as a re-examination of the theory uncovers no errors in our thinking, we are not entitled to doubt its truth (*ibid*.).

"Since the relevant variables of the social world cannot actually be held constant, the economist holds them constant in his imagination" (*ibid*.).

Of what do the laws built by the "economist" consist? They are laws pertaining to the choices people make and their motives.

> The praxeologist...holds that each historical event is the highly complex result of a large number of causal forces, and, further, that it is unique, and cannot be considered homogeneous to any other event...The economic historian combines all of his scientific knowledge with his understanding of motives and choices to attempt to explain the complex historical phenomenon of the price of bread (PME: 322).

In explaining the facts of reality like the price of bread, writes Rothbard, the theorist uses *methodological individualism*. According to this method, the *meaning* of a particular economic phenomenon that entails interaction among a group of actors "is the different *meaning* attached by the people involved" (PME: 336).

Rothbard's Misinterpretation of Mises

These quotations from various sources suggest that in his methodological writings, Rothbard stressed the task of describing historical events, or "reality." Judging from his critique of positivism, and his corresponding references to Mises, he assumed that Mises shared this view. He elected to report only on those writings that were relevant to explaining reality. Ignoring Mises's science of the means, he identified only the first pillar of Mises's critique of positivism and disregarded the second. The first example of this comes in his chapter "Mises on the Methodology of Economics" in his short 1973 book *The Essential von Mises*. There he writes of positivism as a method, or methodology, of explaining historical events (i.e., of explaining reality). He contrasts it with what he calls the methodology of praxeology, which he attributes to Mises (Rothbard 1973a: 32). He goes on to write that "each event, each act, in human history is different and unique, the result of freely acting and interacting persons; hence, there can be no statistical predictions or 'tests' of economic theories" (*ibid*.: 33). He disregards the idea that economics is, like the natural sciences, a science of the means. Correspondingly, he disregards the division of labor law.

Why Mises Distinguished Economics from History

As pointed out above, Rothbard defined the task of interpreting historical events – history – as applied economics. Mises could have done the same. He could have built a classification system of the sciences of human action in which both doing economic history and making statements about economic policy are applied economics. After all, the theorems of pure capitalism are required for both. But he did not. The reason was apparently that Mises did not want readers to confuse the task of interpreting historical events with that of evaluating intervention arguments. Indeed, he believed that economic positivism[4] had led to policies that had reduced, rather than expanded, the division of labor. Thus he wrote of a broader field than praxeology and called it the "science of human

[4]Mises discussed this in EP. He writes:

> No political or economic program, no matter how absurd, can, in the eyes of its supporters, be contradicted by experience. Whoever is convinced a priori of the correctness of his doctrine can always point out that some condition essential for success according to his theory has not been met (EP: 30).

action." Then he broke the broader field into two branches: praxeology and history. Economics is a branch of praxeology, while history stands on its own apart from praxeology.

Rothbard did not follow the same classification system. As a result he diverted attention away from Mises's science of the means. He did so probably because he wanted to promote his ethical approach to policy.

Rothbard Disregarded Mises's Rationale for Calling Economics a Science

Despite rejecting Mises's rationale for calling economics a science, Rothbard does not shy away from using the term "science" to characterize his own work. His rationale is apparently that he regards explaining historical events, or reality, as *applied science* and the economic theorems that underlie such explanations *pure economic science*. To call economics a science also serves his purpose of deceiving readers about his substitution of his ethics of the noninvasive society for economics. His discussion of what he calls Mises's praxeology is telling. He writes:

> If praxeology shows that human actions cannot be pigeonholed into *quantitative laws*, how then can there be a scientific economics? Mises answers that economic science, as a science of human action, must be and is very different from the positivist model of physics. For, as the classical and Austrian economists showed, economics can begin by grounding itself on a very few broadly true and evident axioms, axioms arrived at by introspection into the very nature and essence of human action. From these axioms, we can derive their logical implications as the truths of economics. For example, the fundamental axiom of the existence of human action itself: that individuals have goals, act to attain them, act necessarily through time, adopt ordinary scales of preference, and so on (Rothbard 1973a: 33, italics added).

"Quantitative laws" apparently refers to quantitatively measurable outcomes of the effects of market intervention that the economist deduces in his economic theorems.

Note that he does not mention the reasons Mises gave for regarding economics as a science, namely, that it provides special knowledge and that economists can achieve value freedom by evaluating intervention arguments. He focuses on the method used to interpret historical events.

The Imaginary Construction vs. the Model

Rothbard does not really understand how to use economic theory as a foundation for interpreting historical events. This is evident from his treatment of the concept of a model. In a footnote in MES, he tries to distinguish between the imaginary constructions of economics and a model used in natural science. He claims to have learned this distinction from Mises. The model, he says, is used in "the methodology of physics and engineering" (MES: 576n). It "is a mechanical construction in miniature, *all parts of which* can and must coexist in reality. The engineering model portrays in itself all the elements and the relations among them that will coexist in reality." He contrasts this with the imaginary constructions of economics. These constructions, he says "are imaginary because their various elements never coexist in reality; yet they are necessary in order to draw out, by deductive reasoning and *ceteris paribus* assumptions, the tendencies and causal relations of the real world" (*ibid*.)

This is wrong. It is true that the historian uses imaginary constructions and does mental experiments when he builds theorems to represent the economic aspects of an historical event. He uses *ceteris paribus* assumptions to build these theorems. However, the engineer, but certainly the physicist, also uses imaginary constructions in building tentative theorems about whether a machine

or action will achieve the aim that she has in mind for it.[5] Before the physicist tests a new material in order to determine whether its properties are suitable for a particular use, for example, he may build a number of images, each representing a possible sequence of events that may occur if when subjects the material to various experiments. Both the historian and the natural scientist use imaginary constructions because they are partly uncertain about all of the causative elements they study. The historian is uncertain about the choices individuals will make and the influence they will have. The natural scientist is uncertain about all of factors that will enable the machine to achieve its intended purpose or the action he takes to have particular effects.

The historian whose speciality is economics – the economic historian – could use the term"model" to characterize the image he studies. He could say, for example, that his model of the effects of a government-induced increase in the money supply shows that such an increase, other things equal, causes a trade cycle or that his trade cycle model suggests that the events of the past were caused, in part by an increase in the quantity of money. The difference is not that the natural scientist uses models while the economic historian uses imaginary constructions. The difference is twofold. First, the economic historian studies actions – phenomena that he assumes take actions and make choices. Second, he studies the outcome of choices made under the conditions of capitalism. Accordingly, his model contains a division of labor.

Both the natural scientist and the historian study the events of the past. In their efforts to explain those events, both may build imaginary constructions. The natural scientist, however, is often in a position to experiment. Such experiments yield the knowledge of what the natural scientists call constant relationships among the phenomena. If she undertakes the same experimental action that she undertook in the past, she has good reason to believe that it will yield the same observable quantitative results.[6] In economic history, however, she cannot conduct experiments. She can only observe. Due to complexity, she is compelled to make judgments on the basis of *ceteris paribus* assumptions. Mises uses the example of the quantity theory of money as a case in point. The quantity theory, according to his interpretation deduces that a change in the quantity of money, *ceteris paribus*, "must result in proportional changes of commodity prices" (HA: 55). Mises showed that this is wrong. The act of injecting additional money causes changes in the final state of rest toward which the various prices tend. Correspondingly, it changes the relationship of the prices to each other (HA: 413).

The natural scientist differs from the economist in that she aims to predict the future. She makes quantitative predictions. She can often intervene by conducting controlled experiments, which she uses to "test" whether her prediction is accurate. The economist does not make predictions at all.[7] He builds economic theorems in order to express his chain of reasoning about the consequence of some change on the amounts of material consumer goods, *ceteris paribus*. He knows that there is no way in reality to control all of the factors that may influence the events that a statistician may aim

[5]It might be noted that, instead of an engineer, Rothbard may have in mind primarily an architect, perhaps the architect of if Ayn Rand's famous novel.

[6]However, even in physics, she cannot be certain. The "uncertainty principle" prevails (HA: 57).

[7]Even if he did, he could not learn from them by conducting controlled experiments or by measuring the outcomes quantitatively.

to measure. He also knows that his theorems abstract from the complexity of the causes of market phenomena.[8] In economic history, however, she has no reason to expect experiments to yield constant relationships.

3. CONCLUSION

The differences between Mises and Rothbard on method can now be stated with greater clarity. Consider how they differed in their procedure for building theorems. I begin with Mises. In building economic theorems, the economist combines the prerequisites and necessary characteristics of action, a vocabulary for economics that can be traced to these, and subsidiary assumptions in order to deduce particular types of interaction under particular conditions. He wants a vocabulary that has two properties. First, it must help him trace all theorems back to the prerequisites and necessary characteristics of action. Second, it must help him build theorems about complex interaction under the conditions of capitalism. With the latter goal in mind, he makes subsidiary assumptions about private property rights, free enterprise, the use of money, a division of labor, exchange, and a government that helps establish and enforce these conditions.

To simplify his task, he builds a core image of pure capitalism. He knows that he cannot build a complete image even in this simplest case. Nevertheless, he can build theorems that help him elucidate that interaction by using *ceteris paribus* assumptions. Once he accomplishes this, he is prepared to build theorems that he can use to achieve other aims. As an economic scientist, he wants theorems to help evaluate intervention arguments. The theorems he builds and *ceteris paribus* assumptions he makes depend on the conditions of capitalism that are assumed by the proponents of intervention arguments. As an economic historian, he wants theorems that will help him interpret an historical event. In this case, his theorems are based on his knowledge of the conditions that prevailed in the time period during which the historical event occurred. He tries to match his subsidiary assumptions to the conditions of that period.

The theorems pertaining to pure capitalism provide the foundation for both the evaluation of intervention arguments and the interpretation of historical events. Both the economic scientist and the economic historian must build the same theorems.

Rothbard was not interested in economic science. And his interest in economic history was only peripheral, although he sometimes wrote as if interpreting economic history was his main goal. Wearing the hat of the economic historian, he parroted some of the remarks that Mises made about the difference between the methods used to study historical events and those used to study natural science phenomena. Like Mises, he argued that economic phenomena consist of choices made by actors, while natural science phenomena do not choose and act. Like Mises, he promoted

[8]However, even in physics, she cannot be certain. The "uncertainty principle" prevails (HA: 57).

methodological apriorism in the interpretation of historical events. Still, he did not describe and probably did not comprehend Mises's procedure for producing economic theorems.

Unlike Mises, Rothbard did not show how to trace his theorems back to the prerequisites and necessary characteristics of action. In addition, he criticized theorems that Mises had produced. Most significantly, he neglected the division of labor law. He neglected this because he did not need this law to derive ethical theorems based on his image of interaction the noninvasive society.

The two authors differed in a similar way in their critiques of economic positivism. Both criticized the positivist claim that images of capitalism should be built by treating actors as if they do not make choices. But Mises went further to emphasize that economic theorems incorporate the special knowledge of the higher physical productivity of the division of labor. He did this partly because he wanted to defend the proposition that economics is a science. Rothbard recognized this special knowledge but he did not regard it as an important part of the critique of positivism because he wanted to direct attention to his ethics.

APPENDIX

METHODOLOGICAL DUALISM

Mises introduced the term "methodological dualism." He explains this term in HA in the following way:

> Reason and experience show us two separate realms: the external world of physical, chemical, and physiological phenomena and the internal world of thought, feeling, valuation, and purposeful action. No bridge connects – as far as we can see today – these two spheres. Identical external events result sometimes in different human responses, and different external events produce sometimes the same human response.
>
> We may or may not believe that the natural sciences will succeed one day in explaining the production of definite ideas, judgments of value, and actions in the same way in which they explain the production of a chemical compound as the necessary and unavoidable outcome of a certain combination of elements. In the meantime we are bound to acquiesce in a *methodological dualism*.
>
> Human action is one of the agencies bringing about change...Therefore it is a legitimate object of scientific investigation. As – at least under present conditions – it cannot be traced back to its causes, it must be considered as an ultimate given and must be studied as such (HA: 18, italics added).

Methodological dualism: the proposition that natural scientists and scientists of human action, respectively, find it useful to employ two very different methods of studying the phenomena in their respective fields.

Methodological dualism is merely common sense. It would be silly for natural scientists to assume that the behavior of, say, water molecules is partly the consequence of the choices made by the hydrogen and oxygen molecules of which they are comprised. Matter and, indeed, non-actors do not make choices, by definition. It would be equally out of place for economists to assume that the behavior of actors is not the consequence of their choices. The economist specializes in building images and theorems in which the price of beans is the consequence of choices made by individuals who use economic calculation under the conditions of capitalism.

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*In chronological order according to the date of publication of the first edition.