

# **The Procedure of Praxeological Economics and Its Relation to “Positive Economics”**

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## **Abstract**

This essay combines two ideas: (1) a praxeological view of the definition of the subject matter of economics (praxeological economics) and (2) the goal of evaluating arguments for and against market intervention on the basis of logic and relevance. Pursuing this goal and using the praxeological view has three important properties. First, it accounts at the most fundamental level for the fact that human actors are distinct from other animals and robots. Second, it satisfies the traditional goal in political economy to evaluate arguments for or against intervention in a market economy. Third, it is value free. Moreover, this combination implies a general procedure for evaluating interventionist arguments. The essay describes this procedure in four steps. Afterwards it uses the knowledge that is gained from deriving the procedure to assess some of the propositions that economists associate with the idea of positive economics. Five propositions are assessed.

# The Procedure of Praxeological Economics and Its Relation to “Positive Economics”

Ludwig von Mises (1966) seems to have been the first to derive value freedom from a goal that he asserted economics should have. He asserted that the goal of economics should be to evaluate arguments for or against intervention in the market economy.<sup>1</sup> For convenience we call the latter “interventionist arguments.” Then he pointed out that the adoption of this goal enables one to easily determine whether his work is value free (*ibid.*: 882-4).<sup>2</sup> The economist’s task is merely to judge, using economic logic and knowledge of the relevant facts, whether the goal specified in an interventionist argument can be achieved by means of the intervention or non-intervention specified in the argument.<sup>3</sup>

Mises also seems to have been the first to propose that economics is a branch of the study of human action in general – praxeology. This proposal says that images of the market economy must be based on the assumption that the subjects are actors who possess the properties of action (discussed below). This paper defines “praxeological economics” as the economics that logically follows from this proposal. The definition is developed further in part 1.

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<sup>1</sup>This goal is stated at several places in *Human Action* but nowhere as distinctly as in this paper. Perhaps the deepest discussion is in his section on World View and Ideology (*ibid.*: 178-187). See especially the statement that “[t]he main objective of praxeology and economics is to substitute consistent correct [non-ascetic] ideologies for the contradictory tenets of popular eclecticism” (*ibid.*: 185). But also see his introduction and concluding paragraph. It is worth noting that Israel Kirzner, who seems to have used Mises as the primary reference for an “encyclopedia article” on value freedom in Austrian economics, does not acknowledge the logical connection between the evaluation of arguments and value freedom. This seems partly due to his reliance on Mises writings about history as well as economics. See Kirzner 1994.

<sup>2</sup>It is important when reading the passages to realize that, to Mises, the term “success” means that the action results in the ends that are sought (*ibid.*: 140).

<sup>3</sup>Disagreements over which facts are relevant may occur. So judgments of relevance are necessary; but these are not value judgments. They are resolvable by appeal to reason [provided of course that the appeal is made to reasonable people who share the same goal].

The aim of this paper is to combine the assertion and its implied value freedom with the praxeological economics proposal and then to examine its implications for the procedure of economics and for what most economist would label “positive economics.” It is worth pointing out that the assertion and proposal are quite separable and distinct ideas. One can accept the one without accepting the other. One could assume that the subjects in a market economy are robots or that they are driven entirely by theoretically identifiable instincts, stimulus-response, or some combination. Yet the logic that implies value-freedom if one confines her work the evaluation of arguments would still be valid.

If one both accepts the assertion and does praxeological economics, she can deduce an apparently necessary procedure and some of the core concepts that are relevant to evaluating interventionist arguments. The procedure was only hinted at by Mises; and, in some cases, he employed the concepts incompletely and incorrectly. The paper will identify some of these.

One important case can be demonstrated before the exercise begins. The demonstration will give the reader a good idea of what the author regards as the main contribution of the paper. One who aims to evaluate interventionist arguments must ordinarily build an image of a market economy. However, as the work of Mises and F. A. Hayek (1945) on socialism demonstrated, the human mind is unable to build a complete image of the market economy.<sup>4</sup> It follows that in evaluating interventionist argument, one is limited to building images of action and interaction in an incompletely specified market economy. Mises did not acknowledge this limitation although he did not try to exceed it in his work.

In this paper, we define distinctly human action under the conditions of the market economy as “entrepreneurship.” If this definition seems strange, it is probably because the Austrian economists who have used this term did not follow up on four of Mises’s ideas, namely, (1) that economics employs a

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<sup>4</sup>Mises (1981: 186) wrote about the impossibility of calculating costs. A related but more subjectivist-based argument for the impossibility of building a complete image of the market economy is Gunning (1991: 54-57).

concept of the entrepreneur that embodies a specific function and (2) that entrepreneur means “acting man exclusively seen from the aspect of the uncertainty inherent in every action,” (3) that uncertainty implies speculation, and (4) that speculation means acting on the basis of what one judges or expects others to do.<sup>5</sup> Using this definition, it becomes obvious that the primary task of the economist who aims to evaluate interventionist arguments is to provide logically consistent and relevant examples of entrepreneurship. This, in turn, means that the crucial procedural question in praxeological economics is how to get into a position to give such examples. This issue is discussed further in part 2. It is, in the author’s view, the main contribution of the paper.

This paper is organized as follows. Part 1 helps establish the focus by defining economics from the praxeological point of view. Part 2 outlines the procedure of praxeological economics. Part 3 shows how praxeological economics can be used to assess positive economics, which is taken as the currently dominant procedure for doing economics. Part 4 presents some concluding remarks.

## 1. PRAEIOLOGICAL DEFINITION OF ECONOMICS

The procedure for doing praxeological economics is derived from the goal that students of praxeological economics aim to achieve and from the definition itself. The aim of this part is to provide a

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<sup>5</sup>The first three ideas are in a single paragraph (Mises 1966: 252-3). The fourth is in a different part of the book (*ibid.*: 113). Why have the neo-Austrians not followed up? The reason is that Mises himself did not follow up. On the one hand, he introduced a very different definition of the entrepreneur called the “promoter” in order to elucidate the “market process” (*ibid.*: 254-5) On the other hand, when using the concept of the function of the entrepreneur, he used it in conjunction with the concepts of capitalists, landowners, and laborers as if to contradict his statement, in the same paragraph as the earlier three statements that these are also actors who perform the entrepreneur function [see, for example, his first statement at *ibid.*: 254. For a further elucidation of the concept of the entrepreneur proposed in this paper as well as a criticism of the neo-Austrian most known for his work on “entrepreneurship,” see Gunning 1998a.

presumably non-contentious definition of economics. We define economics as the study of interaction under the conditions specified in the definition of the market economy. These conditions are: a private property system, free enterprise, and the use of money. The term “economic interaction” refers to interaction under these conditions. This is a traditional definition of the subject and should raise few objections. To define economics more fully, we can break this definition into two parts, discussing each in turn: (1) the conditions of the market economy and (2) interaction. We discuss each in turn.

### **Conditions of the Market Economy**

To define the property system, freedom of enterprise, and the monetary system more fully, we must refer to the goal of economics. The ultimate goal, we assert, is to analyze the effects of market intervention, such as a price control, central banking, or taxes to support public works. From this goal, we can derive the intermediate goal of comparing interaction under two sets of market economy conditions: (a) one that contains a particular intervention and (b) one that does not contain that intervention. Before we could make such a comparison, we would have to build a fundamental, or benchmark, image of interaction in an economy that contains the least amount of intervention. The simplest such image makes the unrealistic assumptions that the private property system is complete yet there are no taxes, that there is no self-production or barter, that individuals are completely free from coercion to enter every occupation and to produce any good or factor of production they wish, and that the quantity of money is fixed. In such an image, there are no goods with the jointness-in-demand characteristic (public goods). For convenience we call this set of conditions the conditions of the *pure market economy*. In short, our first priority is to build an image of the pure market economy.

Once we build the benchmark image, we aim to build additional images to help us compare the interaction in the presence of the proposed intervention with interaction in its absence. To do this, we try to identify in what way the conditions in the absence of the intervention differ from those in its presence.

In all cases, we will have to make assumptions about the property system, the extent of free enterprise, and money. The criteria we use to make these assumptions are based on judgments of relevance. We must judge whether the property system, free enterprise, and monetary system assumed in our images are relevant to the conditions that are assumed in a specific interventionist argument.

### **Interaction**

The second part of the definition of economics is the term “interaction.” Praxeological economics defines this in a specific way based on the proposition that economics is a specific field within the more general field of praxeology. The more general field begins with the definition of distinctly human action. Distinctly human action implies that behavior is chosen. A distinctly human actor (1) imagines at least two alternative futures each of which depends on which specific behavior he chooses to perform now, (2) he deliberates over which behavior will lead to more desirable results, (3) he makes a decision, and (4) he bears the uncertainty. We can distinguish distinctly human action from the behavior of robots, which is programmed by distinctly human actors. We can also distinguish it from the behavior of non-human animals, which possess a much lower degree of self-awareness and which lack the imagination, creativity, and inventiveness of the distinctly human actor. Distinctly human action refers to *homo agens*, not to *homo sapiens*.<sup>6</sup> Some human beings, especially the young and the very old, are not capable of distinctly human action. In economic interaction they are dependents.<sup>7</sup>

Interaction implies two or more actors. Since our goal is to conceive of an image of a market economy that is large enough to enable us to make judgments about interventionist arguments relating to

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<sup>6</sup>The definition and epistemological problems connected with defining distinctly human action are dealt with in Chapters 1-6 of Mises's *Human Action*. See especially Chapter 1.

<sup>7</sup>Mises points out that "[i]n every real and living economy...the minor family members...are...themselves not actors" (*ibid.*: 252). There are also people who live but who lack in the vital energy needed to act or who fail to use it (*ibid.*: 131).

the societies that exist today, we must assume that the number of actors is very large. This implies potential for numerous specializations.

### **Impossibility of Building a Complete Image of a Market Economy**

We cannot succeed in building a complete image of the pure market economy. One reason is that we must assume that the market economy contains innumerable specializations. A market economy contains a very large number of products, each with a large number of stages of production and, therefore, producers of factors of production. For each product, there are advertisers, marketers, distributors and other middlemen, agents, advisors, and so on. We cannot build an image of free enterprise that contains all of these specialized actions. A second reason is that distinctly human actors possess the qualities of imagination, creativity, and inventiveness. The image builder also possesses these qualities. However, he is not in a position to determine, with any significant precision, how the qualities will be exercised by the indefinite number of specialized actors. Thus, our effort to achieve our goal cannot succeed. Nevertheless, we can build images that are sufficiently complete to provide a basis for evaluating *some* interventionist arguments. We must be satisfied with this. Regarding the other interventionist arguments we must simply admit that we cannot evaluate them on the basis of logic and relevance.<sup>8</sup>

Although we cannot build a complete benchmark image, we can build images that enable us to understand some aspects of the benchmark image. Examples of such aspects are competition, innovation, copying, and consumer sovereignty. We describe this further below.

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<sup>8</sup>At the same time, such arguments are suspect precisely because they cannot be evaluated.

## 2. THE GENERAL PROCEDURE OF PRAXEOLOGICAL ECONOMICS

Because we cannot build a complete image of a market economy, we must resign ourselves to the task of evaluating arguments on the basis of incomplete images, or imaginary constructions. The procedure of praxeological economics amounts to the procedure we follow in our endeavor to build these incomplete images without violating the basic principle that economics is a branch of praxeology – i.e., the principle that our images must be of actors who possess the properties and qualities of action. Given the definition of entrepreneurship, this means that the procedure amounts to building images of entrepreneurship. Space limitations prevent a full description of the procedure.<sup>9</sup> It must suffice to outline it.

A brief preview, or summary, may be helpful. The procedure is presented here by referring to four steps. The goal is to assure that all of the images used to evaluate an interventionist argument are images of distinctly human action and that every image is of a complete production-consumption action under market economy conditions. The first step begins with pure praxeology by identifying the properties and qualities of distinctly human action in general. The second step is designed to assure that images involve a complete production-consumption action by identifying economic functions that must be present in such an action. Someone who makes an interventionist argument would have to include these functions or explain why they are absent. The third step is build an image of the pure entrepreneur economy. This is the simplest economy in which the general characteristics and consequences of entrepreneurial free enterprise can be described. A prerequisite of this image is to identify the properties and qualities of entrepreneurship and then to build the image of a pure entrepreneur. Thus the third step is actually a combination of sub-steps. Fourth, in order to evaluate arguments, we use the procedure of

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<sup>9</sup>Some initial efforts in this direction were made by Gunning 1991 and 1994, Chapter 1. The procedure outlined here represents part of a work in progress.

giving examples of entrepreneurship in a complete production-consumption action. We now proceed to describe these four steps in greater detail.

### **Step 1: Identifying the Properties and Qualities of Distinctly Human Action**

In order to assure that all of our images are praxeological, we must identify and clarify the properties of action in general. To do this, we begin as praxeologists. In the author's interpretation, these properties are (1) deliberation over alternative means to achieve ends, (2) an act of will, and (3) uncertainty bearing. To identify the properties of action, Mises used a combination of introspection and a counterfactual procedure. The purpose of the counterfactual was to contrast a being that lacks one or more of these properties with one who possesses them.<sup>10</sup> A related procedure can be used to identify another class of qualities of distinctly human action. To refer to these, we can use the phrase "imagination, creativity, and inventiveness."<sup>11</sup> To distinguish these qualities, we can contrast the human production of new knowledge under the conditions of the market economy with non-human production of new knowledge. Such a contrast leads us to conceive of human action as possessing a far greater degree

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<sup>10</sup>It would be best if the author could point to a specific passage where Mises describes these properties of action. However, Mises presents the properties of action as part of a continuing dialog with real and prospective critics of praxeology. The relevant passages from which these three properties can be gleaned are p. 11-14 and Chapters 4-6. The property of deliberation accounts for the actor's imagination of conditions that will suit him better and his expectations of this (*ibid.*: 13). His decision-making accounts for the moment that the act of will takes hold and for his "behavior according to the decision made" (*ibid.*: 13). His uncertainty-bearing accounts for the uncertainty that is inherent in every action (*ibid.*: 105).

<sup>11</sup>These terms are chosen with the following ideas in mind. Imagination is a requirement for creativity and inventiveness. But for imagination to be relevant to the satisfaction of wants, it must be creative. Using the imagination to daydream is not part of a production-consumption act. The term "inventiveness" is meant to refer to the actor's evaluation of the outcome of creativity in economic interaction. In a market economy, invention implies a new factor of production, new method of production, or new consumer good. It may be new to everyone; it may merely be new to a particular actor who copies a new factor, new method or new good from someone else; or it may be a combination of the two. These qualities are not necessary properties of action. We can imagine action occurring without them, as in the case of a decision to daydream. However, they are relevant to economics.

of imagination, creativity, and inventiveness. Or we can contrast human action with the behavior of a robot, the algorithms of which are produced by the human actor. Whatever imagination, creativity, and inventiveness we might attribute to the robot; we would be compelled to attribute the actor who created the robot with a greater degree.<sup>12</sup>

Mises did not identify these qualities and the absence of inventiveness from the Misesian image of the “market process” has been a deterrent to its further development. Yet it is clear that the free enterprise condition of the market economy gives people both opportunities and incentives to gain from acquiring new knowledge about how to satisfy the wants of individuals in the role of the consumer. It thus enables them to gain by exercising these qualities. For example, it enables them to gain by exploring and experimenting in an effort to discover previously unknown factors of production and consumer goods. But it also exposes each person to potential losses due to the competition of others. The anticipated reduction in standard of living that often accompanies such competition also gives individuals incentives to exercise their imagination, creativity, and inventiveness in an effort to avoid the reduction. All forms of intervention have some effect on the free enterprise condition and thus on the incentives of individuals to compete in specific ways. To evaluate such intervention, we need an image of the market economy that takes account of imagination, creativity, and inventiveness.

## **Step 2: Incorporating the Economic Functions in a Market Economy**

Second, we must incorporate into our images the early neoclassical redirection of emphasis away from the welfare of a nation and toward the wants of individuals in the role of the consumer. In other

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<sup>12</sup>Our recognition that we can identify the properties and qualities of action is itself evidence that we, as human actors, possess these qualities or could possess them. This is so because, in the process of achieving this recognition, we come to acquire knowledge that we know was previously unknown to us and that we would not have discovered in the normal course of human development (i.e., if we had not decided to try to produce this knowledge). We did not know initially what we would discover but we pursued a course of action that we believed might lead to a discovery.

words, we stipulate that interventionist arguments must refer to action that results in the want satisfaction of individuals in the role of the consumer. This implies that all of the images that are used to support interventionist arguments must contain, at a minimum, the roles of the consumer-saver, the producer, and the supplier of factors of production. We reject any argument that is based on an image that does not contain at least these three roles as being incomplete or irrelevant. We follow Mises in the view that the interventionist arguments that are relevant, along with the ideologies that support them, are concerned with “earthly well being” (*ibid.*: 178-84).<sup>13</sup> We call consuming, saving, producing, and supplying factors the *economic functions*.

There is a virtual infinity of other possible roles that we might add, including the producer of various factors, the employer of human work teams, the advertiser, the agent, and the middleman in various exchange activities. Which roles we choose to include depends on the interventionist argument we aim to evaluate. To select these additional roles, we will have to make a judgment of relevance based on the argument itself and the goals that a proponent of the intervention (or non-intervention) aims to achieve.

We can build an image of non-human behavior that contains these functions. An example is the mathematical model of general equilibrium and Mises’s evenly rotating economy (*ibid.*: 246-50). Thus, by including these functions, we do not assure that the image is praxeological. To make it praxeological, we must endow the actors with the properties and qualities of distinctly human action described in step 1.<sup>14</sup>

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<sup>13</sup>This implies that interventionist arguments based *exclusively* on an ascetic goal, such as equality, are beyond our ability to evaluate. Where a combination of ascetic goals and the goal of satisfying consumer wants is proposed, we can only evaluate the part of the argument that deals with the latter goal.

<sup>14</sup>The models employed by early neoclassical economists like Menger, Jevons, Walras and Clark for the purpose of describing marginal productivity theory contained only behavior and thus were not praxeological. This was not a deficiency so long as their aim was to refute the Marxian exploitation

### Step 3: Elucidating Free Enterprise

As pointed out above, we cannot succeed in building a complete image of the pure market economy because we cannot capture all of the imagination, creativity, and inventiveness of the numerous, distinct, and specialized individuals who act under market economy conditions. Nevertheless, we must make an effort to comprehend free enterprise and its effects. To do this, we collapse all of the distinctly human action into a single role. Successive subjective value theorists have used the term “entrepreneur” to refer to this role.<sup>15</sup> We want to build the image of an economy in which all of the distinctly human action is performed by a distinct class of individuals who act in the role of the entrepreneur, while all of the economic functions are performed by other subjects who we assume are *not* distinctly human actors. In what follows, we first define the entrepreneur role. Then we describe the pure entrepreneur and the pure entrepreneur economy.

#### *The Role of the Entrepreneur*

To assure that our image is praxeologically-based, we attribute each actor with the properties of deliberation, acts of will, and uncertainty-bearing under market economy conditions. In order to describe distinctly human action under the conditions of the market economy, we transform these properties into

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theory, since that aim could be achieved without recognizing that human beings are actors. Such non-praxeological models also serve as counterfactuals to help elucidate economic interaction.

Another deficiency of some of the early models was the absence of saving. This can be represented by assuming that capital is produced and that the reward for producing it is interest (*ibid.*: 530-1). Mises used this notion in *Human Action* to present a theory of the trade cycle that was more epistemologically oriented than the theory he produced in 1912 (Mises 1935). All of the chapters in the catallactics section of *Human Action* can be partly viewed as laying the praxeological foundation for his more refined theory of the trade cycle in Chapter 20.

<sup>15</sup>These include Hawley (1907), Davenport (1914), Knight (1921), and Mises (1966). It is essential to distinguish this praxeological concept of the entrepreneur from the more mundane concept used to refer to a leader in business and an innovator. Nor does the praxeological concept refer to alertness, a concept that was developed by the neo-Austrian economist Israel Kirzner in 1973. For a critique of Kirzner’s use of the term “entrepreneur,” see Gunning 1998a.

appraisal, undertaking and uncertainty bearing. We say that entrepreneurship embodies the identification and money evaluation of factors of production (appraisal), the undertaking of production projects which an individual expects to result in a consumer good, and the bearing of uncertainty that the supply of that good will entail a loss. Entrepreneurship also entails the qualities of imagination, creativity, and inventiveness. Under free enterprise, these qualities are manifest in a continuing discovery of new factors of production, new methods of production, and new products.

### *The Pure Entrepreneur and the Pure Entrepreneur Economy*

The simplest image we can build in order to describe free enterprise is that of a pure entrepreneur economy. The pure entrepreneur economy contains (1) passive, robot factor suppliers and consumer-savers and (2) active, distinctly human pure entrepreneurs. All production is controlled by the members of the class of pure entrepreneurs.<sup>16</sup> We define the pure entrepreneur economy such that each entrepreneur borrows money from robot consumer-savers and employs factors owned by robot factor suppliers in order to produce consumer goods to be sold to robot consumer-savers. Each pure entrepreneur guarantees all loans to savers and produces a specific consumer good (a good of the first order, in Menger's sense) from beginning to end.<sup>17</sup> Such an economy contains no distinctly human actors

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<sup>16</sup>The procedure of building the image of the pure entrepreneur economy is similar to that used by Kirzner (1973: 41-43; 72), albeit in a different context. Kirzner (1992: 98-99) defends the procedure as an analytical device that is necessary in "order to understand the entrepreneur-driven market process." The procedure may have first developed in the work of Davenport (1914), who conceived of entrepreneurship as, among other things, an agency responsible for assigning, through capitalization, prices to all factors (Gunning 1998b). Mises also used this image but he did not assign to it the importance it deserved (Mises 1966: 256).

<sup>17</sup>This implies that all loans are fully guaranteed and that the pure entrepreneur possess sufficient property (guaranty) to guarantee them. In a real market economy, much guaranty would be supplied jointly by people who save and who act in the entrepreneur role. Loans and therefore production in a real market economy are less than otherwise due to the absence of guaranty, which is the same as saying that they are limited by the presence of uncertainty. Our aim of elucidating free enterprise demands that we build a simple image even though it is not (and indeed could not be) completely realistic.

who produce only factors, or intermediate goods, for sale. Nor does it contain middlemen, such as retailers and distributors.

The pure entrepreneur economy helps us elucidate free enterprise. Free enterprise implies various general patterns of economic interaction that have traditionally been associated with the market economy. These include competition (which contains innovation and copying), interaction that leads to specialization, consumer-oriented production and factor supply, and the use of price signals as conveyors of information. In elucidating free enterprise, we elucidate these patterns.

Building an image of the pure entrepreneur economy is a step toward building more complex praxeologically-based images of economic interaction. By definition, every interventionist argument requires an understanding of free enterprise. But many arguments require a more detailed understanding than is possible with the pure entrepreneur economy. To elucidate free enterprise further, we can separate the pure entrepreneur role into parts, such as the middleman, the credit intermediary, the guarantor, the factor-supplying entrepreneur, and the consuming entrepreneur. We can also include entrepreneurs who produce more than one good and who perform various parts of the total entrepreneur role, such as brokering exchanges.

Consider some other images we can build. To elucidate specialization in producing goods of different orders in a structure of production, we can divide pure entrepreneurs into classes based on which order of goods each is specialized in producing. We can elucidate middleman activity, the supply of guaranty, and agency by creating sub-classes of entrepreneurs who specialize in these activities. We can introduce credit intermediation and banking entrepreneurs to deal, respectively, with credit middleman activity and credit money creation. We can introduce employee and employer entrepreneurs to help us elucidate the entrepreneurship entailed in producing and implementing an employment compact. And we can introduce technical or interactive relationships among different entrepreneurs in order to help comprehend economic organization and changes in it, such as mergers and inter-

entrepreneur agreements. The number of images that we can build is indefinite. Which ones we actually build depends on the interventionist argument we aim to evaluate.

It is worth identifying a common error made by economists who attempt to build images of entrepreneur economies. It is to neglect what we have called the qualities of entrepreneurship. Real actors who act in the entrepreneur role are imaginative, creative, and inventive. Attempts to build images of entrepreneur economies must always leave space for the entrepreneurs to exercise these qualities by identifying and introducing new factors, goods, and methods of supply.

#### **Step 4: Giving Examples of Entrepreneurship**

Every intervention leads consumption, production, and factor supply behavior to be different from what it would be in the absence of the intervention. Presumably, causing such changes is at least the intermediary goal and possibly the ultimate goal of an intervention. To evaluate an interventionist argument, we must make judgments about the connection between the intervention and the changes in these behaviors. In a science of the outcome of action, such changes are caused by entrepreneurship. It follows that the task of making and evaluating interventionist arguments entails giving examples of entrepreneurship.

Giving examples of entrepreneurship enables us to articulate our arguments and evaluations so that colleagues can evaluate them. We are not likely to be able to identify and describe all of the entrepreneurship and behavior that we believe would be affected by an intervention. However, by identifying and giving examples of those that we regard as most important, we can reach a position where we will be able to communicate reasons for accepting or rejecting a specified interventionist argument or evaluation. Our choices among the different possible examples we could give are based upon our judgments about which reasons are likely to be logically persuasive.

To give an example of entrepreneurship, we imagine a *starting point*. The starting point is characterized by the assumption that all future behavior is determined completely by an imaginary, fully synchronized set of individual plans. We can build a model of such a situation and, in complex cases, it may be useful to communicate this model mathematically. We discuss the assistance of mathematical models further in part 3. Let us call this starting point a *model of fully synchronized plans*. In this model, everyone has an incentive to act in accord with the assumed plans. Contrariwise, no one has an incentive to deliberate further or to make her behavior different from what we assume is planned. We can characterize this model in a different way. We can say that although individuals behave because they recognize how they can gain from performing the behavior, they recognize no unexploited opportunities to gain from changing their behavior.

Once we establish the starting point, we proceed to introduce an incentive to change a plan and, therefore, to change behavior. For illustrative purposes let us use an image of fully synchronized plans in which all entrepreneurship is concentrated in the hands of pure entrepreneurs. In other words, we imagine a pure entrepreneur economy that is constrained by the requirement that it also be an image of fully synchronized plans. In this situation, we can introduce an incentive to change a plan in the form of a pure entrepreneur's perception of a want or an ability to satisfy a want that is not accounted for in the plans that characterize the starting point. Assuming that everything else stays the same, we make judgments about the appraisals, undertaking, and uncertainty-bearing that all of the relevant pure entrepreneurs would have to carry out in order to reach a new image of fully synchronized behavioral plans. We call this set the *ending point* and define it as a situation in which there are no longer any unexploited opportunities to gain.

We end this step with a contrast between the entrepreneur behavior that we *assume* will lead to the endpoint and a reference to real entrepreneur *action*, which is beyond our ability to completely comprehend. We point out that no image of assumed entrepreneur action, including that which we judge

would lead to an endpoint, can fully and accurately depict the breadth and depth of entrepreneurship in a specialized market economy. Real entrepreneurship entails the use of imagination, creativity and inventiveness to appraise, undertake and bear uncertainty in specialized fields that we, as economists, can only know in small part.<sup>18</sup>

We have employed the pure entrepreneur economy for illustrative purposes. In the evaluation of interventionist arguments, we would ordinarily want to employ more complex images. Such images are likely to contain an element of the pure entrepreneur economy. For example, the argument that speculation should be regulated would require in addition the pure entrepreneur economy, and at a minimum, a class of pure speculators.

### 3. WHITHER POSITIVE ECONOMICS?

On the basis of our discussion of the procedure of praxeological economics, we can conclude several things about what most economists seem to have in mind when they refer to their economics as “positive.” One activity that is typically regarded as part of positive economics is formalism, which translates into mathematical modeling. Because it is not possible to build a complete image of a market

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<sup>18</sup>Part of the process of giving examples of entrepreneurship involves (a) identifying a state in which entrepreneurs’ plans are not synchronized and (b) specifying the behavior that would lead to a final state in which they are synchronized. Kirzner (1992) has explicitly attached the label “market process” to such plans and behavior. Murray Rothbard (1962) and Mises used the term “market process” in a similar way. To the extent that the examples in these market process analyses employ a concept of entrepreneurship that includes appraisal, undertaking, and uncertainty-bearing and to the extent that they are open-ended in the sense that they emphasize entrepreneurial imagination, creativity and inventiveness; they are a part of the procedure described here. However, market process has often been used to mean something more restrictive.

economy, we should certainly advise mathematical model builders who believe that they can model distinctly human action that they are wasting their time. Such an exercise is Quixotic.

We must assume, however, that most mathematical economists who build models of an economy have no pretensions that their models can capture distinctly human action and that they would agree that attempting to do so is a waste of time. They fully appreciate that their models are of a robot or animal system. The question we must pose is how such models can help us elucidate action. In this respect, it seems that a mathematical model may help one identify and keep track the scope of the images of entrepreneurship that he wishes to build. In other words, it may help him keep track of the different classes or groups of actors of whose actions he aims to build images. Stated still differently, it may help him keep track of the different roles and functions that he assumes. For example, he may want to build an image of entrepreneurial interaction that contains consumers, resource suppliers, producers, financiers, and speculators, each of whom possesses different qualities or characteristics. When we begin to use such an image to evaluate an argument, a mathematical model may help us avoid the error of neglecting one of the roles.<sup>19</sup>

Second, the procedure of praxeological economics has no place for the distinction between positive and normative economics, which is probably one of the first thing that a majority of introductory students learn.<sup>20</sup> An entire field of professional economics – welfare economics – is based on this

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<sup>19</sup>This, by the way, is a corollary of the argument that the notion of equilibrium or an evenly rotating economy can function “as a foil” (Hayek 1941: 23) in an *argumentum a contrario* (Mises 1966: 250). The mathematical model of behavior helps us keep track of the behavior that our images of entrepreneurship are intended to help us understand. The model shows a “static” relationship among the actors. The task of the praxeological economists is to breathe life into this static model, as it were, by endowing the assumed subjects with the properties and qualities of action.

<sup>20</sup>The first chapter in Gregory Mankiw’s recently published and highly successful textbook ends with a section entitled “positive vs. normative analysis” (Mankiw 1994). Other texts are similar.

distinction.<sup>21</sup> Welfare economists presumably have the goal of helping those who are willing to make value judgments show how (1) to implement those judgments in a policy and (2) to predict the policy's effects. Such an endeavor is full of hazards. The most important one is the failure to attribute subjects in the model with the properties and qualities of distinctly human action. But even if this is done, the image builder can be easily compromised. To make his images relevant, he must decide which welfare judgments people will want to make. It is a short step from here to the task of building images that support the particular *prejudgments* of policies that someone has already made. In other words, the economist who thinks of himself as the servant of others' ideologies or welfare judgments, seems likely to conceive of his work not as a tool to be used by some random follower of an ideology but as a tool for some specific follower who sponsors his image building.

Probably the most significant effect of this particular hiatus in the development of economics is that it brought into sharp relief the benevolent despot assumption toward which the orientation of policy economics had been shifting at least since the early work of A. C. Pigou.<sup>22</sup> This recognition led directly in the 1960s and 1970s to the field of public choice – where economists applied their tools to the interaction that leads decisions to be made and implemented in a democracy. Interestingly, a large part of the work in this field is guided by the same positive-normative distinction and other aspects of positivism that are being discussed here. It follows that, like economics, it could benefit from considering the possibility of making its goal the evaluation of policies designed to limit the freedom that one can

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<sup>21</sup>One might include modern macroeconomics if Anthony Atkinson (2001: 193) is correct in saying that this field is full of welfare economics statements.

<sup>22</sup>See Pigou: 1912 and 1938. Actually, complaints about the benevolent despot assumption were made by Knut Wicksell in 1896. They were related to his belief that writers in public finance who made this assumption were serving the interests of a privileged class. This idea was discovered much later by James Buchanan who, with his colleagues, applied it to all of economics. This history is widely reported. A simple exposition is provided by Robert Formiani (2003).

roughly imagine would emerge from an initial condition of anarchy.<sup>23</sup> In addition, public choice should be regarded as a branch of praxeology. By regarding it as such, public choice theorists would recognize the need for a concept that is comparable to that of the entrepreneur in economics.

In a recent mini-symposium in this journal (December 2003) on the legacy of Milton Friedman's 1953 essay on positive economics, none of the commentators mentioned this aspect. Interestingly, Friedman wrote a conference paper in 1967 on the issue of values in economics in which he came very close to the position of Mises on the subject of value freedom. He wrote:

In principle, economics as a special discipline is concerned with the consequences of change in circumstances on the course of events, with prediction and analysis, not with evaluation. It has something to say about whether specified *objectives* can be achieved and if so, how, but not, strictly speaking, with whether they are good or bad objectives (Friedman 1967: 86, italics added).

Which objectives does Friedman have in mind? Presumably they are the objectives described in some interventionist argument. Or, one who has the objectives is presumably planning to make or reject such an argument, which amounts to pretty much the same thing. The claim being made here is not that

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<sup>23</sup>The recently developed professional field of constitutional economics comes close to this. However, it is not certain whether the emphasis that James M. Buchanan (1990) places on cooperation rather than conflict will yield the kind of science that is comparable to praxeological economics. To make progress in this direction, someone will have to work through the problems that Buchanan has identified but to which he has not identified a solution. See his discussion of the “compulsion [of the constitutional economist] to advance his own privately preferred ‘solutions’ to the ultimate choice among regimes” in his section on social philosophy in Buchanan 1987: 586. This issue, as it has emerged in the subsequent literature is represented by the question of the role of the “status quo.” (See, for example, Brennan and Hamlin: 2004.) Its resolution, from the standpoint of relevance, seems to require a kind of delineation of status quos, each with its own associated constitutional political economy. The type of constitutional political economy that is relevant to the U. S., for example, would be quite different from the type that is relevant to Iraq. The difference would be manifest in the different assumptions that define the conditions of the status quo. Once this is done, one could proceed to build a benchmark image of political interaction that is analogous to the benchmark image of economic interaction under the conditions of the pure market economy. He could then assure value freedom by confining his work to the evaluation of arguments relating to changes in the conditions that are derived from the image of the status quo.

Friedman presented a foundation for value freedom that is identical to that of Mises. It is that Friedman would have most likely agreed that confining oneself to the evaluation of arguments is a means of achieving value freedom.<sup>24</sup>

Another legacy of Friedman's essay is the verbal connection between positive economics and normative economics. Friedman (1953: 3) defined normative economics, it appears from the context, as the equivalent of J. N. Keynes's "normative or regulative science." It is "a body of systematized knowledge discussing criteria of what ought to be." Notwithstanding the title of Abram Bergson's later collection of works in welfare economics (1966), it is not clear that such a body of systematized knowledge would have any relationship to any of the traditional definition and concerns of economics.

Third, for "positive" exercises that have the goal of representing historical facts, guidance from praxeology is necessary. Many modern economists who have adopted a "positivist attitude" conceive of themselves as part of a science in which the goal is to build a body of knowledge of economic principles based on hypotheses that have been successfully tested (i.e., not refuted). This view is undermined by the uniqueness of economic events which, in turn, is due to the fact that they are the consequence of distinctly human action (Mises 1966: 49). Hypothesis testing can only reveal behavioral facts. One cannot deny these facts. However, behavioral facts cannot yield a body of knowledge about the actions people will take in the future. They can give hints in the sense that if one has reason to believe that the

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<sup>24</sup>An interesting element of Friedman's paper is a critique of Kenneth Boulding's neglect of an important insight that economics brings to prediction and analysis. This is the insight regarding a spontaneous order. For Mises, this insight meant that someone who makes an interventionist argument must demonstrate an appreciation for the market order. Absent that, he is not qualified to make such an argument. After all, how can one oppose or defend an argument for intervention if he does not understand the system that would exist without the intervention. For Friedman, it meant that the goal of achieving a common set of values, which Boulding had proposed, should be tempered by a recognition that a "structure [of values] can emerge and develop from the spontaneous and voluntary cooperation of individual human beings and need not be imposed or constructed or legislated by philosopher-kings, or aristocrats, or presidents, or legislators, though all of these have much to contribute to its development" (*ibid.*: 92). [This passage leads one to wonder whether Friedman was writing the paper while reading one of F. A. Hayek's numerous writings on the subject.]

future conditions will be similar and that people are likely to deliberate and choose similarly under similar conditions, he may expect that a similar behavior will occur. But one must remember that the path from observed behavior to action, given the complexity of economic interaction, is unlikely to be straight.

Our fourth comment concerns the realism of assumptions, which is an issue raised in the vast majority of the papers that were written following Friedman's 1953 essay. Realistic assumptions about the properties and qualities of action are imperative. Realism is dictated by the fact that action is the subject of economics. Economists do not study robots or non-human animals. Other assumptions are imperative because of the desire to study how production satisfies the wants of individuals in the consumer role. Yet most of the assumptions that we make must be unrealistic. This applies specifically to assumptions about the content of action and about the conditions under which action occurs. If we were try to make realistic assumptions about all of these, we could not make any progress at all in the evaluation of interventionist argument because of complexity, as defined above. Thus, it is correct to say that economics uses a mix of realistic and unrealistic assumptions in its image building. However, it matters which assumptions are realistic and which are not. A discussion of realism in making assumptions cannot be complete until one develops a clear conception of what economics can accomplish and its procedure for trying to accomplish it.

One topic remains: that of hypothesis-testing by means of statistics. There are two issues: (1) what can statistics tell us? and (2) what is the nature of the hypothesis being tested? Regarding the first issue, statistics are manifestations of behavior. For the praxeological economist, behavior is a manifestation of action. Thus the statistics are two steps removed from the focal point of praxeological economics. It follows that one cannot test hypotheses in economics in the same sense that one can test them in the natural sciences. One must use intuition and images of action to judge whether his hypotheses about the relationship between action and the statistics are *reasonable*. An hypothesis in

economics that one aims to test by means of statistics is a compound one. It is that certain actions would lead to certain behavior and that the behavior would get manifest in the statistics he has collected and subjected to various formal analysis. On the one hand, he must consider whether the statistics may also be consistent with other behavior. On the other hand, he must consider whether the behavior may also be consistent with deliberations, decision-making and conceptions of uncertainty that he did not hypothesize were present. All users of statistics in economics should show an appreciation for these points.

Regarding the second issue, the typical hypothesis is about the past, since controlled experiments that are relevant to interventionist arguments are practically impossible to carry out. The question is: Is a specific set of knowledge about past actions, assuming that it can be obtained, relevant to predicting the effects of a government intervention in the future? Mises has stressed the uniqueness of human events \*\*\*Chapter 2, while Hayek (1975) has suggested the possibility of pattern predictions. Suffice it to say that the issue is beyond the scope of this paper.

There is nothing wrong with using statistics to represent what one hypothesizes to be the observed outcome of economic interaction. But the gathering of such statistics needs to be guided by two principles: (1) those facts must be, through praxeological theory, conceptually related to distinctly human action and (2) those facts must in some way be related to the evaluation of an interventionist argument.

#### **4. Concluding Remarks**

Mises introduced the idea that economics is a branch of praxeology. He also showed how to keep economics value free – by directing one’s attention to the evaluation of interventionist arguments. Finally, he recognized the “complexity” of economic interaction. We have pointed out that complexity in economics is largely due to the fact that in the market economies that are relevant to evaluating

interventionist arguments, there are numerous specializations and each specialist is a distinctly human actor who possesses the qualities of imagination, creativity, and inventiveness. To build a theory to represent complexity, the economist must use what Mises called the method of imaginary constructions. Mises successfully used this method in praxeology by building counterfactuals in order to identify the properties of action. In economics, he left the impression that one could use a similar procedure to build an image of the pure market economy and proceeded as if he was building such an image. This paper has reiterated what Mises himself knew about such an image, namely, that it cannot be built due to numerous specializations and to the imagination, creativity, and inventiveness of distinctly human actors. Rather than try to build an image of the market economy, the paper has argued that economists should try to build images of entrepreneurship. The paper outlined a four step procedure that can be used to achieve this goal. In addition it assessed some of the important issues raised by the notion of “positive economics.”

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