

## The Methodology of Economics: Mises vs. Rothbard

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### Appendix: Mises on the Procedure of Economics

#### 1. Ratiocination in Economic Theorem Building

In his article "[Praxeology: the Methodology of Economics](#)" (1976), Murray Rothbard, as the title indicates, treats praxeology as a methodology of doing economics. Ludwig von Mises, on the contrary, says that the method of both praxeology and its branch, economics, is the method of imaginary constructions. In this article, I show how Mises used imaginary constructions. Then I address Rothbard's claim about methodology. I suggest both that Rothbard failed to understand Mises and that the reason is likely to have been Rothbard's desire to eclipse Mises's scientific economics in the eyes of future Austrian economists with his ethics.

In spite of his shortcoming, Rothbard nevertheless succeeded in the eyes of a cult of followers, who now rail against practically all actions by "the state." Many of these also promote anarcho-capitalism. In my view, members of this cult threaten the long-term image of Austrian economics in the eyes of the best and brightest of the potential economics students.

Part One of this essay describes Mises's definition of praxeology and his distinction between praxeology and economics. It introduces the method of imaginary constructions as a means of dealing with the complex of interaction that comprises the reality of capitalism. Part Two shows how Mises used imaginary constructions in praxeology and presents his definition of economics. Part Three describes his use of imaginary constructions in economics. Part Four presents the logic of Rothbard's ethics and evaluates his statements on the relationship between praxeology and economics. Part Four speculates on why Rothbard deviated from Mises on the critical issue of method.

## 1. MISES ON PRAXEOLOGY AND ECONOMICS

In his 1966 treatise, *Human Action* (HA) Mises wrote that economics is a science (HA: 3) of the means.<sup>1</sup> It consists of knowledge that is useful to human beings in the pursuit of their aims to satisfy their material wants.<sup>2</sup> It is a *branch*, or subclass, of praxeology (*ibid.*: 885, 886). In what sense is economics a branch of praxeology? Mises answers that it is possible to study what is universal (the category of action) by considering the manifestation of action under all conceivable conditions, both realistic and unrealistic. Such a science would take forever to complete and would be mostly irrelevant to humankind's interests. Thus, the praxeologist, in building the science of economics focuses on realistic conditions (*ibid.*: 64-5).

### Studying Real Interaction under the Conditions of Capitalism

By showing that economics is a branch of praxeology, Mises promoted the view that, to avoid error in her reasoning, every student of capitalism should begin as a praxeologist. The economist is ultimately interested in market interaction that “helps the masses” by enabling them to enjoy larger amounts of and better consumer goods than otherwise. His special knowledge comes from the insight of the classical economists that market interaction enables individuals to multiply the amounts of material goods they produce due to the “great basic principle...of cosmic becoming” of the higher physical productivity of the division of labor (*ibid.*: 145). He uses that knowledge to evaluate intervention arguments.

To complete the study to which these interests lead, the economist aims to study distinctly human action and interaction under what I call the specific *conditions of capitalism* – the division of labor, private property rights, free enterprise and the use of money. The classical economists showed that under these conditions, actors are in the best positions to take advantage of the higher physical productivity of the division of labor.<sup>3</sup>

In light of human nature as we know it, the conditions of capitalism could not exist without a government (*ibid.*: 149). Accordingly, a further condition is the existence of a monopoly over coercion and compulsion. Correspondingly, taxes are one of the conditions of capitalism. If the economist is concerned with capitalism in the face of an eminent threat of confiscation, slavery or death; even conscription may be a condition of capitalism (*ibid.*: 282). Thus, the economist begins

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<sup>1</sup>The full meaning of the idea of a science of the means is explained in my essay “[How the Mises Institute Promotes Progressivism](#).”

<sup>2</sup>Mises writes:

Because man is a social animal that can thrive only within society, all ideologies are forced to acknowledge the preeminent importance of social cooperation. They must aim at the most satisfactory organization of society and must approve of man's concern for an improvement of his material well-being. Thus they all place themselves upon a common ground. They are separated from one another not by world views and transcendent issues not subject to reasonable discussion, but by problems of means and ways. Such ideological antagonisms are open to a thorough scrutiny by the *scientific methods of praxeology and economics* (*ibid.*: 184, italics added).

<sup>3</sup>To verify that Mises delimited the subject matter of economics in this way, the reader of his treatise must refer to his chapters on ideology (*ibid.*: ch 8), on action in society (*ibid.*: ch. 7), and on the scope and method of economics (*ibid.*: ch. 14).

by assuming the presence of an imaginary construction that Mises calls a pure market economy (*ibid.*: 237). After presenting the theory of interaction under these conditions, he examines proposals for market intervention.

### The Method of Imaginary Constructions

Mises writes that the method of economic science is the method of imaginary constructions. He says that this method is also the method of praxeology. Wearing the hat of the praxeologist, one uses the method of imaginary constructions to help conceive the prerequisites of action (*ibid.*: 13-14) and its necessary characteristics (*ibid.*: ch. 4, 5, and 6). Then, wearing the hat of the economist, he uses this method (1) to distinguish the specific subject matter of economics from related subject matter and (2) to build economic theorems. Such theorems are basically manifestations of the prerequisites and necessary characteristics under the conditions of capitalism that are assumed.<sup>4</sup> Thus, Mises regards the method of imaginary constructions as the method of both the science of praxeology and the science of economics (*ibid.*: 236-7).

## 2. MISES ON THE SCOPE AND METHOD OF ECONOMICS

In assessing the work of those economists for whom he had the greatest respect, Mises judged that they had sometimes erred. They had not traced their economics back to the prerequisites and necessary characteristics of action. In an effort to help them avoid this error in the future, he spent up to thirteen chapters on foundation-building before defining economics and identifying the method of studying it. The majority of the earliest chapters in the treatise were devoted to what one might call “pure praxeology” – the study of action as a category or action in general. I introduce this term because Mises uses it in both the narrow sense of pure praxeology and in the broad sense of the study of action under all conceivable circumstances. Praxeology in the broad sense encompasses the economics branch.

**Pure Praxeology:** the study of action as a category or action in general. In other words, it is the study of the *acting character* of human beings.

Once Mises described the process of tracing economic theorems back to the prerequisites and necessary characteristics of action, his further foundation-building was dictated by what he considered to be the aims of economics. He was convinced that the classical economists and subjective value theorists had produced economic knowledge that was as important to the future of humankind as the knowledge of the natural sciences. The most significant insight of these economists to intellectuals was the higher physical productivity of the division of labor that could be achieved under the conditions of capitalism. This knowledge had already been used to help individuals attain their material ends and could be used in the same way for the indefinite future. Mises also knew that, in spite of unprecedented economic progress in the production of material goods under the conditions of capitalism, intellectuals had raised many objections to these

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<sup>4</sup>Mises does not fully explain his uses of the method in economics. One purpose of this essay is to bring these uses to the attention of the reader.

conditions. These objections, which were used to influence public opinion, threatened the prospect that the new economic knowledge would continue to be used in the future.

Of special concern to Mises were arguments favoring proposals to intervene in capitalism in some way in order to “improve its results” or overcome its shortcomings. When he turned to the application of pure praxeology to reality, he thought about these arguments. He conceived of using the new knowledge to evaluate them. To achieve this, he would first have to build an image of what he called the pure market economy. Then, he would have to produce the theorems needed to evaluate the particular intervention arguments that were most popular and important.

Thus, two factors dictated his definition of economics (its scope) and the method that he reasoned must be used to study it. The first is the need to avoid error by establishing praxeological foundations. The second is his aim of building a science the goal of which is to aid humankind by evaluating intervention arguments that were based on the view that the intervention would not affect the amounts of material goods that could be produced.

In this part, I begin by presenting the praxeological foundations. Then I show how the aims of economics, in conjunction with those foundations, determine the scope and method of economics. Finally, I show how Mises used imaginary constructions in the actual presentation of economics.

### **The Subject Matter of Pure Praxeology**

For Mises, the study of economics – indeed, the study of human action in all its forms – begins with the acting character of human beings. Some human beings do not act. Some are not fully developed actors while others are senile or mentally deficient. The concern of economists with the acting character of human beings leads them to produce a science about individuals who possess this character.<sup>5</sup> The student of human action studies *homo agens*.

Man is...not only homo sapiens, but no less homo agens. Beings of human descent who either from birth or from acquired defects are unchangeably unfit for any action (in the strict sense of the term and not merely in the legal sense) are practically not human (HA: 13-14).

The phrase “practically not human” should be interpreted to mean “not human from the standpoint of the purpose of building the concepts and theorems of praxeology and economics.”

The pure praxeologist “asks: What happens in acting? What does it mean to say that an individual then and there, today and here, at any time and at any place, acts? What results if he chooses one thing and rejects another?” (HA: 45).

### *Praxeology, Thymology and the Non-action Determinants of Behavior*

It is important to distinguish pure praxeology from other studies of human beings. The pure praxeologist is not concerned “[1] with the accidental and environmental features of [a particular] action and [2] with what distinguishes it from all other actions, but only with what is necessary and universal in its performance” (HA: 44). Mises writes that praxeology is the study of “human action, not the psychological events which result in an action” (HA: 11-12). “Psychological events” refers to the

<p><b>Thymology:</b> the study of particular ends and perceived means.</p>
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<sup>5</sup>If no members of the species *homo sapiens* acted, there could be no study of action. Not only would there be no actors to study, there would be no scientists.

particular ends and perceived means of achieving them that individuals regard as the human cause of their choosing one course of action over another.<sup>6</sup> In the final edition of HA and in his 1957 book on *Theory and History*, he used the term *thymology* to refer to the study of particular ends and perceived means (Mises 1957: 264-72). The results of thymological studies is “knowledge of human valuations and volitions” (*ibid.*: 265).

The “psychological events” are different for different people and for the same person at different times. In writing about such events, Mises refers to “changing content.” “Praxeology is not concerned with the changing content of acting, but with its pure form and its categorial structure. The study of the accidental and environmental features of human action is the task of history” (HA: 47). He is writing here about the subject matter of pure praxeology.

One of Mises’s aims in introducing the term “thymology” is to direct the reader’s attention to the fact that the experimental and observational study of the actor’s behavior is a subclass in the class of the natural sciences. The experimental and observational studies are concerned with the non-action determinants of behavior. A second aim is to distinguish economics from history. Both economics and history are branches of the science of human action. But they are different subjects. Thymology is a body of knowledge employed by historians in their effort to apply the “specific understanding of the historical sciences of human action” (TH: 264). The historian aims to identify the particular ends and perceived means that motivated some action or set of actions. The knowledge with which he is concerned differs from the knowledge of the category of action, which is the starting point for all of the branches of praxeology.

A person’s choices of particular actions depends not only on her “psychological events,” i.e., on her particular thymological characteristics. They also depend on her perceived social and physical environment. Particular mores and laws may influence an individual to act in ways that are different from how she would act in their absence. Similarly, the opportunities to gain from specialization and exchange under the conditions of capitalism lead individuals to act differently from how they would act in the absence of these conditions. One must assume that when Mises writes of the accidental and environmental conditions of action, he was also referring to these social and legal conditions.

### *The Prerequisites and Necessary Characteristics of Action*

In this subsection, I describe what Mises regarded as the prerequisites of action and show how he used imaginary constructions to identify them. These prerequisites constitute Mises’s initial statements about the nature of the acting character of human beings. He writes in his opening chapter about the prerequisites.

Acting man is eager to substitute a more satisfactory state of affairs for a less satisfactory. His mind imagines conditions which suit him better, and his action aims at bringing about this desired state. The incentive that impels a man to act is always some uneasiness (HA: 13).

He goes on to call these “the general conditions of human action.” This seems misleading. The term “conditions” can have many meanings. What he should say, in order to avoid any ambiguity, is that

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<sup>6</sup>In early editions of HA, Mises used the term “psychology” to refer to the study of psychological events. He later introduced the term “thymology” as a substitute for “psychology” in order to avoid any confusion between the study of such events and studies in the fields of the experimental and behavioral psychology.

these are the prerequisites of action as a category or of action in general. In writing of the acting character of actors, the praxeologist *means* that actors, by definition, possess these prerequisites.

How can Mises “prove” that these are prerequisites? The answer is that he can use the only method available, namely, the combination of aprioristic reasoning and imaginary constructions. Mises uses this method when he writes the following:

A man perfectly content with the state of his affairs would have no incentive to change things. He would have neither wishes nor desires; he would be perfectly happy. He would not act; he would simply live free from care (HA: 13-14).

And

In the absence of [the expectation that purposeful behavior has the power to remove or at least to alleviate the felt uneasiness] no action is feasible. Man must yield to the inevitable. He must submit to destiny (HA: 14).

Here he uses a “counterfactual” image to deduce three prerequisites: uneasiness, the power to alleviate the uneasiness, and the expectation that the uneasiness will be removed by an act of will.

He goes on in subsequent chapters to demonstrate that other characteristics of action are derived from, or implied by, the prerequisites of action. In HA, chapters 4-6, he demonstrates, respectively, that (1) ends and means, (2) time and (3) uncertainty are necessary characteristics. In each case, he uses images of beings who do not possess these characteristics to confirm their necessity. The reader who doubts Mises’s use of imaginary constructions is encouraged to explore these chapters.

**The prerequisites and necessary characteristics of action:** uneasiness, the power to alleviate the uneasiness, the expectation that the uneasiness will be removed by an act of will, which implies ends and means, time and uncertainty. This phrase is equivalent to Mises’s category of action and action in general. The characteristics are identified by aprioristic reasoning which entails the use of counterfactual images.

To refer to these prerequisites and necessary characteristics of action, Mises used the term “category of action” (HA: 35, 64, 68). Regrettably, he also used this term to refer to particular prerequisites and necessary characteristics (HA: 22, 393). For example, he calls originary interest a category of action (HA: 527). To avoid any ambiguity, I use the longer but more descriptive phrase.<sup>7</sup>

### *Aprioristic Reasoning*

The method used to identify the prerequisites and necessary characteristics of action is a combination of aprioristic reasoning and the counterfactual imaginary construction. In this subsection I discuss each in turn.

I define aprioristic reasoning as the use of the mental tools developed during the period of cognitive growth of the normal distinctly human actor.<sup>8</sup> Such mental tools help the praxeologist

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<sup>7</sup>Rothbard introduced a seemingly more convenient phrase: “action axiom.” Mises avoided the term axiom when referring to praxeology and economics.

<sup>8</sup>The existence of these tools corresponds to the fact that the distinctly human mind has what Mises called a logical structure.

create a vocabulary for articulating what such a person can know exclusively by reflecting on her own action.

The praxeologist can identify acting character because she is a distinctly human actor herself. So far as is known, no human being is born a distinctly human actor. Each must develop the mental tools required to fit this designation. Such development generally occurs without help from medicines or other therapeutic

procedures. The baby possesses senses that enable it to form a primitive concept of physical causality.<sup>9</sup> Perhaps the most primitive concept is its coming to associate particular noises and other sensations with an alleviation of hunger. As the child grows, it comes to differentiate between physical causality and human causality. For example, it comes to see some set of actions by its mother as the cause of its being fed. As the child grows further, it develops a sense of ego, informing it that other human beings are different from it.

Nothing more is needed than this sense of ego – the individual's recognition that he alone can cause changes that he observes. His attainment of this stage of development is sufficient to put him in a position to comprehend and, assuming that he has developed language, to articulate the prerequisites and necessary characteristics of action. Once she has reached this stage, she is prepared to employ counterfactual images to deduce the prerequisites and necessary characteristics of action. When a person uses counterfactual images in this way, her mode of reasoning is *aprioristic*.

Why do distinctly human actors, as opposed to other animals, develop in this way? An obvious answer is natural selection. Some pre-human species contained members with the capacity to form primitive distinctions between physical causality and human causality, to form a sense of ego, and to think abstractly about their own development. In competition with their counterparts, they survived and passed on their traits to their offspring. From this point of view, the traits exist today due to the service they provided distinctly human actors in the competition for food, avoidance of predation, and surviving the elements.<sup>10</sup>

**Aprioristic reasoning:** the use of the mental tools developed during the cognitive growth of the normal distinctly human actor.

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<sup>9</sup>This primitive concept of physical causality is later expressed in its most advanced form in the a priori sciences of geometry and mathematics (HA: 39-40).

<sup>10</sup>Thus, he writes that animals

are driven by impulses and instincts. Natural selection eliminated those specimens and species which developed instincts that were a liability in the struggle for survival. Only those endowed with impulses serviceable to their preservation survived and could propagate their species...[We may assume] that in the long way that led from the nonhuman ancestors of man to the emergence of the species *Homo sapiens* some groups of advanced anthropoids experimented, as it were, with categorial concepts different from those of *Homo sapiens* and tried to use them for the guidance of their conduct...Only those groups could survive whose members acted in accordance with the right categories, i.e., with those that were in conformity with reality and therefore—to use the concept of pragmatism—worked.

He goes on to point out, however, that whatever its source,

one thing is certain...[T]he a priori categories have enabled man to develop theories the practical application of which has aided him in his endeavors to hold his own in the struggle for survival and to attain various ends that he wanted to attain, these categories provide some information about the reality of the universe. They are not merely arbitrary assumptions without any informative value, not mere conventions that could as well be replaced by some other conventions. They are the necessary mental tool to arrange sense data in a systematic way, to transform them into facts of experience, then these facts into bricks to build



### *The Counterfactual Imaginary Construct*

In employing aprioristic reasoning to derive the prerequisites and necessary characteristics of action, the pure praxeologist must use what I have called counterfactual imaginary constructs. In each case, she uses counterfactual images of beings who do not possess these characteristics to confirm their necessary character. In doing this, she tries to build a concept of action that lacks a property that she has learned to associate with the words “more (less) satisfactory,” “ability to attain a more satisfactory state,” “expectation,” “choice,” “ends,” “means,” “time” and “uncertainty.” She tries to imagine an action in which she does not expect a more satisfactory state, an action for which she has no means of improving her state of well-being, a timeless action and an action for which the outcome is certain. Lacking the ability to conceive of an action that lacks such characteristics, she confirms that they are part of the acting character. She can then feel confident that these words represent prerequisites and necessary characteristics of action. If she uses these words or their equivalent to describe action in her theorems, she knows that they will help her trace the theorems back to her actions. She will have produced a vocabulary that suitable for describing action and interaction under any conceivable set of conditions, including pure capitalism.

### *Mises on the Method of Imaginary Constructions*

One who aims to highlight Mises’s imaginary constructions might be frustrated by the fact that in his elucidation of the prerequisites, he does not mention the method. To recognize that he uses it, the reader must page ahead. In his first reference to how the praxeologist comes to comprehend action, he writes:

All that is needed for the deduction of all praxeological theorems is knowledge of the essence of human action...No special experience is needed in order to comprehend these theorems, and no experience, however rich, could disclose them to a being who did not know a priori what human action is. The only way to a cognition of these theorems is logical analysis of our inherent knowledge of the category of action [the prerequisites and necessary characteristics of action]. We must bethink ourselves and reflect upon the structure of human action. Like logic and mathematics, praxeological knowledge is in us; it does not come from without (HA: 64).

In this statement, he is saying that the operations required to produce concepts and theorems about the prerequisites and necessary characteristics of action are not physical but mental.<sup>11</sup> He does not

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theories, and finally the theories into technics to attain ends aimed at (UF: 16).

<sup>11</sup>A reader searches HA in vain for a definition of “praxeological theorem.” She can find previous uses of this phrase at HA: 36 and 38-9. She can also find statements comparable to “inherent knowledge of the category of action.” This knowledge consists of knowledge that is acquired by means of aprioristic reasoning and imaginary constructions, as I have indicated. But what can he mean by a praxeological theorem? Logic and mathematics have theorems of the “if-then” variety. If this is what Mises has in mind by a praxeological theorem, then he must be referring to *particular* ends and *particular* means. He must have in mind something like the following statement: If an actor is to satisfy her thirst, she must identify the alternative sources of thirst-quenching liquid and other uses of the means required to obtain the liquids; she must weigh the alternatives; and she must make and act of will that she expects to result in her acquisition of the means. He cannot be writing solely about the prerequisites and necessary characteristics of action. Yet it seems obvious that he *is* writing about this. The problem lies either with his use of the word “theorem” or his failure to specify that he is employing a broad definition of praxeology.

There is no point in carrying this analysis of Mises’s words further, since nothing important depends on

mean, of course, that any kind of bethinking and reflecting will reveal the prerequisites of action. The right method – one that entails imaginary constructions – must be used.

Mises does not mention imaginary constructions until much later in HA. The reader who aims to link the derivation of the prerequisites and necessary characteristics of action with the imaginary constructions must again page ahead. He writes:

The main formula for designing of imaginary constructions is to abstract from the operation of some conditions present in actual action. Then we are in a position to grasp the hypothetical consequences of the absence of these conditions and to conceive the effects of their existence. Thus we conceive the category of action by constructing the image of a state in which there is no action, either because the individual is fully contented and does not feel any uneasiness or because he does not know any procedure from which an improvement in his well-being (state of satisfaction) could be expected (HA: 237).

The use of imaginary constructions, along with aprioristic reasoning, puts the pure praxeologist in a position to define words that match concepts she already knew. These words put her in a position to articulate concepts that she had used in her everyday action but that she had not attempted to express in words. On the foundation of this core vocabulary, she can proceed to build additional vocabulary for economics that will enable her to trace back her economic theorems to the prerequisites and necessary characteristics of action. Linking such vocabulary helps her avoid errors in building theorems.

### *The Logical Structure of the Human Mind*

How does the praxeologist and the economist develop the capacity to ratiocinate? Mises gives his answer in his discussion of what he calls “the logical structure of the human mind.” This logical structure is the source of the praxeologist’s capacity to reason aprioristically – to build aprioristic theory. Mises writes:

**Logical structure of the human mind:** the mental tools possessed by all distinctly human actors to acquire knowledge of reality and to use that knowledge to help attain their ends.

The human mind is not a tabula rasa on which the external events write their own history. It is equipped with a set of tools for grasping reality. Man acquired these tools, i.e., the logical structure of his mind, in the course of his evolution from an amoeba to his present state. But these tools are logically prior to any experience.

Man is not only an animal totally subject to the stimuli unavoidably determining the circumstances of his life. He is also an acting being. And the category of action [the prerequisites and necessary characteristics of action] is logically antecedent to any concrete act.

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* (HA: 35).

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the paragraph I quoted. The reader of HA must presume that Mises did not intend to distinguish between a prerequisite and necessary characteristic of action and a praxeological theorem.

The principle of causality refers to the concept of cause studied by the natural scientists. This is evident from his use of the synonym “mechanistic causality.” Teleology refers to the concept of cause studied by the scientists of human action. It means “purposeful behavior” (HA: 11, 25).<sup>12</sup>

In his last book, UF, Mises presents a more detailed hypothesis about the origin of this logical structure. In that hypothesis, he suggests that natural selection was probably the source of this structure. He points out, however, that whatever its source,

one thing is certain. Since the a priori categories emanating from the logical structure of the human mind have enabled man to develop theories the practical application of which has aided him in his endeavors to hold his own in the struggle for survival and to attain various ends that he wanted to attain, these categories provide some information about the reality of the universe. They are not merely arbitrary assumptions without any informative value, not mere conventions that could as well be replaced by some other conventions. They are the necessary mental tool to arrange sense data in a systematic way, to transform them into facts of experience, then these facts into bricks to build theories, and finally the theories into technics to attain ends aimed at (UF: 16).

The logical structure of the human mind, then, is the source of all of the ideas that have resulted in what is today regarded as the advance of the natural sciences. It is also the source of the ideas that have led to Mises’s economics. It is, by this reckoning, the source of the capacity to ratiocinate.

### *Imaginary Constructions and Reality*

It has sometimes been argued that because imaginary constructions are not derived from realistic assumptions, they cannot be helpful in *economics*. Such an argument certainly does not apply to pure praxeology. The counterfactual imaginary constructs are not real. But the prerequisites and necessary characteristics are real to every person who is in a position to bethink and reflect. Recognizing this, Mises writes:

The imaginary constructions of praxeology can never be confronted with any experience of things external and can never be appraised from the point of view of such experience. Their function is to serve man in a scrutiny which cannot rely upon his senses (HA: 237).

In pure praxeology, the imaginary constructions are used as foils, so to speak. The pure praxeologist knows what action is because she is an actor. But she is uncertain how to express this knowledge. She asks: “what are the properties of this action that I know I perform?” She proceeds by trying to build a concept of action that lacks a property that she has learned to associate with the words “more (less) satisfactory,” “ability to attain a more satisfactory state,” “expectation,” “choice,” “ends,” “means,” “time” and “uncertainty.” The result is an imaginary construction that she can *contrast* with her action as she knows it already. When she discovers that a construct is indeed imaginary – that it does not match action as she knows it already – she learns a prerequisite and/or necessary characteristic.

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<sup>12</sup>The reader might wish to refer to Mises’s statement that actors cannot “imagine categories at variance with...the principles of causality and teleology” (HA: 35). By “principles” of causality and teleology, he means the concepts that make it reasonable for normal, distinctly human actors to refer to two different classes of reasons for events that they observe.

### The Scope of Economics

I now turn to the scope of economics. Mises first mentions the scope in his chapter 2 on epistemology in a section entitled “The Procedure of Economics.” He writes that after extracting and deducing the “concepts and theorems” of pure praxeology, one goes on to define “the less general conditions required for special modes of acting” (HA: 64). Because the end of science is to “know reality,” the praxeologist “restricts [his] inquiries...” (HA: 65).

This statement is similar to that made in his 1933 book. It would be possible, he writes there, to

construct, by the use of the axiomatic method, a universal praxeology so general that its system would embrace not only all the patterns of action in the world that we actually encounter, but also patterns of action in worlds whose conditions are purely imaginary and do not correspond to any experience (Mises 1933: 15).

However, “we are satisfied with the less universal system that refers to the conditions given in the world of experience.” What “we owe to experience is the demarcation of those problems that we consider with interest from problems that we wish to leave aside because they are uninteresting from the point of view of our desire for knowledge” (*ibid.*: 16).

Both sets of quotations tell the reader, in essence, that economics is a branch of praxeology and that its students are concerned with “special conditions” that are of interest to the economist. In his 1933 book, Mises does not go on to demarcate the “economic problems.” In HA, he devotes an entire chapter to the scope and method of economics.<sup>13</sup>

Strictly speaking, it is incorrect to say that it is possible to use the “axiomatic method” to deduce *all* of the patterns and conditions entailed in market interaction. We can conceive of this being done because we can conceive of deducing every particular pattern we can identify. But there is an infinite number of these patterns and conditions due partly to the fact that there is an infinite number of iterations of incomplete private property rights. Our interests as economists dictate which of the patterns and conditions we assume. Once we decide this, we build imaginary constructions that enable us to deduce the desired patterns. From among the infinite possible problems that present themselves the economist, constrained by time and the limited capacity of the human mind, must restrict his interests to the study of some of these.

### *Definition of Economics*

In Part One of chapter 14, Mises writes that economists have always agreed that economics is about “the determination of the mutual exchange ratios of the goods and services negotiated on markets, their origin in human action and their effects upon later action” (HA: 232). In other words, economists have traditionally been interested in choices that result from and are affected by prices and markets.

But problems arise because the choices that determine these things cannot be separated from other choices for which prices and markets are not of primary concern. The praxeologist knows that choices of all kinds are related. It is not possible in reality to separate “economic choices” from “non-economic” choices. As a result, the economist “must not restrict [his] investigations to those

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<sup>13</sup>Some interpreters of Mises have relied entirely on this section for their interpretation of the relationship between economics and praxeology. However, his discussion there is designed to distinguish between the procedure of praxeology in its most inclusive sense and the procedure of the narrower field of economics, which requires building an image of pure capitalism. I discuss this section in the Appendix to this chapter.

modes of action which in mundane speech are called ‘economic’ actions, but must deal also with actions which are in a loose manner of speech called ‘noneconomic’” (HA: 234). Mises explains this in the following way:

In studying interpersonal exchange one cannot avoid dealing with autistic exchange [action that is isolated from the action of others or is non-cooperative]. But then it is no longer possible to define neatly the boundaries between the kind of action which is the proper field of economic science in the narrower sense, and other action. Economics widens its horizon and turns into a general science of all and every human action, into praxeology. The question emerges of how to distinguish precisely, within the broader field of general praxeology, a narrower orbit of specifically economic problems (HA: 232).

Here, he is saying that the imaginary construction of action that is isolated from the action of others or is non-cooperative helps the economist draw the boundary line between the traditional interests of economists and broader interests. The use of this image thereby helps the economist build the imaginary construction of pure capitalism. Imaginary constructions are thus required in order to define the scope of economics.

#### *The Economic Problems and the Ultimate Goal of Economics*

What does Mises mean by the term “specifically economic problems?” In this case, he is referring to the effects of “interference with the market [the sphere of capitalism] on the part of governments and other agencies employing coercion and compulsion” (HA: 238, as quoted below). He writes about these problems immediately after introducing the imaginary construction of the pure or unhampered market economy. He writes that the economist begins by trying

to elucidate the operation of a pure market economy. Only at a later stage, having exhausted everything which can be learned from the study of this imaginary construction, does [he] turn to the study of the various *problems* raised by interference with the market on the part of governments and other agencies employing coercion and compulsion (HA: 238, italics added).

The economic problems refer to the economist’s ultimate goal of evaluating intervention arguments.

#### *The Sphere of Capitalism and Economic Freedom*

I use the term “sphere of capitalism” to refer to a necessarily amorphous boundary between the actions of all sorts that individuals take in everyday life and actions under the conditions of pure capitalism. The term is based on Mises’s own usage. He refers, for example, to the “sphere of the unhampered market” (HA: 565), the “sphere of private property and the market” (HA: 725), “the sphere of private property and the laws protecting it against encroachments on the part of violent or fraudulent action (HA: 726). The meaning

**Sphere of capitalism:** an amorphous boundary between the actions of all sorts that individuals take in everyday life and actions under the conditions of pure capitalism.

**Economic freedom:** a state of being that individuals experience when the range of government action is limited to protecting people against “violent or fraudulent aggression on the part of antisocial individuals.”

is similar to the pure market economy and pure capitalism, with the added emphasis on the possibility that such a sphere may exist in an economy where there is substantial intervention. My meaning is perhaps best captured by the following quotation:

The system of the hampered market economy or interventionism aims at preserving the dualism of the distinct *spheres* of government activities on the one hand and economic freedom under the market system on the other hand. What characterizes it as such is the fact that the government does not limit its activities to the preservation of private ownership of the means of production and its protection against violent or fraudulent encroachments. The government interferes with the operation of business by means of orders and prohibitions (*ibid.*: 719, italics added).

The term “sphere of capitalism” is useful in representing the notion, *ceteris paribus*, of an increase or decrease in market intervention. Thus Mises writes that if “it is in the jurisdiction of the government to decide whether or not definite conditions of the economy justify its intervention, no sphere of operation is left to the market” (HA: 724).

The companion concept to the sphere of capitalism is *economic freedom*. Under capitalism, Mises writes, “there is a sphere within which the individual is free to choose between various modes of acting without being restrained by the threat of being punished. If, however, the government does more than protect people against violent or fraudulent aggression on the part of antisocial individuals, it reduces the sphere of the individual’s freedom...(HA: 281). And: “Government is a guarantor of liberty and is compatible with liberty only if its range is adequately restricted to the preservation of what is called economic freedom” (HA: 285).

It is obvious that, in reality, the scope of government actions required to assure economic freedom depends on the particular inter-human and environmental circumstances that exist. For individuals who operate in a sphere of capitalism and who face an immanent invasion by plunderers, enslavers and killers; that scope may be large indeed. Referring to the time period around the 1960s, Mises wrote that he “who in our age opposes armaments and conscription is, perhaps unbeknown to himself, an abettor of those aiming at the enslavement of all” (HA: 282).

### **Economics as a Branch of Praxeology**

Mises’s ultimate goal of evaluating intervention arguments reflects his invention of the idea that economics is a science of the means. Like the knowledge of the means in the natural sciences, the special knowledge possessed by the economist enables humankind to attain their ends more fully than they could without that knowledge.

Economics differs from the natural sciences, however, because the phenomena it studies and describes are the consequence of purposeful action. The phenomena of the natural sciences cannot think and choose. As a result, economics has a foundation that the natural sciences lack. When the economist builds the theorems needed to evaluate intervention arguments, he refers to thinking and acting under particular conditions. The conditions vary depending upon the intervention argument that he aims to evaluate. But regardless of conditions, the assumption that purposeful action is at work is always made. The prerequisites and necessary characteristics of action are present in every economic theorem. But so are other subsidiary assumptions that enable the economist to build the

imaginary constructions required to evaluate intervention arguments. On this basis, one can say that economics is an application of praxeology or, as Mises wrote, economics is a *branch* of praxeology.

### 3. USE OF IMAGINARY CONSTRUCTIONS IN ECONOMICS

The best way for a reader of the treatise to see how Mises uses the method of imaginary constructions in economics is to search for the term “imaginary construction” and derivative terms. Such a search reveals a number of images, each of which plays an essential part in presenting the theorem of the elimination of price differences, which is the basis for all of the theorems required to build an image of capitalism and the theorems to evaluate intervention arguments.

No good economist would deny the importance of using *models* that in some respects are unrealistic. The usual explanation for using such models is simplification. Reality is too complex, it is said, to represent in its entirety. Thus models are needed. Mises, too, refers to complexity and reality. However, he goes beyond that. He uses imaginary constructions to separate the phenomena traditionally studied by economists from non-market action. In addition, he uses them to depict the presumed consequences of market interaction without the action that causes those consequences in order to highlight the causal actions. Finally, he uses imaginary constructions as beginning points and endpoints in building economic theorems. Some of these uses overlap with the uses of models in mainstream economics. However, the fact that mainstream economists have not tried to classify their models suggests that Mises was a pioneer in this area.

Mises’s organization of the imaginary constructions that are used in economics is unique and an understanding of his economics requires their careful scrutiny. The aim of this part is to present these constructs and to explain to the reader why Mises used them. Since this is the first attempt to do this of which the author is aware, it is sensible to both quote Mises and to try to paraphrase his remarks. This procedure will help the reader verify that my interpretation is correct. In the last subsection of this part, I try to show how he uses most of these constructs in a single task – to present his trade cycle theorem.

#### **Imaginary Constructions as Tools to Build Economic Theorems**

The special knowledge possessed by the economist is the division of labor law. The economist’s ultimate goal is to employ this knowledge to evaluate intervention arguments. The proponent of an intervention proposes some change in the actions of government agents that she expects to affect market interaction. To evaluate such a proposal, the economist needs an image of interaction that will enable him to judge the effects of the actions in light of the proponent’s aims. Beginning with such an image, he describes the government action, the conditions under which he assumes it occurs, and how the action changes market interaction. In other words, he describes it by building an *economic theorem*. The theorem is the description.

Theorems about the effects of government can only be built after the economist has built an image of interaction under pure capitalism. The economist must first elucidate interaction in the

absence of intervention before he can evaluate an intervention argument. His initial image of market interaction is a combination of (1) definitions of concepts, such as the division of labor, private property rights, money, the entrepreneur and the consumer, and (2) theorems about interaction under the *conditions of capitalism* – capitalism in the absence of government intervention. These theorems include the [theorem of the elimination of price differences](#), theorems about the economic phenomena that result from entrepreneur profit-seeking (prices and quantities of consumer goods and the factors of production), and the theorem of the trade cycle.

The concept of the conditions of capitalism in the absence of government intervention is somewhat amorphous. This is due to the fact that some of the terms used to describe these conditions represent a range of actions as opposed to distinct actions. An example is private property rights. The economist can build a definition of “complete private property rights.” This is a situation in which every actor is held accountable for the harm he imposes on others and receives a reward for the benefits he bestows. However, the economist cannot point to a situation, either currently or in the past, during which complete private property rights prevailed. If he assumes that private property rights are incomplete, however, he encounters the problem of specifying the external effects that he assumes to exist. Since there is a virtual infinity of possibilities, this is impractical. So he begins with the unrealistic construct of *pure capitalism* for which he assumes complete private property rights. He expects to alter the image later if it is necessary in order to evaluate a particular intervention argument. The same is true of the enforcement of contracts to help people deter fraud.

The use of money is similar. The economist can assume that there is a distinct item that everyone accepts and uses in exchange. In reality, however, people may use a variety of items. In the imaginary construction of pure capitalism, however, it is assumed that only one item is used as money. The image of pure capitalism is the starting point in a process of building an imaginary construction of market interaction – i.e., a set of economic theorems – that can be applied to the task of evaluating intervention arguments.

The first of the imaginary constructions that Mises used to derive economic theorems is the image of direct exchange. The next step in the presentation consists of describing that image.

### **Direct Exchange and Indirect Exchange**

In capitalism under direct exchange, a person exchanges a good or factor for a good or factor without the use of the medium of money. Direct exchange means barter. Indirect exchange refers to a person’s exchange of a good or factor for money and then the person’s exchange of money for a good or factor. In indirect exchange, a person must hold money for some period of time. Pure capitalism under direct exchange refers to an image of pure capitalism in which all exchanges are direct.<sup>14</sup>

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<sup>14</sup>Mises called this image the “barter fiction” (HA 201). It is worth noting that the direct exchange image is not a system in which barter actually occurs. In fact, it contains no barter at all.



Although the economist assumes that exchange is direct, he also assumes that the market participants can calculate using money prices. Individuals acting in the entrepreneur role send and receive price signals. On the basis of their prediction of the future money prices of the products they consider producing and the future money prices of the factors of production, they proceed to calculate the profitability of the various production projects they may undertake. They *calculate*. Thus, the economist says that economic calculation by entrepreneurs, or entrepreneurial calculation, is a characteristic of the image of direct exchange.

When the economist builds the image of direct exchange, he assumes that supply chains exist for at least some of the factors of production. This enables him to identify the relationship, or connections, between the prices of the final products and of the various factors of production that are produced at each juncture along the supply chains. Because many factors can be used to help produce more than one final product, all prices are related. If some change causes entrepreneurs to change one price, it also may cause them to change every price of every factor of production and every product.<sup>15</sup>

The direct function of the image of direct exchange is to enable the economist to describe the basic theorem of the elimination of price differences under the conditions of capitalism.<sup>16</sup> It also enables a simplified presentation of the tendency for the entrepreneurs to cause the money price of each final products to equal the money cost of producing it.<sup>17</sup>

**Choices based on economic calculation:**  
Choices in which individuals can calculate expected money revenues and the money costs associated with their actions.

An image of direct exchange is an imaginary construction for two reasons. On the one hand, the image of pure capitalism, which the economist aims to help build, is itself an imaginary construction. On the other hand, someone must produce the money that individuals use in exchange and individuals acting in the consumer role who aim to satisfy their future wants for material consumer goods must have a demand to hold money. I discuss the image of direct and indirect exchange in turn.

The image of the direct exchange enables the economist to express two essential characteristics of market interaction in the simplest possible way. These are scarcity and the division of labor law.

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<sup>15</sup>Mises used the term “connexity” to express this relationship among the various prices (HA: 391-4). The term did not attract a following and I will not use it here.

<sup>16</sup>Thus, Mises writes that the “operation of the entrepreneurs brings about a tendency toward an equalization of prices for the same goods in all subdivisions of the market, due allowance being made for the cost of transportation and the time absorbed by it” (HA: 329).

<sup>17</sup>Thus Mises writes that the “prices of the goods of higher orders are ultimately determined by the prices of the goods of the first or lowest order, that is, the consumers’ goods” (HA: 333). To describe the sequence of events required for this to occur, the economist must use the imaginary constructions described below.

Scarcity is represented by the proposition that as the entrepreneurs bid more of a specialized factor of production away from a particular use, its price in that use tends to rise. The division of labor is represented by the proposition that entrepreneurs who produce each material consumer good and factor of production at each juncture along the supply chains possess specialized knowledge that may not be possessed by anyone else.<sup>18</sup>

### *Indirect Exchange*

By adding the demand for and supply of money to the image of direct exchange, the economist transforms the direct exchange economy into the image of indirect exchange. In this image, changes in the money supply can lead market participants to make errors. Since I do not aim to present all of Mises's economics and since I am not interested in differences between Mises and Rothbard on the subject of money and credit, I will say nothing more about these images in the text.

### **The Image of Autistic Exchange**

"In order to study interpersonal exchange," Mises writes, the economist "must compare it with conditions under which it is absent" (*ibid.*: 243). To do this, he builds two images of autistic exchange – the isolated actor and the socialist commonwealth.

The image of the isolated actor helps the economist recognize the limits imposed on economics by tradition. By tradition, economists have studied market interaction under the condition in which individuals must achieve satisfaction only from material consumer goods. In addition, they have assumed that to satisfy their wants, individuals must first acquire money. Interaction outside of markets and purely personal action is excluded. Yet it is evident from the image of isolated action that acquiring money and buying consumer goods in markets is only one method for individuals to obtain satisfaction.<sup>19</sup>

The image of the socialist commonwealth is necessary in order to appreciate the consequences of the division of labor. The economist first builds an image in which all of the factors of production are employed in such a way that the most urgent wants of consumers are met according to a plan that

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<sup>18</sup>Mises writes that the inventors of this theory used the barter fiction to show how "to trace back the phenomena of the market to the universal category of preferring *a* to *b*..." (HA: 201). What he means is that by focusing on the relative prices at which goods are exchanged instead of the absolute prices, which may be determined by a change in the supply of or demand for money, the economist can easily recognize that the entrepreneur's profit incentive can be traced to the demand for material consumer goods. What he neglects to say, however, is that it can also be traced back to the specialized knowledge possessed by entrepreneurs at each "junction" along the various supply chains.

<sup>19</sup>Thus Mises writes:

In studying interpersonal exchange one cannot avoid dealing with autistic exchange. But then it is no longer possible to define neatly the boundaries between the kind of action which is the proper field of economic science in the narrower sense, and other action (*ibid.*: 232).

is specified in the construct. This is the socialist commonwealth. Then one attempts to show the effects of individuals acting in their self-interest under the conditions of capitalism. The result is a contrast that helps one understand how such self-interested action, taken according to the separate plans of individuals, helps to satisfy the most urgent consumer wants.<sup>20</sup>

### The Image of Integrated Functions

Interaction under capitalism entails the cooperation of uncountable different individuals participating in a system of markets and prices under the division of labor. The vast majority of these individuals know very little about the functions they perform in helping to expand the division of labor and to deal with scarcity. Yet the economist needs a skeletal image of these functions, so to speak. Just as a pure praxeologist could not build an image of action without a conception of ends, perceived means and ends, human imagination, and incentive to act, the economist must have an image that enables him to capture the [division of labor law](#) and the scarcity as represented in the [law of consumer sovereignty](#). I call this the *image of integrated functions*.

**Image of integrated functions:** a skeletal image of market interaction in which the economic functions of causing material goods to be produced to satisfy consumer wants are performed by hypothetical individuals who act in the specific roles of the consumer-saver, entrepreneur, and factor supplier.

The image of integrated functions contains three fundamental roles that perform functions. The first is the consumer-saver, which expresses the utility from material consumer goods that ultimately motivates entrepreneur action to cause goods to be produced. The second is the entrepreneur, which embodies the knowledge of how to produce consumer goods and factors of production and is the driving force and determinant of all market phenomena. The third is the factor supplier, which embodies the ownership of the factors and the desire to maximize income from supplying these factors. To distinguish between the owners of material factors and the owners of human factors, the

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<sup>20</sup>Thus Mises writes:

Along with the imaginary construction of a pure market economy the classical economists elaborated its logical counterpart, the imaginary construction of a socialist commonwealth. In the heuristic process which finally led to the discovery of the operation of a market economy this image of a socialist order even had logical priority. The question which preoccupied the economists was whether a tailor could be supplied with bread and shoes if there was no government decree compelling the baker and the shoemaker to provide for his needs. The first thought was that authoritarian interference is required to make every specialist serve his fellow citizens. The economists were taken aback when they discovered that no such compulsion is needed. In contrasting productivity and profitability, self-interest and public welfare, selfishness and altruism, the economists implicitly referred to the image of a socialist system. Their astonishment at the “automatic,” as it were, steering of the market system was precisely due to the fact that they realized that an “anarchic” state of production results in supplying people better than the orders of a centralized omnipotent government (*ibid.*: 239).

users of the image further divide this third role into two: the capitalist and the worker. The entrepreneur role is central.<sup>21</sup>

Mises used the roles and functions of the image of integrated functions in practically all of his advanced presentations of the theorem of the elimination of price differences and division of labor law. He also used it in presenting the law of consumer sovereignty (see his chapters 15 and 16). However, in these presentations, he did not refer back to the image of integrated functions (i.e., what he called the *functional distribution*). Yet the image of integrated functions contains the critical vocabulary that is necessary to bridge the gap between the study of isolated action, or action as a category, and the study of market interaction.

### *Passive and Active Roles*

By designating the entrepreneur role as the driving force, the economist separates the distinctly human, activating character of market interaction from its passive character. The roles of the capitalist, landowner, and worker possess only passive character. The economist assumes that they passively provide services to the entrepreneur role in exchange for income. The capitalist and landowner have command over property that they rent out in return for market interest. The worker commands his work. He passively supplies the labor factor and earns wages. Mises does not emphasize the fact that his presentations divide the roles into passive and active. But he uses the active-passive distinction repeatedly in building economic theorems.

### *The Capitalist Financier*

The image of integrated functions contains no capitalist-financier. In real market interaction, a project can be financed by consumer-savers who lend money to the entrepreneur or by owners of factors of production who agree to wait for their payments until after the product is produced and sold. In either case, the financiers must bear uncertainty. Recognizing this, Mises invents the role

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<sup>21</sup>Mises writes that the entrepreneur function is the driving force of market interaction (HA: 328-9). Regarding the image of integrated functions Mises begins with the entrepreneur role. He says that entrepreneur means

acting man in regard to the changes occurring in the data of the market. Capitalist and landowner mean acting man in regard to the changes in value and price which, even with all the market data remaining equal, are brought about by the mere passing of time as a consequence of the different valuation of present goods and of future goods. Worker means man in regard to the employment of the factor of production human labor. Thus every function is nicely integrated: the entrepreneur earns profit or suffers loss; the owners of means of production (capital goods or land) earn ordinary interest [pure market interest]; the workers earn wages. In this sense we elaborate the imaginary construction of *functional distribution* as different from the actual historical distribution (HA: 254).

Here he touts the what he calls the “functional distribution.” This is one of his imaginary constructions. I prefer the term image of integrated functions partly because it is more descriptive and partly because by I believe that contrasting this image with the historical distribution is misleading.

of the capitalist. The capitalist, he says, is always an entrepreneur because she cannot avoid bearing uncertainty.<sup>22</sup>

*The Time Preference Ratio, Market Interest and Pure Market Interest*

In market interaction under real capitalism, some individuals specialize in causing factors of production to be produced. The economist represents these by referring to supply chains or producers of higher-order goods. Some entrepreneurs, he writes, produce and sell consumer goods; others produce and sell “capital goods.” Some of these capital goods, such as parts delivered to an assembler, are used up during the production of a higher-order good. Others are only partly used up. Still others, such as the space for a manufacturing plant, may not be used up at all.

Those capital goods that are only partly used up or not used up at all constitute material property that must be owned by someone. In the image of integrated functions, they cannot be owned by the entrepreneur role. The economist assumes that they are owned by the factor suppliers. In his description of the functional distribution, Mises calls such individuals the “owners of means of production.” Another phrase he uses is “capitalists and landowners” (HA: 297, 311). Such individuals are included in the class of capitalist financiers.<sup>23</sup> Accordingly, there are two types of capitalist financiers: the savers of money and the owners of the material factors of production. Each helps to finance the entrepreneur role.

Each member of the class of capitalist financiers receives a combination of incomes: profit and interest. The interest received by the owners of the material factors is due to the fact that they could sell their factors and proceed to buy consumer goods. A person might do this if, for some reason, her income fell or if her time preference ratio fell.

Consider two capitalist economies, A and B, that were alike in all respects except that the time preference ratios in A were higher. Then A would have a smaller proportion of capital goods than B. In addition, the amount of market interest collected in A would be lower.

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<sup>22</sup>To isolate the capitalist-financier, Mises tries to build an image of what he calls a *pure entrepreneur*. A pure entrepreneur would possess no financing. Suppose, he says, that the pure entrepreneur speculates on behalf of the capitalists and takes “100 per cent share in the net profits.” The capitalist would be left to bear any losses. He neglects to say that no capitalist would be satisfied with such a situation. But he implies this by writing that the “capitalist is always also virtually an entrepreneur and speculator” (HA: 253).

His aim is to emphasize the fact that in the task of describing real market interaction, the functions of driving market interaction and bearing uncertainty cannot be separated. They can only be separated by the theorist who aims to distinguish different functions that must be performed in market interaction in order to build theorems in light of market interaction complexity.

<sup>23</sup>Thus Mises writes:

Capitalists and landowners are compelled to employ their property for the best possible satisfaction of the consumers. If they are slow and inept in the performance of their duties, they are penalized by losses. If they do not learn the lesson and do not reform their conduct of affairs, they lose their wealth. No investment is safe forever. He who does not use his property in serving the consumers in the most efficient way is doomed to failure (HA: 311-12).

*The Entrepreneur Role and Invention*

The entrepreneur role does not express what can be called the inventive character of action. This character is responsible for the discovery of new factors of production and new ways to employ existing factors. The entrepreneur role, as such, is not inventive. It has the capacity to recognize that new discoveries have been made and the incentive to employ either the individuals who can make discoveries or the material results of discoveries made elsewhere. The result of such employment is that individuals in the consumer role are served with goods that it regards as superior to existing ones or goods that it can buy at a lesser sacrifice, *ceteris paribus*, than existing consumer goods, thereby leaving more factors for the production of other consumer goods.

Inventiveness is one of two contributors to the increase in humankind's capacity, *ceteris paribus*, to produce consumer goods. The second is saving.<sup>24</sup>

**The Evenly Rotating System**

The economist possesses only one set of mental tools to study the independent influence of the separate conditions of capitalism. It is (1) to begin with an imaginary image of a pure capitalist system in which no change occurs and in which individuals best attain their ends routinely in light of the existing division of labor and scarcity, (2) to introduce a change in one of the conditions, and then (3) to conceive of the actions that the change would incentivize individuals to take in order to better attain their ends in light of the change. Mises called an image representing the routine satisfaction of wants an "evenly rotating system." He employed it both as an *initial state of rest* and a *final state of rest*. With some minor deviation, I adopt his terminology here.<sup>25</sup>

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<sup>24</sup>Thus Mises writes that

the preliminary conditions of economic improvement are an achievement of those whose saving accumulates the additional capital goods and of the inventors, and that the utilization of these conditions for the realization of economic improvement is effected by the entrepreneurs (HA: 298).

Mises tended to emphasize saving. The reason, one speculates, is that many intervention arguments disregard the effects on current saving and on the consumption of previously accumulated capital goods. In building the image of pure capitalism, it is important, however, to emphasize the relationship between invention and the entrepreneur role.

<sup>25</sup>Mises describes the evenly rotating system as an image of automaton.

The evenly rotating economy is a fictitious system in which the market prices of all goods and services coincide with the final prices. There are in its frame no price changes whatever; there is perfect price stability. The same market transactions are repeated again and again. The goods of the higher orders pass in the same quantities through the same stages of processing until ultimately the produced consumers' goods come into the hands of the consumers and are consumed. No changes in the market data occur. Today does not differ from yesterday and tomorrow will not differ from today. The system is in perpetual flux, but it remains always at the same spot. It revolves evenly round a fixed center, it rotates evenly. The plain state of rest is disarranged again and again, but it is instantly reestablished at the previous level. All factors, including those bringing about the recurring disarrangement of the plain state of rest, are constant. Therefore prices – commonly called static or equilibrium prices – remain

The evenly rotating system is a robot system designed to simulate a division of labor in the supply of different material consumer goods. It is an image of the routine supply of factors of production to the various production processes. In building it, the economist specifies supply chains and prices of each factor and material consumer good. He assumes factor suppliers, producers who direct the production and cause the goods to be produced and sold, and consumers who consume the consumer goods. The evenly rotating system simulates the roles and routine performance of functions described in the image of integrated functions. The exception is the entrepreneur role, which is not present in the system. It contains no driving force, uncertainty-bearing, or inventive activity.

The theorem-building economist uses function-performing robot routines to summarize her *ceteris paribus* assumptions prior to and subsequent to the introduction of a factor provoking action. Suppose that an economist wants to tell you his beliefs about the effects of a change in the weather on market interaction under the conditions of capitalism. He begins with an evenly rotating system in which there is no change in the weather. He calls this system the *initial state of rest*. Next, he introduces a change. Then he describes the actions taken by individuals acting in the entrepreneur, the consumer-saver, and the factor supplier roles. This action – the competitive actions of the entrepreneurs – results in a different evenly rotating system that is called the *final state of rest*.

#### *Division of Labor and Scarcity*

The evenly rotating system cannot represent the signaling and economic calculation that interactors employ to determine prices in real market interaction. These actions are performed by the entrepreneur role. But it can help the economist assure that the division of labor law and law of consumer sovereignty are incorporated into every economic theorem. Since the law of consumer sovereignty represents how individuals adjust to the scarcity of the factors of production, the evenly rotating system helps assure that scarcity is incorporated into every theorem.

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constant too (HA: 247).

Mises's use of the term "economy" here is unfortunate. Since such a system cannot contain actors, I prefer the term "system." Mises uses the term "system" several times in the treatise. But he more frequently uses "economy." The term "plain state of rest" can be misleading. What Mises is referring to is the situation as it is or the market phenomena that exist at some point in time in a real market interaction.

In writing about this purpose of the evenly rotating system, Mises says that it helps deal with "the problem of the relation between the prices of products and those of the factors required for their production..." (HA: 248). He is referring here to the law of consumer sovereignty. To present this theory, the economist conceives of the evenly rotating system as the outcome of entrepreneur interaction. The economist imagines that the entrepreneurs continue to interact until they determine all of the prices and other market phenomena. At that point entrepreneur action ceases and there is an evenly rotating system.

### The Initial and Final States of Rest

The economist must employ the images of the initial and final states of rest in order to produce an economic theorem. He begins by assuming an initial state of rest of an evenly rotating system. To express the routine behaviors of producing and consuming material consumer goods, he assumes that the same factors of production are used to produce the same material consumer goods again and again indefinitely in what can be conceived as “rounds.” He next introduces a profit opportunity that incentivizes an action by at least one entrepreneur. This action consists partly of sending a price signal that is different from the price in the initial state of rest. That signal incentivizes other entrepreneurs to take actions and to send price signals that also differ from the prices in the initial state of rest. The combination of signals incentivize further entrepreneur action. The collection of entrepreneur actions constitutes a *competitive response*, which occurs during a hypothetical *period of adjustment*. The adjustment actions end with the final state of rest of an evenly rotating economy.<sup>26</sup> The prices and quantities in this new evenly rotating economy are called “final prices” and “final quantities,” respectively. Such final prices and quantities can be compared with the initial prices and quantities. In addition, the economist can compare the factor suppliers, consumer-saver, and others by referring to the incomes they receive and the prices they pay in the final state of rest with those of the initial state of rest. I summarize the method of producing an economic theorem in the attached box.<sup>27</sup>

#### Method of producing economic theorems:

1. Specify the initial state of rest of an evenly rotating system.
2. Assume an initiating event provoking action (an entrepreneur-perceived change in consumer wants, in the environment, innovation and variations in the conditions that define the market economy).
3. Describe the competitive response that occurs during a period of adjustment (the series of entrepreneur actions that tends toward a final state of rest).
4. Describe the final state of rest of the evenly rotating economy at which the entrepreneur action is assumed to end.

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<sup>26</sup>HA: 248.

<sup>27</sup>In describing this method, Mises used the term “static.” While this was the term used J. B. Clark (EP: 117-8). Mises was concerned that its use was based on a false analogy to between the study of distinctly human action and the study of material phenomena. His point is that, in economics, there is no “dynamic method” with which to contrast it. The “static method,” wrote Mises is “precisely the proper mental tool for the examination of change (HA: 247-8). It is “logically incontestable.” He goes on in the treatise to refute objections to it (HA: 248). Aside from this one usage of the term, he does not refer to the “static method” again in the treatise. He does, however, critique the notion of mathematical economists that a “dynamic method” should be substituted for the “static method” in the study of economic change (HA: 356-7).



In building an economic theorem, the two states of rests are means of representing the *ceteris paribus* assumptions that the economist must make when he introduces the factor provoking change.<sup>28</sup>

*Analogy with the Study of Change in Isolated Action*

The best way to comprehend the evenly rotating system, the initial state of rest and the final state of rest as aids in producing an economic theorem is to show first how it can be used to help produce a theorem in a simpler but analogous situation of the isolated actor. Consider a person who wants to build a theorem pertaining to a single individual – say Crusoe on an island. She wants to tell you her beliefs about how Crusoe will respond if there is, say, a permanent change in weather conditions. She has only one method that is direct and that will achieve her goal. It has three steps. The first step is to assume a starting point at which Crusoe had established some thoughtless routine of action. The routine expresses her assumptions about Crusoe's ends, his perceived means of achieving them, and the actual behavior he performs to adjust to the environment he is assumed to face. The routine includes the her assumptions about how Crusoe has adjusted not only to the weather but also to every other environmental condition that is relevant to attaining his ends. The second step is to introduce the change in weather. This is the factor that she assumes provokes action. The third step is to conceive of a set of adjustment actions leading to an endpoint at which Crusoe had established a new routine, assuming that there are no changes in her ends, perceived means, or the environment. At that endpoint, he no longer is motivated to act and reverts to thoughtless routine behavior.

In this effort, she would use the “imaginary construct” of a starting routine and the imaginary construct of an ending routine. If she was asked to characterize the actor under these routine conditions, she might say that he is not really an actor, but an automaton, or robot. The automaton, or robot, is an imaginary construction, not a real actor.

She knows that Crusoe's actions never actually settle into a routine. He is always adjusting to unexpected changes. Moreover, she knows that as an inventive being, Crusoe consciously aims to improve his conditions by seeking out new means of achieving his ends. Nevertheless, she assumes

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<sup>28</sup>Guido Hülsmann (2003: 89-93) has challenged Mises's statement about the static method. He asserts that Mises could not use such a method to produce economic laws. One of Hülsmann's reasons is that “Mises seems to assume that, under stable conditions, all effects of the change will sooner or later be exhausted. Yet, nowhere does he give a reason why this should be so” (*ibid.*: 91). It is true that Mises does not explain why the effects would be exhausted. However, in writing that the final state of rest is a mental tool for comprehending action, he implies a reason. He implies that there is no other way to study action than by studying specific actions. Since a specific action cannot be studied without using an endpoint, the simple logic implied by the task requires one to use the imaginary construction of the final state of rest. The use of this method *assumes* that “all effects are exhausted.” To effectively counter Mises, Hülsmann would have to deal with the opening statement of Mises's section 5, as quoted above. He would also presumably have to either show that economic action can be studied in some other way or deduce that the study of such action is impossible.

these routines because she wants to tell you her beliefs exclusively about the effects of a change in the weather.

The economist develops an analogous set of tools to study the effects of a change in one of the conditions facing individuals under capitalism. His aim is to substitute the motivation to eliminate price differences for the isolated actor's motivation to adjust to the change. He imagines a starting routine in which all material consumer want-satisfying actions are performed routinely. Next he introduces a change in one of the conditions of capitalism. Then he conceives of the actions that individuals would take in order to first cause price differences and then to eliminate those differences.

**Constructs required to build the image of pure capitalism:**

1. Evenly rotating system: a time-invariant simulation of production, exchange, and consumption of the same material goods. Automaton are assumed to cause perpetual flux in the prices of consumer goods and factors of production but instantaneously re-establish the prices at their previous levels.
2. Final state of rest: an evenly rotating system that the economist assumes tends to result from entrepreneur action.
3. Final prices: the imaginary prices of the final state of rest.
4. Image of integrated functions: a skeletal image of interaction among roles that perform functions under the conditions of capitalism.
5. Roles of the pure entrepreneur, the passive material factor supplier, the passive worker, and the consumer-saver.
6. The incomes of pure profit, pure market interest, and pure wages.
7. Image of direct exchange: an image of pure capitalism in which there are prices and economic calculation but no holding of money.

Unlike a theorem about action by an isolated actor, an economic theorem must employ the image of integrated functions. In an economic theorem, a change in one of the conditions of capitalism incentivizes individuals acting in the role of profit-maximizing entrepreneurs to adjust to the change. The entrepreneurs no longer regard prices that are charged in the routine performance of functions as best suited to satisfying material consumer wants. As they adjust, they cause prices and other market phenomena to change in the direction of a new set of routines.

**Theorems to Study the Conditions of Capitalism**

To study the effects of changes in the conditions of capitalism, the economist conceives of changes in each of these independently of the others. What are the effects, he asks, of a system of private property rights that does not hold a person fully accountable for his harmful actions or provide a means for her to be fully rewarded for an action that causes more material consumer goods to be produced and consumed than otherwise. He does the same for cases in which freedom of enterprise is blocked by government coercion or by other coercive actions that are not deterred by

the government. He considers the effects of fraudulent actions and of regulations and other government means that might be designed to reduce fraud. Finally, he considers taxation and other means of financing government actions, such as borrowing and increasing the money supply.

In studying the effects of the conditions of capitalism, the economist studies market interaction and the effects of variations in the conditions on the *market phenomena*. These include prices, quantities and qualities of the material consumer goods and factors of production.

### **The Evenly Rotating System as a Counterfactual**

Mises also recognized a second purpose for the evenly rotating system that is unrelated to its use as an auxiliary construct. It is to help elucidate the entrepreneur role. The satisfaction of consumer wants in the evenly rotating system occurs automatically, as it were. People behave routinely. In real market interaction, however, the driving force is the entrepreneur role.<sup>29</sup>

### **The Images of the Stationary, Progressing and Regressing Systems**

The image of a stationary system contains what one might call simulated entrepreneurs, or robot entrepreneurs, who direct the shifting of the factors of production and the supply of consumer goods.<sup>30</sup> However, these “entrepreneurs” cannot cause income and wealth to rise. And they cannot earn additional *total* profit.<sup>31</sup> The main purpose of inventing the image of the stationary economy is to introduce two kindred images: the progressing and retrogressing systems. In the former, wealth

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<sup>29</sup>He wrote that

the only problems for whose treatment [the evenly rotating system]...is both appropriate and indispensable [are (1)] the problem of the relation between the prices of products and those of the factors required for their production, and [(2)] the implied problems of entrepreneurship and of profit and loss” (HA: 248).

<sup>30</sup>Mises does not use the term “entrepreneur” in his initial description of the three economies. He does use it in his later discussions of them, however.

<sup>31</sup>Mises defines the stationary system as on in which “the wealth and income of the individuals remain unchanged.” In this system, he says, the composition of the consumer goods and factors of production may change. New consumer goods and new factors may be employed; old consumer goods and factors may disappear so long as there is no change in wealth and income. As changes occur,

capital from those branches of production which are to be restricted in accordance with them [is slowly transferred] into those to be expanded...by not replacing equipment used up in the shrinking branches and instead investing in the expanding ones (HA: 251).

Simulated entrepreneurs may earn profit or loss. However, “the total sum of all profits and of all losses is zero” (HA: 251, 294).

and income rise. In the latter, they fall.<sup>32</sup> The progressing system helps to show the effects of an increase in saving.<sup>33</sup> In such a system, individuals decide to save enough to enable the amounts of capital goods to increase, either directly through production or indirectly through technological advance.<sup>34</sup>

Who receives the additional income and wealth? At first, it is received by the simulated entrepreneurs, who are motivated by profit to employ the new capital goods. But then it is distributed to the owners of the capital goods and the workers whose factors increase in price due to the increased bidding by the entrepreneurs. In addition, the consumers gain from lower prices or a wider range of consumer goods from which to select.<sup>35</sup>

There is no need to repeat his discussion here. It is sufficient to note that he uses these artificial constructs to help produce economic theorems. From this point of view, the constructs are auxiliary.

Stationary, progressing and retrogressing systems: images of direct exchange in which robot entrepreneurs employ consumer savings to alter the composition of capital goods. The image is called stationary, progressing or retrogressing, depending on whether the hypothetical total money value of capital is constant, rising or falling.

### *The Use of Imaginary Constructions in Mises's Presentation of the Trade Cycle Theorem*

Mises invented the trade cycle theorem and presented it in 1912. Every economist who calls himself Austrian thinks that he understands it. Yet, Mises's version of the cycle in HA employs

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<sup>32</sup>With one exception (HA: 558), Mises refers to these systems as "economies" In order to be consistent in my terminology, I use the term "system."

<sup>33</sup>Mises uses the image of the progressing economy for other purposes. One is to present the effects on the demand for money of an increasing population and division of labor (HA: 414-5). Another is to describe the effects of credit expansion (HA: 557-9). Still another is to present a history of capitalism (HA: 614-6, 664-5).

<sup>34</sup>Mises writes: "The injection of these additional capital goods is bound to increase the total sum of the income produced" (HA: 295). In his initial statement about the reason for the rise or fall, Mises cites increases or decreases in capital goods (HA: 294). However in a later statement, he includes the possibility of technological change (HA: 515-6).

<sup>35</sup>Another way to show the effects of an increase in saving would be to begin with an initial state of rest and then assume a change in individuals' originary interest ratios. However, Mises chooses to use the progressing economy image. A good reason for Mises's approach is that it avoids comparing consumer-saver evaluations of goods prior to the change with their evaluations after the effects of the change have occurred. The progressing economy, by definition, assumes that income and wealth rise without making any particular assumption about consumer-saver evaluations.

The reader who is interested in comparing Mises's treatment of these constructs with that of Rothbard should begin with Mises's presentation of this relationship at HA: 294-7. Then she should compare with Rothbard's at Rothbard (MES: 532-536).

imaginary constructions that, so far as I know, no Austrian economist has mastered. In light of this, it is doubtful that any Austrian has grasped the advanced version of the theory that Mises produced after having provided the praxeological foundation.

Mises begins by referring to originary interest in the pure market economy (pure capitalism).

In the market economy in which all acts of interpersonal exchange are performed by the intermediary of money, the category of originary interest manifests itself primarily in the interest on money loans...[I]n the imaginary construction of the evenly rotating economy the rate of originary interest is uniform. There prevails in the whole system only one rate of interest. The rate of interest on loans coincides with the rate of originary interest as manifested in the ratio between prices of present and of future goods. We may call this rate the neutral rate of interest (HA: 538).

Here he uses the term “originary interest” to refer to the rate of interest in the state of rest of the evenly rotating economy. This is the imaginary rate the pure market interest.

Consider the imaginary constructions that are either stated or implied in this paragraph. First, his reference to the image of the market economy is to indirect exchange – pure capitalism, which is the topic of all of part 4 of HA. Second, he refers to the evenly rotating system and to the imaginary construction of the pure market rate of interest.<sup>36</sup> The presence of originary interest and the rate of interest in a final state of rest implies a vocabulary that the economist can only build by employing the skeleton image of integrated functions.

Next he writes:

The evenly rotating economy presupposes neutral money. As money can never be neutral, special problems arise...If the money relation – i.e., the ratio between the demand for and the supply of money for cash holding – changes, all prices of goods and services are affected.

Note that when he writes “if the money relation changes,” he is writing of a factor provoking action. He is preparing to state and economic theorem. He goes on:

These changes, however, do not affect the prices of various goods and services at the same time and to the same extent. The resulting modifications in the wealth and income of various individuals can also alter the data determining the height of originary interest. The final state of the rate of originary interest to the establishment of which the system tends after the appearance of changes in the money relation, is no longer that final state toward which it had tended before. Thus, the driving force of money has the power to bring about lasting changes in the final rate of originary interest and neutral interest (*ibid.*).

This passage reflects the economic theorems that he presented in his chapters 14-19 on method and on direct and indirect exchange. With specific reference to the imaginary constructions, he begins by referring to the final state of rest of the evenly rotating system toward which the economic

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<sup>36</sup>Originary interest, as Mises uses the term in reference to market interaction, is also an imaginary construction because he defines it by referring to the imaginary constructions of integrated functions and the evenly rotating system.

theorem builder must assume market interaction is tending. Then, by proposing that money is not neutral, he indicates that his image of the market economy is one of indirect exchange, as opposed to direct exchange, in which individuals receive utility or profit from temporarily holding money.

The existence of changes to which actors adjust implies the entrepreneur role. Later in the same discussion, Mises asks how “the interplay of the market factors readjust the gross money rate to the height conditioned by the rate of originary interest” (HA: 539). This is a question about the actions taken by individuals acting in the entrepreneur role to cause a tendency toward a new final state of rest. That he regards it as such is indicated by the title of the next subsection in HA, namely “The Entrepreneurial Component in the Gross Market Rate of Interest” (*ibid.*). The gross market rate of interest refers to the rates that must prevail in market interaction.

A fitting end to this part is a quote that demonstrates the importance that Mises attaches to this exercise of explicating the trade cycle theory. He had already elucidated the expanded indirect exchange image of pure capitalism in his chapter 17. In addition, he had successfully shown how the entrepreneur role takes account of wants for consumer goods over time. The theory of the trade cycle, which he presents in chapter 20, utilizes each of these contributions in addition to the imaginary constructions described earlier. It helps to solve “great problems.”<sup>37</sup>

These were the problems economists tried to solve in discussing banking, fiduciary media and circulation credit, credit expansion, gratuitousness or nongratuitousness of credit, the cyclical movements of trade, and all other problems of indirect exchange (HA: 539).

Mises discusses some of these problems in his chapter 17. One of these is that of conceiving a real indirect exchange economy in which an increase in the supply of money can be neutral (HA: 416-418). Others are connected with debate in England between the so-called currency and banking schools concerning credit expansion (HA: 444-8).

On the basis of this discussion, it should be evident to the reader that Mises’s revised theory of money and credit expansion relies on imaginary constructions that were, at best, only implicit in the his original theory. This suggests that to understand the revised theory requires nothing less than a total comprehension of the praxeological foundation of economics that Mises provided in HA. Only with this comprehension can an interpreter know the basis for the theorem-building procedure that he followed.

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<sup>37</sup>In between his chapters 17 and 20 are two chapters that help the economist incorporate time preference and interest into the image of integrated functions. These chapters are unique. They reflect unique Misesian contributions to the law of consumer sovereignty. Mises seems to have been able to invent the ideas in these chapters only by first identifying the prerequisites and necessary characteristics of action.

#### 4. ROTHBARD ON THE RELATIONSHIP BETWEEN PRAXEOLOGY AND ECONOMICS

Rothbard's failure or unwillingness to comprehend the difference between praxeology as a foundation for economics and praxeology as a methodology led to a massive failure to communicate the economics that Mises sought to present. When Rothbard suggested in his *Man, Economy and State* (1962 [2004] – MES) that he had mastered Mises's economics, many prospective students of Austrian economics eagerly substituted Rothbard's simpler treatise for that of Mises. They did not realize that they were learning a curious mixture of Rothbardian ethics and Misesian economic insights. As a result, generations of would-be Austrian economists were led to follow Rothbard's ethics and away from Mises's scientific economics.

It is not the task of this essay to criticize Rothbard's treatise. It will suffice to show the logic of what I have called Rothbard's ethics and to evaluate an appendix he wrote on the relationship between praxeology and economics.

##### **The Logic of Rothbard's Ethics**

Unlike Mises, Rothbard does not pause to define the imaginary construction of the pure and unhampered market economy. As I have pointed out in my article "[Rothbard's Distorted Image of the Free Market](#)," his image is different from that of Mises, mainly because it contains no government. Because of this difference, a reader might expect that he would distinguish the definitions. However, Rothbard does not even define his own image, which he calls "the unhampered market economy" (MES: 85), in a way that corresponds to any reasonable person's conception of real market interaction.<sup>38</sup> A term that he uses interchangeably with the unhampered market economy is "free market." The conditions of the unhampered market economy become evident only by following Rothbard's discussion of an invasive action and defense against such action.

##### *The Invasive Action*

Rothbard's basic assumption about the type of interaction that is permitted in his "unhampered market economy" is that it cannot consist of an "invasive action." He defines an invasive action as "as any action – violence, theft, or fraud – taking away another's personal freedom or property without his consent" (*ibid.*: 176). He assumes that every existing private property right in his free market has evolved in such a way that no "invasive actions" were performed in the interaction that led to its emergence. Thus, the property that Rothbard assumes to

Rothbard assumes that all property in the free market has been acquired in an ethical manner.

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<sup>38</sup>He writes about conducting "an analysis of the workings of [a continuing pattern of interpersonal exchanges – society] based purely on voluntary action, entirely unhampered by violence or threats of violence" (*ibid.*: 83-4).

exist in the unhampered market economy has not been acquired through violence, theft or fraud. It is convenient to express this assumption by saying that a person's property has been earned or acquired in *an ethical manner*.

### *The "Enforcing Agency"*

The curious reader must surely ask how such a situation is related to reality? In trying to answer this question, she comes to recognize what can most accurately be called "subterfuge" in Rothbard's presentation. In the first reference to this question, Rothbard recognizes the difficulty of providing a rationale in reality for building an image of this "society based purely on voluntary action." "One of the problems" he writes, "is the role of the enforcing agency..." The role of this agency is to combat the "invasion of the physical person and property" (*ibid*: 183).

A reader who had read Mises's treatise might now expect Rothbard to say that such an enforcement agency is what Mises called a government – the agency that controls the monopoly over coercion and compulsion. Such a reader would be wrong. Rothbard at this stage wants to convey the message that he aims to build his image of the free market *without specifying* the nature of such an agency. Thus he dismisses the issue by saying that

it makes no difference whether this condition [that property is acquired in an ethical manner] is established by every man's deciding to refrain from invasive action against others or whether some agency is established to enforce the abandonment of such action by every individual (*ibid.*).<sup>39</sup>

Here he mentions "some agency" but does not tell his reader that such an agency cannot be a government agency. Consistent with this, he writes later that he assumes that "there are no invasive acts in the society, either because no individuals commit them or because they are successfully combatted and prevented by *some sort of enforcing agency*" (*ibid.*: 184, italics added).

This would have been an ideal time for Rothbard to introduce the distinction between his image of a free market and that of Mises. He could state Mises's definition and then his own. Then he could tell why he does not follow Mises's lead. Instead, he turns away from the topic. He ends his chapter on direct exchange by presenting a quotation from a British political philosopher who he claims has most clearly described "the basis of the free, noninvasive, or 'voluntaryist' society...in a brief space" (*ibid.*).

The reader who is more curious about what Rothbard means by "some sort of enforcing agency," as quoted above, is left to wonder. She might expect to find an answer in Rothbard's last chapter on "The Economics of Violent Intervention in the Market." However, she soon discovers in this chapter also that "the analysis of intervention applies to whatever agency wields the violence, whether private or governmental" (*ibid.*: 898). In fact, however, Rothbard had no intention of allowing the enforcement agency to be governmental, at least if it requires financing.

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<sup>39</sup>If it makes no difference, then the property titles that exist in the noninvasive society must have emerged in a society in which there were no invasive actions.



Another possible source of information for what Rothbard is really assuming about the enforcement agency is his treatment of taxes and national defense. This treatment implies that the agency cannot be a government, although Rothbard does not say this. In the case of taxes, he writes is that taxes are an example of a “binary intervention.” A binary intervention is “a *hegemonic* relation...between two people: the intervener and the subject” (*ibid.*: 877, italics added). He had earlier ruled out hegemonic relationships as part of his unhampered society (*ibid.*: 84-5). Thus, when he writes of “some sort of enforcing agency,” he cannot have in mind an agency that imposes taxes.<sup>40</sup> To a reader who has the patience to sort through the various definitions for consistency, it becomes clear that Rothbard’s free market cannot contain a monopoly over coercion and compulsion with the authority to finance its operations by imposing taxes. Yet without taxes or some other means of financing, a government could not be sustained. But a critical reader must ask why Rothbard does not say this outright.

A reader who has less patience may come to realize what Rothbard is assuming when he discusses the government budget. There he classifies taxation as a government intervention. “Government intervention, he says, is not only...like price control; it may also be...taxation, and is therefore imbedded into the very nature of government and governmental activity” (*ibid.*: 908).

The tax-and-expenditure process, therefore, will inevitably distort the allocation of productive factors, the types of goods produced, and the pattern of incomes, from what they would be on the free market. The larger the level of taxing and spending, i.e., the bigger the government budget, the greater the distortion will tend to be (*ibid.*: 909).

It would be correct to say that a given set of government actions that is financed by taxation would yield a different allocation of factors of production than one that did not have to be financed at all. But that is not what Rothbard is saying in this quotation. He is comparing a set of government actions financed by taxation with his free market, in which by assumption no invasive actions occur.

### *National Defense*

If observation of the modern world provides any information about what to fear from government-less market interaction, it tells one that internal defense may be less important than defense against foreign aggressors. Bombs, poisons, and sabotage of communication, transportation,

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<sup>40</sup>Also see his discussion of inalienable personal rights.

Because a man’s self-ownership over his will is inalienable, he cannot, on the unhampered market, be compelled to continue an arrangement whereby he submits his will to the orders of another, even though he might have agreed to this arrangement previously (*ibid.*: 164).

Such inalienable rights are incompatible with a society that contains a government that enforces the conditions of market interaction (the conditions of capitalism) and requires resources through taxation.

and energy networks are means of disabling and overwhelming a defense force that is not prepared for *total war* or that is not aligned with a nation that is so prepared.<sup>41</sup>

Yet Rothbard does not allow national defense to be a rationale for a monopoly over coercion and compulsion. “The defense function,” he writes “is particularly vital to the State’s existence, for on its virtual monopoly of force depends its ability to extract taxes from its citizens” (MES: 955). But nowhere does he write that defense is vital to the existence of a free market or to the protection of wealth acquired by free market participants.

In MES, Rothbard does not provide any justification for believing that private defense agencies could block invasive action. In some of his later works, he tries to do so but, in my opinion, he fails, as I show in my essay on “[Competing Defense Agencies in Anarchy](#).” In any case, the subject of this study is his treatise. So there is no reason to discuss such agencies further. What is evident is that if individuals voluntarily choose to not act invasively, his image of the free market would be realistic. However, since making such choices amounts to ethical behavior, the alert reader must recognize that what Rothbard calls the “*Wertfrei* laws” are based on an image in which actors are assumed to act ethically. This is why I call the subject matter that Rothbard describes in MES as “ethics.” If this label is applied, the final sentence in the above quotation – which is the final sentence in the body of Rothbard’s treatise – is a non-sequitur. The praxeologist, in Rothbard’s terms, builds every theorem on the assumptions embodied in his ethics of the noninvasive society. Only one political course is available to one who favors a “mechanism of harmony,” etc. It is to abolish the government.

### On Praxeology and Economics

The reader who has learned Mises’s statements about the relationship between praxeology and economics, as described above, would be disappointed by Rothbard’s discussion. In the body of his treatise, he writes about it briefly.

What is the relationship between praxeology and economic analysis? Economics is a subdivision of praxeology – so far the only fully elaborated subdivision. With praxeology as the general, formal theory of human action, economics includes the analysis of the action of an isolated individual (Crusoe economics) and, especially elaborate, the analysis of interpersonal exchange (catallactics). The rest of praxeology is an unexplored area (*ibid*: 74).

He could have said that praxeology is the study of human action in general or as a category. But he clouds the issue with the term “formal.” How does this term help one distinguish praxeology from non-praxeology. And how does it help one delineate the subdivision of economics? The term “general” in this quotation would be acceptable if he went on to distinguish it from the particular theory of the economics subdivision. However, he does not. Moreover, his statement about “Crusoe economics” reveals nothing about the problem of separating decisions to engage in interpersonal exchange and decisions to act outside the nexus of exchange. What is the purpose, one wonders of

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<sup>41</sup>For a definition of “total war,” see HA: ch. 34.

Rothbard's "Crusoe economics?" He does not say.<sup>42</sup> It is certainly not the same as Mises's image of autistic exchange.

Nor does Rothbard mention "economic problems" (the problems of intervention). Yet it is only by focusing on the evaluation of proposals for market intervention that one can set the parameters for building the imaginary construction of the pure market economy. These omissions suggest that Rothbard failed to recognize the significance of the method of imaginary constructions because he was unwilling to accept the aim of building a science to evaluate intervention arguments. Rothbard certainly used imaginary constructions in his ethics. But his goal was to present an ethic not the science of economics. It served his purpose better to claim that praxeology yielded ethical principles that could be used as a foundation for his ethics.<sup>43</sup>

### *The Appendix*

Rothbard's treatment of the relationship between praxeology and economics in his appendix is short and sweet. Its essentials take up less than one page. I duplicate the essential part here:

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.

It is important to realize that economics does not propound any laws about the content of man's ends (*ibid.*: 72).

On its face, this statement of the relationship seems like nonsense. It implies that simple logical reasoning based on the action axiom enables one to derive all of economic theory. However economic theory is a set of theorems. To deduce a theorem, it is necessary to add subsidiary assumptions such as those required to build the image of pure capitalism and those made by the proponents of intervention arguments. One cannot begin with what he calls the action axiom and

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<sup>42</sup>One obvious purpose is to help the economists remember that choices made on the basis of monetary calculation are embedded in a more general theory of choice. A second purpose is to reason *by analogy* about choice and scarcity in market interaction. In fact, however, Rothbard uses his image not only for this latter purpose but also to provide some preliminary descriptions of action in specific environments – i.e., under particular conditions.

<sup>43</sup>In effect, he ended up equating the theorems derived from his concept of an invasive action with the theorems derived from the combination of the prerequisites and necessary characteristics of action and the presence of the conditions of capitalism. Thus, he made the theorems of his ethics the analogs of the economic theorems in Mises's scientific economics.

deduce (“elaborate”) all of economic theory. To do so, one would have to know and build theorems for all of the possible proposals for market intervention that proponents might make. To achieve that feat, one would also have to include all of the variations in the conditions of the pure market economy that might be assumed in such a proposal or that might have to be taken into account for other reasons.

It is true enough that once the assumed market economy conditions and the assumptions made by the proponent of an intervention are specified, the economist’s task is to employ the method of imaginary constructions to build economic theorems. These theorems represent the consequence of the distinctly human action of separate individuals under the assumed conditions. To build such theorems one must begin with the assumption that the individuals are actors (what Rothbard calls the “action axiom”). It is also true that to avoid error, the economist must be able to logically trace all economic theorems back to the prerequisites and necessary characteristics of action. From this point of view, an economic theorem can be represented in approximately the form that Rothbard describes. But the process of deciding which theorems to build must begin by specifying the aim that the economist wishes his theorem to help him achieve, since this specification dictates the subsidiary assumptions. It cannot begin only with the “action axiom.”

It cannot be denied that Rothbard’s presentation bears some resemblance to that of Mises. For example, Mises writes that all “the concepts and theorems of praxeology are implied in the category of human action” (HA: 64). However, if one reads further, he recognizes the importance of identifying the reality that is of interest to the praxeologist qua economist. The following quotation abbreviates what Mises has in mind:

It would be possible to [delineate] all thinkable conditions and [deduce] from them all inferences logically permissible...But the end of science is to know reality. It is not mental gymnastics or a logical pastime. Therefore praxeology restricts its inquiries to the study of acting under those conditions and presuppositions which are given in reality...However, this reference to experience does not impair the aprioristic character of praxeology and economics. Experience merely directs our curiosity toward certain problems and diverts it from other problems. It tells us what we should explore, but it does not tell us how we could proceed in our search for knowledge (*ibid.*: 65).

He gives the example of the disutility of labor.

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.[23] But the real world is conditioned by the disutility of labor. Only theorems based on the assumption that labor is a source of uneasiness are applicable for the comprehension of what is going on in this world (*ibid.*).

Economists are not interested in a world in which labor does not yield disutility, although such a world is imaginable.

It should be evident to a close reader that this approach to apriorism is quite different from that of Rothbard.

## 5. WHY DID ROTHBARD MISREPRESENT MISES ON METHOD?

It is problematic to argue that Rothbard intentionally misrepresented Mises's ideas. However, it is not problematic to argue that Mises sought to present subject matter that is very different not only from Mises's economics but from the economics that most people had, until Rothbard, called Austrian. If the misrepresentation is not intentional, then one must attribute it to Rothbard's fervor. He must have been so intensely motivated to gain acceptance for his ethics that he not only twisted many of Mises's words, he appropriated some of them for his own purpose.

Nothing is to be gained from further speculation. Perhaps someone who was closer to Rothbard or who has access to his private papers could shed additional light. It is sufficient here to reach a single conclusion which was stated in the introduction. If the cult that Rothbard initiated is not countered, it will threaten the long-term image of Austrian economics in the eyes of the best and brightest of the potential economics students. Failure to deal directly with that cult will enable the cult's ethics to eclipse the study of Mises' scientific economics.

## APPENDIX

## MISES ON THE PROCEDURE OF ECONOMICS

Mises's first discussion of "The Procedure of Economics" is in his chapter 2. He begins his section by pointing out that the economist, as pure praxeologist, produces the prerequisites and necessary characteristics of action by employing aprioristic reasoning. Then he goes on to discuss the theorems of economics. To deduce these theorems, he writes, "one must go further and define – of course, in a categorial and formal sense – the less general conditions required for special modes of acting." It would be possible to build theorems for action under "all thinkable conditions." "But the end of science is to know reality" (HA: 64-5). He does not say why this is the "end" of the science of economics. Nor does he tell the aspects of reality – which, of course, is impossible to fathom in its totality – that the economist aims to study. The following edited excerpt tries to capture the true thrust of his discussion in a way that anticipates what Mises writes in his chapter 14:

Experience...directs our curiosity toward certain problems and diverts it from other problems. It tells us what we should explore...In our actual world...[studies that assume the disutility of labor and indirect exchange] are an essential part of economic theory. [Economists' interest in indirect exchange and other real conditions under which actors operate] does not alter the aprioristic character of its reasoning. But it marks the way in which economics, up to now the only elaborated part of praxeology, presents the results of its endeavors...In introducing assumptions into its reasoning, it satisfies itself that the treatment of the assumptions concerned can render useful services for the application of its theorems to *the solution of concrete historical and political problems*. It adopts for the organized presentation of its results a form in which aprioristic theory and the interpretation of historical phenomena are *intertwined*...From the unshakable foundation of the category of human action praxeology and economics proceed step by step by means of discursive reasoning. Precisely defining assumptions and conditions, they construct a system of concepts and draw all the inferences implied by logically unassailable ratiocination" (HA: 65-67, italics added).

Three points must be made about the excerpt. First, when Mises uses the term "aprioristic theory," he is referring to the aprioristic reasoning that he had introduced in his derivation of the prerequisites and necessary characteristics of action. When he writes of historical phenomena, he is thinking of the historical conditions that he summarizes in his definition of capitalism. He expects that elucidating interaction under such conditions will help achieve either the ultimate goal of evaluating intervention arguments or the goal of interpreting historical events. Thus economic theorems represent a logical intertwining of (1) the prerequisites and necessary characteristics of action and (2) assumptions that he will later make about the conditions under which the market interaction occurs.

The second point relates to his reference to historical and political problems. Presumably, "political problems" refers to problems associated with evaluating intervention arguments – i.e., "the various problems raised by interference with the market on the part of governments and other agencies employing coercion and compulsion" (HA: 238). But a question arises as to why he refers to historical problems. The answer seems to be that one of his main concerns in other parts of his chapter is how to interpret historical events. He seems to be acknowledging that the image of pure

capitalism, which is a prerequisite for doing economics, is also a prerequisite for doing economic history. He sees no reason to explain the apparent paradox that even though he had written that history is a separate branch of the science of human action from praxeology and economics, he now seems to be saying that the economic historian must use vocabulary derived from the same image of pure capitalism as the economist.<sup>44</sup>

The third point is that he writes nothing here about *how* to intertwine aprioristic theory and historical phenomena. His statements are abstract and general. To learn about this intertwining, a reader must page ahead. If a reader goes on to his chapter 14 on the method of economics, it is evident that he is referring to the use of theorems to build the imaginary construction of interaction under the conditions of pure capitalism. The economist knows that the conditions of capitalism enable an expansion of the division of labor and he wants to produce theorems for a situation in which those conditions are present. So he begins by producing theorems for pure capitalism. When Mises writes of historical phenomena that are intertwined, he is referring to the historical conditions of capitalism, which the economist uses as assumptions under which action and interaction occur.

### Ratiocination in Economic Theorem Building

Mises used the term ratiocination to refer to the procedure used in both praxeology and economics. This term is preferable to the method of imaginary constructions. First he used it to express the methods that the students of these subjects have in common. He writes that “praxeology and economics proceed step by step by means of discursive reasoning. Precisely defining assumptions and conditions, they construct a system of concepts and draw all the inferences implied by logically unassailable ratiocination” (HA: 67, italics added).

**Ratiocination in Pure Praxeology:** the mental process used to derive the prerequisites and necessary characteristics of action.

Later, in conjunction with the quotation above, he distinguished between the two. He wrote that economics

does not present an integrated system of pure aprioristic ratiocination severed from any reference to reality. In introducing assumptions into its reasoning, it satisfies itself that the treatment of the assumptions concerned can render useful services for the comprehension of reality (HA 39, as partly quoted above).

This suggests that ratiocination in pure praxeology is the mental process used to derive the prerequisites and necessary characteristics of action. Ratiocination enables the pure praxeologist to build a vocabulary.

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<sup>44</sup>In Mises’s presentation of the science of human action, history is a branch that is separate from praxeology and its sub-branch, economics, which deals with political problems. To divide the science in this way is to set aside the fact that a theory of action in general is required for both.

In economics, ratiocination refers to the mental process of combining that vocabulary with assumptions that can be used to build economic theorems. Such theorems enable her to build an image of capitalism and to evaluate intervention arguments.

**Ratiocination in economics:** the mental process of building economic theorems.



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