Consumer Sovereignty: the Key to Mises's Economics

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Abstract

The praxeological view of the isolated farmer's action is that he identifies and employs factors of production (means) to meet his ends. The result, in the absence of error, is that he satisfies his wants in the best way he knows. Analogously, Mises's economic view of economic interaction under the conditions of the pure market economy is that the entrepreneur category identifies and employs factors of production. The result, in the absence of error, is that the wants of individuals in the consumer role are satisfied. This statement implies consumer sovereignty. The entrepreneur role is the mandatory of the consumer. The statement also reflects a view of entrepreneur role that is uniquely praxeological. By taking this view and following a specific analytical mode of deconstruction, one can trace all want-satisfying (i.e. all entrepreneur) actions under market economy conditions back to the category of action – the use of means to achieve ends.

If pure market economy conditions could exist, they would, in the absence of monopoly, enable the members of a group to take the greatest advantage of the gains due to the "division of labor." The entrepreneurs in such a system would produce the quantities of goods and distribute those quantities in ways that consumers are most willing and able to buy. As a result, it would be the desired system from the perspective of both the classical and early neoclassical economists. This judgment is not based on values; it is not an ethical judgment. It is based on the classical insight of the higher productivity associated with the division of labor, which Mises dubbed the theorem of the harmony of rightly understood interests. Mises derived what I call the theorem of consumer sovereignty from this insight.

I submit that this, in a nutshell, is the core of Mises's economics. The economics is built on the foundations of the deduction that consumer sovereignty prevails under pure market economy conditions and that the entrepreneur role always acts according to the theorem of consumer sovereignty. The burden of this essay is to defend this interpretation of Mises's economics by carefully examining Mises's treatise *Human Action* (1966). It pays special attention to the part of his treatise in which he presents the image of the pure market economy. The essay also discusses previous literature on Mises's consumer sovereignty concept. Its goal is to renew interest in Mises's economics, albeit from a more informed point of view than previously.

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By my interpretation, Ludwig von Mises was the first and the last to build an epistemological foundation for a value-free economics based on praxeology. In other words, he built a logic of distinctly human action (praxeology). Then he expanded this into a logic of interaction under market economy conditions (economics). I use the term "Mises's economics" to refer to this economics. Because it incorporates the universal law of the higher productivity of the division of labor (Mises 1966: 145) and of association (*ibid.*: 159-161), it is closest to the economics of the classical economists, as refined and modified in the writings of early neoclassical economists like Carl Menger, J. B. Clark, Eugen Bohm Bawerk, Philip Wicksteed, Herbert Davenport and Frank Knight. What amounts to the same thing, Mises's economics is a refinement of the Austrian theory of value and cost and the marginal productivity theory of distribution of the early neoclassical economists.

> **Mises's economics**: a systematic exposition of praxeology-based economic theorems about the pure market economy and market intervention. The theorems are derived from the theorem of consumer sovereignty and they are used to help make value-free evaluations of interventionist arguments.

I define Mises's economics as a systematic exposition of praxeology-based economic theorems about the pure market economy and market intervention. These theorems are derived from the theorem of consumer sovereignty and they are used to help make value-free evaluations of arguments in favor of or against government intervention in otherwise free markets (hereafter called "interventionist arguments"). Mises intended his economics, which he first presented in his treatise, to achieve a single purpose – to make it possible to use the insights of the

Mises's single, ultimate purpose of economics: to enable the economist to make value-free evaluations of arguments in favor of or against market intervention.

classical and early neoclassical economists to help evaluate interventionist arguments. The most extreme of these arguments was for socialism, which advocated the abolition of markets.

Classical economists evaluated interventionist arguments on the basis of the theorem of the harmony of rightly understood interests.

Mises wrote that the classical economists, as such, evaluated interventionist arguments by asking how an intervention affects the division of labor. In so doing, they indicated an acceptance of what Mises called the *theorem of the harmony of rightly understood interests* (*ibid*.: 674). This theorem says that when individuals engage in market interaction, they benefit from the higher productivity of the division of labor. Thus, as the classicals saw it, if the intervention expands the division of labor, it is good. If the intervention causes the division of labor to contract, it is bad.

Mises translated the theorem of the harmony of rightly understood interests into the theorem of consumer sovereignty.

The Austrian theory of value and cost improved on the classical theorem by showing how to trace all value to the assumed wants of individuals acting in a role – that of the consumer of goods. In the newer theory, other roles – the supplier of material factors, the supplier of work, and the entrepreneur – combine to cause the production of goods that the consumer role benefits from consuming.[1] Mises refined the Austrian theory by translating the theorem of the

[1] I prefer to use the phrase "Austrian theory of value and cost" to refer to what Mises variously called the subjective, modern, and marginal theory of value. He said that the theory was founded by Carl Menger, William Stanley Jevons, and Leon Walras (*ibid*.: 121), although there were some precursors who were largely ignored.

harmony of rightly understood interests into what I call the *theorem of consumer sovereignty*. The theorem holds that, under the conditions of the pure market economy, the entrepreneur role *always* acts in the interests of individuals in the consumer role. The consumer sovereignty theorem corrects for the defective classical theory of the source of value and it explicitly takes account of the fact that possessing a monopoly is a means for owners of certain factors of production to benefit at the expense of the "social interest."

Broadly speaking, to use the theorem of consumer sovereignty to achieve the single purpose, the economist compares the performance of the carefully defined entrepreneur role under two sets of conditions. She asks whether consumers would be better served by means of the entrepreneur role in the presence of the intervention or in its absence. An important part of this procedure is to produce theorems about how the entrepreneur role acts under various conditions, particularly those of the pure market economy.

Theorem of Consumer Sovereignty: Under the conditions of the pure market economy, the entrepreneur role always and exclusively acts in the interests of individuals in the role of the consumer.

Since his economics was aimed at evaluating arguments on the basis of a widely accepted criterion, he could legitimately claim value freedom for this procedure. Because use of this criterion was the tradition in economics, one who decides *not* to use it could be branded a non-economist. A rejection of this criterion amounts, as Mises saw it, to a rejection of economics. Thus, Mises regarded his economics as value free and scientific.

The production of theorems needed to evaluate of interventionist arguments based on the theorem of consumer sovereignty can be a value-free science.

My interpretation of that Mises's treatise appears unique. In the process of developing it, I have had to introduce new terms, to reject some of the terms that Mises used, and to consistently use a single term where Mises employed a variety of terms to mean the same thing. As a result, the interpretation may seem foreign to some readers who are familiar with the treatise. I can only beg the skeptical reader to be patient and attentive. The intellectual reward, I believe, will be immense.

The purpose of this essay is to elaborate on and to document my claim that consumer sovereignty is the key to understanding the treatise. Part 1 presents and documents my interpretation of Mises purposes in greater detail. Since a crucial part of Mises's procedure for achieving his purposes consists of defining the entrepreneur role, part 2 is devoted exclusively to elucidating this role. It focuses especially on the relationship between the profit of the entrepreneur and the elusive concept of "originary interest." Part 3 concludes the documentation by identifying economic theorems in the economics portion of Mises's treatise and showing that these are derived from the theorem of consumer sovereignty. This helps to show that the key to Mises's economics is his theorem of consumer sovereignty. Part 5 discusses interpretations by Kirzner and Gonce. Part 5 presents a brief conclusion.

1. THE PURPOSES OF MISES'S ECONOMICS

Mises's economics is best understood in terms of a single, ultimate purpose. It is to enable the economist to make value-free evaluations of arguments in favor of or against market intervention.

It achieves this purpose by employing a practically unobjectionable criterion for evaluating interventionist arguments and by making certain that all economic theorems can be traced back to distinctly human action.[2] Tracing back all theorems is a means of avoiding error by binding economics to praxeology.

> **How Mises achieves the ultimate purpose of his economics:**
> 1. He identifies a practically unobjectionable criterion for evaluating interventionist arguments.
> 2. He builds economic theorems in which economics is bound to praxeology.

This part identifies the criterion Mises chose and how it enabled him to achieve value freedom. It also shows how he was able to bind economics to praxeology. Mises gave two reasons for binding economics to praxeology: to help him secure his economics against criticism and to avoid error. Sections are devoted to both of these reasons, respectively. Economic theorems are described in a Part Three of the essay.

Achieving Value Freedom

Mises achieved value freedom by proposing to evaluate interventionist arguments, including the argument for socialism, on the basis of the theorem of the harmony of rightly understood interests" (hereafter referred to by the acronym THRUI). A person's rightly understood interest is defined in such a way that she *must* gain from living in an environment where she can trade and, therefore,

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[2]I use the term " distinctly human action" to clearly distinguish human action from the behavior of animals and robots. The concept also distinguishes the actions of normal adults from the behavior of children and otherwise handicapped humans and from human beings that lack what Mises calls vital energy (Mises 1966: 490). Mises wrote that praxeology "deals with acting man, not with man transformed into a plant and reduced to a merely vegetative existence" (*ibid*.: 29) and that "Praxeology is human...because it deals only with human action and does not aspire to know anything about nonhuman – whether subhuman or superhuman – action" (*ibid*.: 36).

benefit from specialization and the division of labor. Thus, the question raised by an interventionist argument is how an intervention would affect the gains from specialization and the division of labor.

Mises recognized that the early neoclassical economists had succeeded in correcting for the deficient theory of value in classical economics and, in the process to transform the THRUI into the theorem of consumer sovereignty. In terms of the theorem of consumer sovereignty, the question raised by an interventionist argument is how the intervention affects the entrepreneur role's performance of its function, under pure market economy conditions, of exclusively satisfying consumer wants. So long as the person making the interventionist argument accepts the theorem of consumer sovereignty and is not an ascetic, her argument can be evaluated from a value-free perspective. In this subsection, I document the fact that Mises used the THRUI as a common ground for evaluating arguments. Next I show how Mises relates the THRUI to the theorem of consumer sovereignty. Finally, I contrast this approach with that of modern welfare economics.

The THRUI

Mises's claim to value freedom was based on the THRUI, which he used to signify the classical discovery of the higher productivity of specialization and the division of labor. He incorporated this discovery into the very definition of the pure market economy. By doing this, he compelled anyone who makes a comparison between this imaginary construct and some other construct, such as a socialist system, to deal with the question of how the division of labor and specialization would be achieved in the other construct.

Mises’s treatise contains seven parts. Part 4 is devoted to producing economic theorems that are pertinent to the pure market economy. In the last chapter of that part, he writes the following about the THRUI:

> What makes friendly relations between human beings possible is the higher productivity of the division of labor. It removes the natural conflict of interests. For where there is division of labor, there is no longer question of the distribution of a supply not capable of enlargement. Thanks to the higher productivity of labor performed under the division of tasks, the supply of goods multiplies. A pre-eminent common interest, the preservation and further intensification of social cooperation, becomes paramount and obliterates all essential collisions. Catallactic competition is substituted for biological competition. It makes for harmony of the interests of all members of society. The very condition from which the irreconcilable conflicts of biological competition arise – viz., the fact that all people by and large strive after the same things – is transformed into a factor making for harmony of interests. Because many people or even all people want bread, clothes, shoes, and cars, large-scale production of these goods becomes feasible and reduces the costs of production to such an extent that they are accessible at low prices. The fact that my fellow man wants to acquire shoes as I do, does not make it harder for me to get shoes, but easier. What enhances the price of shoes is the fact that nature does not provide a more ample supply of leather and other raw material required, and that one must submit to the disutility of labor in order to transform these raw materials into shoes. The catallactic competition of those who, like me, are eager to have shoes makes shoes cheaper, not more expensive.
>
> This is the meaning of the *theorem of the harmony of the rightly understood interests* of all members of the market society. When the classical economists made this statement, they were trying to stress two points: First, that everybody is interested in the preservation of the social division of labor, the system that multiplies the productivity of human efforts. Second, that in the market society consumers' demand ultimately directs all production activities (*ibid*.: 673-4, italics added).[3]

He does not express what he sees as the relationship between the THRUI and classical utilitarianism in this section of his treatise. He does this much earlier in his treatise, long before he tells the reader the more precise meaning of the THRUI. “The utilitarian economist [economists from Hume to Ricardo],” he writes, “does not...ask a man to renounce his well-being for the benefit of society. He advises him to recognize what his rightly understood interests are” (*ibid*.: 147).

It is important for some readers to recognize that this interpretation of utilitarian economists differs from the typical interpretation of classical utilitarianism. Mises’s does not interpret the utilitarian

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[3]The section in which these paragraphs are located is entitled “The Harmony of Rightly Understood Interests.” However, it is largely about socialism. This may be the reason why readers of *Human Action* have failed to realize its relevance to interventionist arguments and, therefore, its significance to Mises’s economics.

economist as making policy evaluations by *only* using a benefit-cost calculation, as Bentham might have done with his felicific calculus (Mitchell 1918). Mises interprets the classical economists with having established that Benthamite net gain from specialization and the division of labor is positive. In other words, he credits the classical economists with having discovered the universal law of the higher productivity of the division of labor (Mises 1966: 145). They went on to incorporate this law into their criterion for evaluating interventionist argument – the THRUI.

The Common Ground, a Single Purpose, and Value Freedom

Mises used the THRUI as the basis for claiming that individuals evaluating interventionist arguments could agree on a common ground, or common criterion, for evaluating such arguments. Having agreed on a common ground, the economists could proceed to develop economic theorems that incorporate that common ground through assumptions. Such theorems would necessarily be value free within that context. The theorems could then be used to analyze a proposed intervention. Thus, to achieve value freedom in light of this common ground, all that an economist has to do is to produce theorems that incorporate the THRUI.

In his *Notes and Recollections*, which he wrote in 1940, Mises writes:

> In my analysis of [the problems of socialism and intervention], I introduced a *new point of view*, the only one that allows a scientific discussion of these political questions. I inquired into the effectiveness of the chosen means to attain the avowed ends, that is, whether the objectives which the recommended measures were to attain would actually be achieved by the means recommended and employed (Mises 1978a: 114, italics added).

He does not describe the "avowed ends" immediately. He describes them two pages later when he writes about his critique of socialism. He writes that regardless of what argument is presented for socialism, the proponent of socialism must determine the extent to which "economic well-being" is reduced. Although we cannot measure economic well-being, we cannot ignore it either. "If the socialist system leads to chaos because economic calculation is impossible," then it is "pure trifling" to present other arguments in its favor (Mises 1966: 116). The common ground in this case is "economic well-being." One must presume that economic well-being and rightly understood interests amount to pretty much the same thing for Mises.

Also consider his remarks on ideology in his treatise. He distinguishes between ascetic and non-ascetic world views. Neither pure reasoning nor experience can resolve disputes about whether a particular means will achieve ascetic goals because no agreement can be reached on the goals.

> But where earthly things are involved, the natural affinity of all men and the identity of the biological conditions for the preservation of their lives come into play. The higher productivity of cooperation under division of labor makes society the foremost means of every individual for the attainment of his own ends whatever they may be. The maintenance and further intensification of social cooperation become a concern of everybody. Every world view and every ideology which is not entirely and unconditionally committed to the practice of asceticism and to a life in anchoritic reclusion must pay heed to the fact that *society* is the great means for the attainment of earthly ends. But then a *common ground* is won to clear the way for an agreement concerning minor social problems and the details of *society's organization*. However various ideologies may conflict with one another, they harmonize in one point, in the acknowledgment of life in society (*ibid.*: 179-80, italics added).

The "common ground" of which he writes in this passage is the THRUI, although he does not directly say so. That this is so is evident from his definition of *society* as "the division and combination of labor" (*ibid.*: 143).[4] "Society's organization" is a reference to whether a particular intervention may improve society – i.e., whether it will expand specialization and the division of labor.

[4]Mises writes that "[h]uman society is an intellectual and spiritual phenomenon. It is the outcome of a purposeful utilization of a universal law determining cosmic becoming, viz., the higher productivity of the division of labor" (*ibid.*: 145). See also the discussion of society at *ibid.*: 2.

Unfortunately, Mises does not always identify this common ground. In two cases, he merely asserts that value freedom can be achieved by merely adopting the criterion of those who propose an interventionist argument. An example is his *Critique of Interventionism*, which he wrote in the 1920s. In that book he writes: "The problem at hand is: What are the consequences of government and other interventions in the private property order? Can they achieve the result they are supposed to achieve?" (*ibid*.: 17)

The same is partly true of his discussion of judgments of value near the end of the treatise (*ibid*.: 882-5). The THRUI is unstated. However, to one who is aware of the common ground, it is evident. Consider the following two quotations.

> [T]he free-trade economists attacked protection. They demonstrated that protection does not, as its champions believe, increase but, on the contrary, decreases the total amount of products, and is therefore bad from the point of view of those who prefer an ampler supply of products to a smaller. It is in this sense that economists criticize policies from the point of view of the ends aimed at.

> Praxeology and economics do not say that men should peacefully cooperate within the frame of societal bonds; they merely say that men must act this way if they want to make their actions more successful than otherwise. Praxeology and economics do not say that men should peacefully cooperate within the frame of societal bonds; they merely say that men must act this way if they want to make their actions more successful than otherwise. Compliance with the moral rules which the establishment, preservation, and intensification of social cooperation require is not seen as a sacrifice to a mythical entity, but as the recourse to the most efficient methods of action, as a price expended for the attainment of more highly valued returns (*ibid*.: 883).

In the back of Mises's mind in each of these cases is the criterion of the THRUI even though he does not state it.

Connecting the THRUI to the Theorem of Consumer Sovereignty

Mises uses the theorem of consumer sovereignty as a criterion for evaluating interventionist arguments. The evaluation of interventionist arguments, in turn, is part of what he calls an incontestable procedure. This is to first elucidate interaction under pure market economy conditions and then to elucidate it under the conditions of market intervention, as indicated by the “problems” that are implicit in the interventionist arguments that the economist aims to evaluate (*ibid*.: 237-8).[5] The elucidation of interaction under pure market economy conditions takes the form of producing theorems, the first of which is the theorem of consumer sovereignty. I will show in Part Three of this essay that the theorems are deductions about the entrepreneur role. At this stage I must spend some time describing the theorem of consumer sovereignty. I begin with a preliminary description.

Consumer Sovereignty

One could express the theorem of consumer sovereignty loosely in the following way. Under market economy conditions, the vast majority of people find it necessary to supply factors or to produce goods for others in order to satisfy their own wants as consumers. In doing so, each person acts in the interests of the person or persons whose buying actions enable him to earn income. If the buyers are consumers, her actions benefit them directly. If the buyers are producers of consumer goods, her actions benefit consumers indirectly through her supply of a factor. Mises used the concept of consumer sovereignty to refer to the producers of consumer goods and factors of production at what many writers today would call each link in each factor supply chain.

A person may experience satisfaction or dissatisfaction by using a factor in a particular way. For example, a shoemaker may enjoy making shoes or a trash collector may abhor the stink associated

[5]Mises’s wording is slightly different because of his object-centered grammar (see below). This procedure is further discussed in Chapter Three.

with her work. These people are direct consumers of their own work. As such, their wants as consumers compete with the wants of the consumers who stand to benefit from the good or service that their factors help produce. A worker's choice to take account of the joy, tedium, or irksomeness of work is not an exception to consumer sovereignty.

A person may already possess enough purchasing power to buy all the things necessary to attain what he regards as a comfortable life. However, if he fails to try to earn the highest income from his savings, he will have to give up a somewhat *more* comfortable life. A person may disdain the use of effort required to manage his savings or he may oppose lending on, say, ethical grounds. Even in this case, he balances the marginal satisfaction he expects if he were to earn additional money by means of lending and investing against the change in satisfaction he expects if he does not consider lending and investing. Again, his action is not an exception to the theorem of consumer sovereignty. He acts in the interests of the consumer role by taking his own interests into account in his choice as well as those of other consumers. Only if an actor is a hermit or an ascetic – who is not part of a market economy – can his action avoid accounting for the consumer role.

Such a loose expression of the theorem of consumer sovereignty cannot be sufficient in the rigorous logic required of economic science. To make it more rigorous, it is necessary to precisely define the conditions under which the theorem holds. Moreover, given the prospect of monopoly, it is necessary to clearly define the entrepreneur role. I discuss each in turn.

The Pure Market Economy

If the single purpose of economics is to evaluate interventionist arguments, then one must begin with an image of interaction under conditions in which there is no market intervention. Employing an object-centered grammar, Mises called such an image "the imaginary construction of a pure market economy" (*ibid*.: 237). This definition of the pure market economy assumes the division of labor, a complete private property system, completely free enterprise, absence of fraud and of coercion except for that employed by the government to enforce private property rights and laws against fraud (*ibid*.: 257, 685, 718). Another assumption that he employs in his analysis of the effects of changes in the quantity of money is what he calls neutral money (*ibid*.: 249). He also implicitly assumes an absence of deception.

The purpose of the image of the pure market economy is to provide a starting point for the elucidation of market interaction under the specific conditions that define the pure market economy. I prefer to focus on the conditions, rather than on the "object" of the pure market economy. Thus, in this book, I use the term "under pure market economy conditions instead of Mises's preferred term "in the pure market economy." I also equate "elucidating interaction" with "producing economic theorems.

The Entrepreneur Role

Mises begins his treatise by identifying the prerequisites of action (*ibid*.: 13-14). Following chapters, respectively, on epistemology and on the reason why he feels it is necessary to build an economics with a praxeological foundation; he identifies what I call the necessary properties of the category of action or more simply the "properties of action" (*ibid.*: chapters 4-6) The properties of action refer to ends and means, time and uncertainty, as I point out later in the chapter. Once the properties of action are identified, the economist is in a position to incorporate all distinctly human market interaction into the pure market economy's entrepreneur role. Every person who acts under pure market economy conditions possesses the properties and characteristics of the entrepreneur role. "Everyone is an entrepreneur." However, the complexity of interaction dictates that, to produce economic theorems, the economist must conceive of individuals as if they perform particular functions and act in particular roles. The economist envisions an active entrepreneur role as separate from other, passive roles – the consumer-savers and the owners of capital, land and labor. The factor suppliers earn incomes while the consumer-savers receive utility at various times. In contrast to these roles, the entrepreneur role exclusively earns profit and does whatever is necessary to cause the factors of production to be employed to satisfy consumer wants.

> **Entrepreneur Role**: the agency that identifies and attaches costs to the employment of the factors, employs factors in order to cause the consumer goods to be produced, and bears all of the responsibility for the consequences of the factor employment.
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> The entrepreneur role represents all distinctly human action, in contrast to maximizing behavior of the consumer and factor supplying roles, under pure market economy conditions.
>
> The entrepreneur role possesses the characteristics of imagination, creativity, and inventiveness.
>
> Individuals acting in the entrepreneur role always act in the rightly understood interests of individuals acting in the role of the consumer-saver. In other words, they always cause the division of labor of labor to be greater than it would be without their actions.

Each factor supplier role performs a behavioral function that helps the entrepreneur role cause consumer goods to be produced. The consumer role performs the behavioral function of buying and consuming the goods that the entrepreneur role offers for sale. It also saves. The entrepreneur role is the distinctly human agency that identifies and attaches costs and prices to the employment of the factors, employs factors in order to cause the consumer goods to be produced, and bears all of the responsibility for the consequences of the factor employment. The entrepreneur role also possesses imagination, creativity, and inventiveness. Unlike the entrepreneur role, the behavioral roles merely respond, like maximizing robots, to price offers made by the entrepreneur role.

For practically every interventionist argument, the economist assumes a large number of consumers whose wants differ, a large number of factor-suppliers with different specialized skills, and a large number of competing entrepreneurs with different imagination, creativity, and inventiveness capacities. These assumptions are derived from the division of labor characteristic of market interaction under pure market economy conditions.

Consider an analogy with the isolated farmer. First, there is a correspondence between the farmer's evaluation of his means in terms of the consumer benefits he expects and the entrepreneur role's appraisement of factors. Similarly, the farmer's actual employment of means corresponds to the entrepreneur role's decision to employ factors to produce goods – its undertaking. Finally, the farmer's responsibility for errors corresponds to the entrepreneur role's uncertainty-bearing. The farmer's consumption of the goods he has produced corresponds to the consumer role's purchase and actual consumption of the goods that the entrepreneur role has directed to be produced and sold. And the farmer's supply-of-factors behavior corresponds to the factor supplier's role of responding to the highest bid for factors by accepting employment offers and fulfilling the employment duties.

The phrase "entrepreneur role" is probably the most widely used term in this book. This is why I have taken the time to define it as precisely as I can, given the purpose of this chapter. Yet Mises did not use this term. As I show in appendix 1, he used a number of different phrases to refer to the role.

Nor did he define the role as precisely, in terms of the purposes he aimed to accomplish in the treatise, as I have done. In my view, Mises's failure to consistently use a single term to refer to the entrepreneur role is a crucial deficiency of the treatise and goes far toward explaining why readers have often been baffled by Mises's work. I defend my use of the term in Part Two.

Monopoly

> **Profit and monopoly gain** are earned by individuals acting in different roles.
> **Profit**: the income of the entrepreneur role.
> **Monopoly Gain**: the income of an owner of a factor of production who charges a monopoly price.

In order to make a direct connection between the THRUI and consumer sovereignty, Mises attributed the cause of an enduring monopoly not to the entrepreneur role, the income of which is *profit*, but to the role of the maximizing owner of a factor of production. In her ownership capacity, as opposed to her entrepreneurial capacity, a person may withhold some amount of it in order to charge a higher price for the remainder. The additional revenue earned from such an act is not profit by Mises's definition. It is *monopoly gain*.

There are two parts to this argument. The first is that temporary monopoly is a characteristic of competition. Simple changes in demand conditions, technology, and the environment lead to both entrepreneurial profit and loss and to temporary situations of monopoly gain. A candle seller, for example, may be able to earn a monopoly gain during a electricity blackout (*ibid.*: 360-1). When the blackout ends, the monopoly ends. Even if the blackout continues, competition will tend to eliminate the monopoly gain. The second part is that an enduring monopoly cannot occur neither at the retail stage of production or at the production stage. At these stages, individuals compete for the factor.

Enduring monopoly can only occur in the market for the employment of a factor. An individual may be able to enjoy a monopoly gain if she supplies a factor of production that is superior in quality to all of its potential substitutes or that is the only one of its kind. She gains not as an appraiser, undertaker, or uncertainty-bearer, but as the owner of a factors of production.

Making this distinction enabled Mises to deduce that although an enduring monopoly is an exception to the idea that all *behavior* in the pure market economy benefits consumers, it is not an exception to the theorem of consumer sovereignty. The exception refers to an individual as an income-maximizing factor owner and not to an individual as a profit-maximizing entrepreneur. This approach enabled h im to pigeonhole, as it were, all want-satisfying action in the entrepreneur role. He thereby achieved a position in which he could use the entrepreneur-driven pure market economy as the starting point and benchmark for all evaluations of interventionist arguments.

Why the Theorem of Consumer Sovereignty

The theorem of consumer sovereignty states that under the conditions of the pure market economy, the entrepreneur role always acts in the interests of individuals in the role of the consumer. Mises justifies using the consumer sovereignty theorem by pointing out that the Austrian theory of value and cost locates the source of value in the evaluations of consumers. The entrepreneurs appraise factors of production entirely on the basis of their perceived contribution to the entrepreneurs' profit which, under pure market economy conditions, depends entirely on its contribution to the interests of the consumers (*ibid*.: 290-1). Under pure market economy conditions, the entrepreneur role always caters to consumers' wants, even though the owners of factors may charge monopoly prices. I now turn to documenting the connection. The logic is tight, sound and undeniable.

Documentation on the Connection Between the THRUI and the Theorem of Consumer Sovereignty

I have already documented that Mises regards the THRUI as a common ground for evaluating interventionist arguments and that he incorporates it into his economics by means of the assumption that a market economy contains a division of labor. I have also pointed out that he does not establish the THRUI as the common ground until the very end of his part 4, after he has already defined the market economy and produced his economic theorems. Nor, at the time that he defines the market economy does he announce why he assumes a division of labor.

Once he defines the pure market economy, he goes on to claim that interaction under pure market economy conditions implies consumer sovereignty. The typical reader has no way of telling that the theorem of consumer sovereignty is derived from the THRUI. A reader trained in the theoretical welfare economics that was so popular at the mid 20th century would likely think that the theorem of consumer sovereignty is a value judgment rather than an indispensable part of the definition of the market economy.

In fact, the theorem is a logical extension of the THRUI, given Mises's ultimate purpose. To see this, one must first appreciate the advance in economics made by the early neoclassicals. Menger, Jevons, Walras and their successors revised classical economics by correcting for the defective labor theory of value. The most advanced version of this new economics at the time Mises began to write his treatise was the Austrian theory of value and cost. In that theory, all value can be traced to the evaluations of consumer goods by individuals in the consumer role and the goods are produced by individuals in the role of the entrepreneur.[6] Mises went beyond the early neoclassicals to replace the classical criterion for evaluating interventionist argument, namely the THRUI, with the theorem of consumer sovereignty. The theorem of consumer sovereignty corrects for a defect in the THRUI by recognizing that the owner of a factor may obstruct a further division of labor in order to partake in monopoly gain.

The best evidence of both the relationship between the THRUI and the theorem of consumer sovereignty and of Mises's use of this theorem is his final chapter in the pure economics part of the treatise. This chapter (24) is entitled "Harmony and Conflict of Interest." In the early part of the chapter he points out that interaction under pure market economy conditions is characterized by changes in the data. Such changes are the source of entrepreneurial profit and loss. Those with better foresight succeed. Those with a lack of foresight fail (*ibid*.: 664-5). A task of the entrepreneur, he had already written, is to anticipate and adjust to such changes (*ibid*.: 252; 290). Profit depends on one's alleviation of the felt uneasiness of others. Accordingly, there are no conflicts of interest between buyers and sellers (*ibid*.: 665). Of course, entrepreneurs make errors which can harm the decision-makers as well as others who have not made any obvious errors. However, to inhibit the adjustment process in order to avoid such harm would reduce the advantages achievable through the higher productivity of the division of labor.

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[6]This most advanced version, in my view, was presented by Herbert Davenport (1914), although it was also implicit in Frank Knight's 1921 book.

Mises's specific discussion of the THRUI appears in a later part of the chapter. He first defines the theorem (*ibid*.: 673-4). Then he uses it to critique "the almost universally accepted social philosophy of our age," namely, that of the "socialist and interventionist authors" (*ibid*.: 675). He does not discuss interventionism in this chapter. He refers the reader to part 6 of his text (*ibid*.: 682n).

Two paragraphs in the chapter directly connect the THRUI to the theorem of consumer sovereignty. Mises first writes:

> It is necessary to realize that consumers' sovereignty is not perfect and that there are limits to the operation of the democratic process of the market. There is in some exceptional and rare cases of *minor importance* even on a market not hampered and sabotaged by government interference an antagonism between the interests of the owners of factors of production and those of the rest of the people (*ibid*.: 681, italics added).

This reference to an antagonism of interests, in a chapter entitled "Harmony and Conflict of Interest," indicates the link he establishes between the THRUI and the theorem of consumer sovereignty. By exceptional cases, he is apparently referring to monopoly, as indicated by the next quotation.

The second paragraph is on the following page. He writes:

> The classical economists' teachings concerning the harmony of the rightly understood interests were defective in so far as they failed to recognize the fact that the democratic process of the market is not perfect, because in some instances of *minor importance*, even in the unhampered market economy, monopoly prices may appear....They based the doctrine of the harmony of interests upon the erroneous assumption that there are no exceptions to the rule that the owners of the means of production are forced by the market process to employ their property according to the wishes of the consumers (*ibid*.: 682, italics added).

Here one sees a direct connection between the classical and Mises's expression of the THRUI. Mises says that his economics, which I have pointed out it based on the Austrian theory of value and cost, is superior to that of the classicals in dealing with interventionist arguments since it recognizes the limitation on the service to consumers due to monopoly, even though cases in which monopoly is present are of minor importance.

Regarding the defective labor theory of value, the most extensive discussion is in Mises Chapter where he revers to the Austrian theory of value and cost as modern subjectivist economics (*ibid*.: 62-4). Other discussions are at (*ibid*.: 21-2) and (*ibid*.: 121-3).

A Contrast With Modern Welfare Economics

To economists who are trained in mainstream theoretical welfare economics, it must seem strange to suggest that an economist can use either the THRUI or the theorem of consumer sovereignty as a criterion for evaluating public policy while at the same time espousing value freedom. Yet Mises's contention is simple and apparently incontestable. I refer first to the THRUI. So long as (1) one does not evaluate the policy itself but the argument of the policy advocate and (2) the policy advocate employs the THRUI as a criterion for evaluating a policy intervention, the evaluation of policy arguments can be value free. The evaluator of an argument simply determines whether it is logical and relevant to the facts to which it claims to be relevant. Does the proposed intervention achieve the proposed goal of expanding the division of labor or better serving the consumer role, she asks.To the extent that a welfare economist accepts the THRUI, she too is compelled to evaluate interventionist arguments at least partly on the basis of whether they promote the division of labor.

How should the Misesian economist reply to a welfare economist who objects to this? She should first tell him that the goal of the Misesian is not to evaluate policies but to evaluate policy arguments. Then she should tell him that economics is defined by its assumption that individuals benefit from specialization and the division of labor. No ethical premise is needed to evaluate an argument concerning whether a particular interventionist policy will achieve a goal when the criterion used to judge whether the goal is achieved is the THRUI. A welfare economist who still objects must be compelled to answer whether he accepts the universal law of the higher productivity of the division of labor. If he answers no, she should treat him as a non-economist who can either be taught economics or who is a contrarian without reason.

It is possible that someone would accept the THRUI but not the theorem of consumer sovereignty. The question to be asked of such a person is whether she realizes the complexity of market interaction. If so, does she recognize that in order to deal with that complexity, the economist must build images of functions and roles based on praxeological properties of action? Such a person must be persuaded that early neoclassical economics was an advance over the classical and that Mises's treatment of economic problems and interventionist arguments was superior to that of the early neoclassicals. Parts Two and Three present this economics, as transformed by Mises, in greater detail.

Mises did not criticize theoretical welfare economics to my knowledge. If he had, he would undoubtedly have challenged the assumption that some set of goods is possible to produce – i.e., the assumption of a production possibilities frontier. He would have pointed out that the division of labor required to cause such goods to be produced cannot merely be assumed. A market economy must exist in order to motivate people to identify and then take advantage of the higher productivity due to the division of labor. Moreover, to achieve the degree of complexity present in the division of labor in a modern economy, individuals must be able to calculate costs in money terms by keeping track of the signals made by other individuals. In other words the economy must contain economic calculation. To disembody production by means of a complex division of labor from the conditions that must be present to achieve that production is like assuming rain without clouds. A theory based on such an assumption cannot be relevant to the task of evaluating public policy.

Binding Economics to Praxeology

The most important achievement of early neoclassical economics and Mises (i.e., of the Austrian theory of value and cost) was to bind economics to praxeology. Early neoclassical economics was basically an extension of the pathfinding works of Menger, Jevons, the non-mathematical logic of Walras, and the marginal productivity theory of distribution of J. B. Clark. As the focus of these extensions shifted more and more toward the entrepreneur as the driving force of the economic system, the bond between the theorems of economics and distinctly human action became tighter and tighter. To my knowledge, Mises was the first to recognize and announce that the study of economic action had culminated in a situation where economics could now be regarded as a branch of praxeology. Mises's appreciation for binding economics to praxeology is evident in the following paragraph in his introduction.

> For a long time men failed to realize that the transition from the classical theory of value to the subjective theory of value was much more than the substitution of a more satisfactory theory of market exchange for a less satisfactory one...The modern theory of value widens the scientific horizon and enlarges the field of economic studies. Out of the political economy of the classical school emerges the general theory of human action, praxeology. The economic or catallactic problems are embedded in a more general science...[E]conomics becomes a part, although the hitherto best elaborated part, of a more universal science, praxeology (*ibid*.: 3).

Later, he distinguishes economics in a broader sense, which he equates with praxeology, from economics in a narrower sense, which he calls catallactics (*ibid*.: 232). At the end of his treatise, he writes again of economics as a branch of praxeology (*ibid*.: 885).[7]

Praxeology is the study of distinctly human action. Its scope is action "irrespective of all environmental, accidental, and individual circumstances of the concrete acts" (Mises 1966: 32). It follows logically that the production of theorems in praxeology precedes the production of theorems in economics.

> **Praxeological theorem**: a theorem about distinctly human action.
> That actors possess a particular property of action is a praxeological theorem.
> To identify the properties of action, one contrasts imaginary constructions of beings that knows action with what she *a priori* about her own action.

The means of producing theorems in praxeology is "reflection about the essence of action" (*ibid*.: 39). The elucidation of the prerequisites and properties of action yields the simplest and most fundamental theorems in praxeology. More complex theorems are built by employing additional assumptions. A more complex theorem is "valid for all instances in which the conditions exactly correspond to those implied in its assumptions and inferences" (*ibid*.: 32).

One might say that the aim of praxeology is to produce praxeological theorems. The aim of economics, correspondingly, is to produce economic theorems by employing assumptions that are appropriate for the branch of praxeology that is concerned with the evaluation of interventionist argument based on the THRUI.

[7] Also see a clear statement in his 1978b book (1978b: 73).

Using Imaginary Constructions to Identify the Properties of Action

The praxeologist achieves this elucidation goal by using the only method available to identify the necessary properties of action. Starting with a vague image of action, she proceeds to build *imaginary constructions* of beings that lack what she proposes as a necessary property of action. One such image is an automaton. Another is a being who lacks motivation to act, either because he feels no uneasiness because he cannot conceive of a means of removing it. Through a careful process of building images that contradict the inherently knowable meaning of action, the praxeologist discovers that action *in general* is driven by a desire to remove uneasiness and that the actor must possess the power to remove it.[8] This implies the actor's imagination of a future state at which uneasiness is removed. Action further implies ends and means, a concept of causality, time and uncertainty (*ibid*.: chapters 4-6). I believe that employing this image-building process also brings to consciousness the qualities of imagination, creativity, and inventiveness, although Mises does not identify these directly. When I refer to the *properties of the category of action*, I am referring to ends and means, time and uncertainty.[9]

[8] *Ibid*.: 13-4.

[9] Mises used various terms to refer to these properties. Typically he called each of them a category of action. My purpose for using the term "property" is to employ a standard terminology.

An Analogy Between Action in General and Entrepreneurial Action Under Market Economy Conditions

Economists deal with market interaction. Assuming that the ultimate goal of the actors in market interaction is the consumption of goods, economists proceed to acquire their understanding by building an image that incorporates, as a start, the production of the factors of production, the production of consumer goods, consumption and other behavior that must exist for human actors, under pure market economy conditions, to employ means to meet ends. The isolated actor can be depicted in an analogous way. Mises wrote that:

> every allocation of goods – even those in the processes of production – is an exchange, and consequently the basic law of economic action can be comprehended also in the conduct of the isolated farmer (1933 [1981]: 146).

I interpret this to mean that in an effort to satisfy his wants as a *consumer*, the isolated farmer performs the function of a *producer* and a *supplier of factors of production.* Note that the image of the isolated farmer is more than an image of an actor in general. It is thus more than a pure praxeological image. One forms the image of the isolated farmer by combining the praxeology-derived properties of action with assumptions that reflect her interest in factor supply, production, and consumption of goods. Note also that the value to the isolated farmer of a consumer good is derived from consumption as opposed, for example, from the amount of work time. The value of a factor of production is derived from the farmer's expectation of consumption (the imagination of the future state at which his uneasiness is removed).

Economists must build images that contain many specializations and many, different individuals. The task is daunting. In short, market action is *complex*. This complexity compels the economist to transform the behaviors she aims to depict into *roles that perform functions* that represent the properties of action. The starting point is to build an image of roles that, respectively, perform the three basic types of functional behavior – factor supply, production, and consumption. The roles of factor supplier and producer comprise roles that satisfy wants. The actual want satisfaction occurs when the role of the consumer consumes.

The means that Mises uses to bind economics to praxeology is based on an analogy. The economist assumes that production and factor supply are directed by a single role – the *entrepreneur*. The entrepreneur role exclusively directs all of *the means* (the factors of production). It causes them to be employed such that consumer wants are satisfied. The Misesian economist constructs the entrepreneur role in such a way that it embodies all of the relevant distinctly human action under pure market economy conditions. This includes all of the appraisement (identification and comparison of the means of production), undertaking (decisions to produce goods) and uncertainty-bearing. One can imagine factor-supply, production, and consumption occurring without action. For example, they could be performed in an animal community or a community of robots. In contrast, *the Misesian economist uses the entrepreneur role to represent all distinctly human action under pure market economy conditions*.

This definition of the entrepreneur role effectively binds economics to praxeology. The bond does not assure that the economist can avoid error. As mentioned, it is based on an analogy. The use of an analogy can be misleading and the analogy can be used to obfuscate. For economics to be tightly bound to praxeology, economic theorems must be capable of being traced back to the properties of action by meticulously identifying the assumptions employed in the production of those theorems

(Mises 1966: 68). On the other hand, using the role to represent all distinctly human action under pure market economy conditions protects against a specific kind of error – that of neglecting the distinctly human action entailed in the performance of the basic functions.

Why Make Praxeology the Foundation for Economics

Nowadays no one can doubt that human beings are different from other living beings and that it is worth building a logic of market interaction. Nevertheless, professional economists still have a tendency to evaluate interventionist arguments on the basis of models in which the subjects behave as automatons and thus do not actually identify means of production and compare costs, bear uncertainty, or possess imagination, creativity, and inventiveness. Some go so far as to suggest that the combination of a correct model and the numerical data of the past can be employed to predict how people will act in the future. These professionals recommend for economics a statistical extrapolation paradigm similar to the one used in classical astronomy and other material sciences. They do not appreciate the wide differences between the natural sciences and a science, or logic, of action.

> Making praxeology the foundation for economics helps guard against the error of neglecting the distinctly human action entailed in the performance of the basic functions of action.

No deduction in a logic of action would warrant precise predictions of consequences of a change in conditions faced by an actor. On the contrary, humans possess the capacity to predict the actions of each other and then to act contrary to others's predictions. Because each actor is capable of guiding her own actions, an economist cannot identify statistical laws that enable him to manipulate the behavior of others to achieve certain desired results. Numerical data referring to past behavior can be gathered and arranged in a way that facilitates descriptions of historical events. But the imagination, creativity, and inventiveness character of actors precludes the use of statistical extrapolation to reliably predict the consequence of an intentional manipulation of action. However, economists can identify general *patterns* of action. An example is the general calculation errors that would result, under market economy conditions, from an unexpected change in the quantity of money. A more specific set of errors, which can be deduced if certain conditions are assumed, consist of decisions that shift the pattern of production away from the satisfaction of nearer future wants. These errors can be caused by the unexpected addition of new money through the markets for loanable funds. Another pattern that can be predicted is the set of likely entrepreneurial supply responses to a price control. More precise predictions, however, are precluded due to the nature of distinctly human action.[10]

Making praxeology the foundation of economics mitigates against the illusion that human behavior is subject to statistical laws. It is a kind of check on abuse. Economics cannot do without models, or images. But for such images to be relevant, they must be built on a praxeological foundation – i.e., they must be based on assumptions that are traceable to the properties of action.

From a different point of view, one might say that making praxeology the foundation of economics is a means of avoiding the errors associated with materialism, behaviorism and other alleged methods of identifying economic theorems and laws. And, if one considers these methods as being

[10]This is not to deny the importance of fact gathering for the purpose of determining whether the assumptions in a theorem match those of the world to which the theorem is applied in evaluating an interventionist argument.

predominant in modern thought, it is a means of defending economics against these non-economic ideas. Or, if one wishes, it is a means of defending economics from attacks made on the basis of non-praxeological concepts. Writing in the 1930s, Mises viewed providing a praxeological foundation for economics in the latter light – as a means of defending economics against attacks by those who object to the logic of economics (*ibid*.: 6-7).

Securing Economics Against Criticisms

Mises gives two reasons for insisting on a bond between economics and praxeology. These are: (1) to secure economics "against many fallacious criticisms [and (2) to]...clarify many problems hitherto not even adequately seen, still less satisfactorily solved" (*ibid*.: 7). I document the first of these reasons in this subsection and the second in the next subsection.

The Criticisms

The criticisms against which economics must be secured are made "on the part of irrationalism, historicism, panphysicalism, behaviorism, and all varieties of polylogism" (*ibid*.: 7). Consider each of these in turn.

Irrationalism, as Mises describes it, contends "that reason as such is not fit to elucidate the irrational forces that determine human behavior" (*ibid*.: 5). It says "that it is an illusion to believe that scientific research can achieve results valid for people of all eras" (*ibid*.). Its main motive "was to provide a justification for disregarding the teachings of economics in the determination of economic policies" (*ibid*.: 6).

What motivation could someone have for disregarding economics? One answer is that she wants to avoid the damages due to economic competition. For example, the head of a union or a business that is seeking to obtain or to retain a position of privilege might make this argument. Such a person may or not be sincere. At least two kinds of people fit the profile of sincerely making the answer. The first are the dogmatists who assert that the destiny of human beings is beyond their control. The second are religious fanatics who abide by the teachings of a holy book that either excludes science or that treats the comprehension of science as good only if it does not interfere with correct religious practice.

To counter the disingenuous criticism of irrationalism, the economist need only show (1) that economics is concerned with worldly goods and (2) that it provides knowledge that is useful in attaining or increasing such goods. There is no means of reasoning with people who embrace determinism or religious fanaticism.

Next consider historicism. Historicism "asserts that the logical structure of human thought and action is liable to change in the course of historical evolution" (*ibid*.: 5). It "aimed at replacing [economics] by economic history" (*ibid*.: 4). Its main motive was also to justify disregarding the use of economics in evaluating public policies (*ibid*.: 6). Historicism sees capitalism as a stage in history (*ibid*.: 692). It thereby puts its adherents in a position to advocate policies which, even though they may demonstrably harm the people of today's age, the adherents claim will yield benefits in the next historical stage. To counter this criticism, the economist must show that "the logical structure of human thought and action" is constant for at least as long as human beings are able to foresee. Mises does not mention the universal law of the higher productivity of the division of labor in this respect but it seems to me that he could. At what stage in historical evolution, he could ask, would this law become irrelevant?

Historicism is a particularly pernicious doctrine because it puts its advocate in a position to select out facts that are favorable to his position. The modern economist, by definition, learns that entrepreneur actions must benefit individuals in the consumer role (see Chapters Four and Five). She also learns about economic competition. Her learning in this respect is about how every actor must be an entrepreneur and about how entrepreneurial errors can lead to losses. She thus learns that some people in market interaction are harmed in a utilitarian sense by the competition of others and that the history of market interaction contains many examples.[11] Consider, for example, the short life of coal miners and factory workers faced with dangerous working conditions and possibly declining wages due to competition from elsewhere, the plight of domestic farmers in the face of foreign competition, the damage done to small local businesspeople facing competition from large regional firms, and so on. The historicist can point to these harmful effects, while ignoring the lower prices and wider variety of the goods available to consumers and the gains to the competitors. He can persuade people who are ignorant of economics that such "beneficial effects" of a greater division of labor are minimal, as compared with the harmful effects to particular groups. The only way to combat historicism is to teach economics. Especially important are the lessons of the classical economists concerning the harmony of rightly understood interests.

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[11]Modern professional economists represent similar harmful effects with the concept of "pecuniary externalities."

Regarding panphysicalism, Mises writes that it proclaims "mechanicalism as the essence of all knowledge and the experimental and mathematical methods of the natural sciences as the sole scientific mode of thinking. All changes are to be comprehended as motions subject to the laws of mechanics" (*ibid*.: 23-4). The champions of mechanicalism are pragmatists. When asked to explain why their methods work in natural science, they refer to their success (*ibid*.: 24). Extrapolating the results of natural science to that of economics, they expect the same methods to succeed in this field also.

The problem with using experimental and mathematical methods in economics is that they have not been proven to work. Moreover, they are often pursued by professional economists as an end in themselves, thereby functioning to turn economics away from the achievement of the main purpose of economics.

The professionals believe that experimental and mathematical methods are bound to work in economics. This belief is merely a metaphysical superstition (*ibid*.: 25). To counter panphysicalism, the economist must demonstrate that economics is a branch of praxeology and that the methods of praxeology and economics necessarily differ from those of natural science.

Now consider behaviorism. Mises writes that the "aim of behaviorism [is] to study human action from without with the methods of animal psychology..." However, this aim "is illusory" (*ibid*.: 2). In fact, the behaviorist

> unwittingly applies to the subject matter of his studies the human concepts of serviceableness and perniciousness. He deceives himself in excluding all verbal reference to consciousness and aiming at ends. In fact his mind searches everywhere for ends and measures every attitude with the yardstick of a garbled notion of serviceableness (*ibid*.: 28).

Today, the term “serviceableness” is not as popular as the term “function” in this context. When asked to explain why a particular stimulus elicits a particular response in a human actor, the behaviorist typically answers by referring to the function of the response. In fact, this is a veiled reference to the ends at which the human actor consciously aims albeit which, under market economy conditions, she can only achieve indirectly. Mises argues that it is an illusion to think that actions can be interpreted as responses to a stimuli without referring to “the meaning which acting men attach to them” (*ibid*.: 26). Behaviorism can be countered in the same way as panphysicalism – by demonstrating that praxeology and economics are distinct sciences that use distinct methods requiring one to attribute subjective meaning to every action.

While historicism, panphysicalism and behaviorism can be countered with economics; the modern observer of the history of the economics profession could hardly be optimistic about the prospect of Misesian economics winning over the profession. Modern professional economics is mostly a hybrid of these ideas. The modern professional uses something like what Mises would have called “economic theory” to generate hypotheses. Then he tests such hypotheses by means of statistical measures or by referring to the facts of history, which are often described in the form of summary statistics. The reports of such statistics typically refer to “economic behavior” and not to *action* in the sense that it is defined in praxeology and economics. One might label this hybrid “scientism.” The practitioners of scientism aim to subsume economic theory within a broader paradigm of scientistic knowledge gathering. The Misesian economist regards the economic theory as paramount and statistics representing economic action as useful primarily in helping to determine whether theory is *relevant* to particular instances to which it is applied. The scientistic economist, on the other hand, regards the knowledge of statistical, behavioral, historical facts as paramount. He continually flirts with the paradigm of statistical extrapolation. As a result, whereas a Misesian economist is poised to trace all market interaction back to the category of action, the scientistic economist tends to mix economic theory, on the one hand, and statistical extrapolation on the other hand. Basically, the scientistic economist conflates economics with historicism and, as a result, tends to make errors in policy analysis.

Finally, consider polylogism. Mises does not actually define polylogism in the treatise. However, he credits Karl Marx with inventing it (*ibid*.: 693). For Marx, every "social class has a logic of its own" (*ibid*.: 5). Polylogism was later adopted by historicism, which "asserts that the logical structure of human thought and action is liable to change in the course of historical evolution." Other forms of polylogism are racial polylogism and irrationalism (*ibid*.). Like irrationalism and historicism, the main motive for polylogism was to attack the use of economics (i.e., the use of the THRUI and the theorem of consumer sovereignty) in evaluating economic policy. It can be countered in the same way as those two.

Experimental Economics

In order to clarify Mises's justification for binding economics to praxeology, I would like to deal with a more recent development in the economics profession – experimental economics.[12] The working thesis of this field is that economists can learn something about market interaction by doing behavioral experiments. There are three problems with this thesis. Two of them concern relevance.

[12]See Vernon Smith (2008).

The third concerns the propensity to substitute some other purpose for the main purpose of economics. First, only simple behavioral experiments can be done; yet market interaction is complex, involving countless actions, only some of which the human mind is capable of identifying. To duplicate such actions in an experimental situation is out of the question. Thus the experiments are almost certain to lack relevance due to complexity. The second problem is that market interaction is characterized by continuing development and growth. The division of labor is ever expanding under pure market economy conditions. Although there are times when individuals develop routine ways of dealing with each other, there are quite a number of others in which individuals are imaginative, creative, and inventive. Since market interaction consists of interaction among numerous interrelated individuals, the imagination, creativity, and inventiveness of even a few means that the interactive situations of the past are seldom repeated in a similar way. As a result, even if experiments could be conducted on large numbers or even if small number experiments were relevant to understanding past interactions among the large number of actors, the understanding of past interaction would ordinarily be irrelevant by itself to understanding future interaction.

The third problem is the danger associated with professionalizing research of this type. For descriptions from experimental economics to be suitable in a praxeologically-based economics, the language used in the descriptions ought to reflect the assumption that behavior is driven by choices. Every term that is used to report an experiment ought to be traceable to the properties of action (ends and means, time, and uncertainty). It should reflect an assumption or set of assumptions about these properties of action. The grammar must be subject-centered and not object-centered. Yet there is a tendency in a field labeled "experimental economics" to emphasize measurable results. Emphasizing measurable results can easily lead one to make the same error as the rigid behaviorists in psychology. Only dogged self-scrutiny could keep this field from lapsing into an imitation of the rigid behaviorism of old.[13]

The problem faced in both human psychology and economics is the interpretation of facts. This problem is less severe in psychology because the facts are less complex. For that field, rigid behaviorism can be conceived as a fact-gathering process, albeit one that should be guided by prior praxeological theory. In economics, where complexity dominates, fact-gathering by experiment is nowhere near as fruitful. Moreover, the facts gathered through behavioral experiments are very unlikely to correspond to the complex facts that the economist aims to interpret. Theory production is far more important and other means of fact gathering are likely to prove more fruitful.

How to Secure Economics Against the Criticisms

That Mises aimed to counter these criticisms is evident from the following statement which follows his discussion:

> The system of economic thought must be built up in such a way that it is proof against any criticism on the part of irrationalism, historicism, panphysicalism, behaviorism, and all varieties of polylogism. It is an intolerable state of affairs that while new arguments are daily advanced to demonstrate the absurdity and futility of the endeavors of economics, the economists pretend to ignore all this.
>
> It is no longer enough to deal with the economic problems within the traditional framework. It is necessary to build the theory of catallactics upon the solid foundation of a general theory of human action, praxeology. This procedure will not only secure it against many fallacious criticisms but clarify many problems hitherto not even adequately seen, still less satisfactorily solved. There is, especially, the fundamental problem of economic calculation (Mises 1966: 7).

[13]It is worth noting that one of the major proponents of behaviorist psychology recognized, later in his life, the limitations of strict behaviorism. See B. F. Skinner (1964).

Once he defines his aim of binding economics to praxeology, the next task is to determine the best way to proceed. Having rejected scientism and the other "isms," he is obliged to present an alternative. What methods can and should an economist employ to put herself in a position to evaluate interventionist argument based on the THRUI? Mises does not bother to ask immediately answer this question. I claim that his procedure is to bind economics to praxeology by combining the properties of action with imaginary constructions. The imaginary constructions represent the assumptions needed to produce economic theorems. In the theorems, the properties of action and the assumptions are intertwined, so to speak. Although Mises does not say anything immediate about this procedure, he nevertheless begins to carry it out in his first chapter. There, he introduces the concept of human action as consisting of three conditions: (1) uneasiness, (2) the image of a more satisfactory state, and the "expectation that purposeful behavior has the power to remove or at least to alleviate the uneasiness" (*ibid*.: 14).

How to Avoid Error in Economic Reasoning

Mises does not explain why he begins in his chapter 1 to elucidate the properties of action. However, his decision to do so is consistent with the goal of binding economics to praxeology and the reader can take it for granted that this is his purpose. Her faith would be rewarded in chapter 2, where Mises discusses "The Epistemological Problems of the Sciences of Human Action." There she would discover that to avoid error in economic reasoning, one must follow a rule that requires her to trace all economic theorems back to the properties of action. The reasoning behind the need

How to avoid error in economic reasoning: follow the rule of trace all economic theorems back to the properties of action.

to follow this rule begins in a section entitled “Conception and Understanding,” in which Mises’s effort to justify distinguishing praxeology and history is nearing completion. In this section, he distinguishes the mental tool of praxeology, which he calls “conception,” from the mental tool of history, which he calls “understanding” (*ibid*.: 51). He also points out that understanding presupposes conception (*ibid*.: 53-54). He turns specifically to economics in a section entitled “The Procedure of Economics.” In that section, he writes basically that the methods of economics are determined by the subject matter.

Unfortunately, he does not fully define the subject matter of economics until much later in the treatise. In chapter 14, his first chapter that is exclusively devoted to economics, he defines economic phenomena as “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” (*ibid*.: 232). Thus the inquisitive (and persistent) reader is able to find out that the methods of economics are determined by the interest of economists in the mutual exchange ratios (*ibid*.) or actions “conducted on the basis of monetary calculation” (*ibid*.: 234).

Instead of giving his reader a concrete definition of economic phenomena, Mises deals with the problem abstractly. He writes only that economic phenomena refer to experience and reality (*ibid*.: 65). Because economics fixes “its eye on the comprehension of reality,” it must adopt “for the organized presentation of its results a form in which aprioristic theory and the interpretation of historical phenomena are intertwined" (*ibid*.: 66).[14] One who reads this statement cannot help but ask why Mises uses the phrase "organized presentation of its results."

I am sure that Mises is referring to the production of economic theorems that are relevant to evaluating interventionist argument based on the THRUI. Economic theorems are theorems that pertain to the actions that cause the mutual prices of goods and factors of production and that have effects upon later actions. He means that when economics presents economic theorems, it intertwines aprioristic theory and the interpretation of historical phenomena. Given this interpretation, then he is implying that in order to avoid errors, the builder of theorems must intertwine aprioristic theory and the interpretation of historical phenomena. This procedure, we shall see, binds economics to praxeology.

It seems to me that this interpretation is not easy for the typical reader to make. Nevertheless, I am persuaded that it is correct. That I am correct is evident from the fact that it is consistent with what he writes in subsequent statements in the same context. First he writes about the procedure of economics:

> ...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. With regard to the results thus obtained only two attitudes are possible; either one can unmask logical errors in the chain of the deductions which produced these results, or one must acknowledge their correctness and validity (*ibid*.: 67).

Here he writes of "a system of concepts and inferences." He does not write about a set of deductions about economic interactions that intertwine the properties of action with assumptions about the

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[14] I have substituted the term "economics" for "praxeology" in this interpretation on the grounds that this is a more accurate term to express Mises's meaning. The context reveals this.

conditions under which individuals act. Nor does he say that he is referring to an economic theorem. Later, however, when he turns to the prospect for error, he writes generally about how man, in his effort to comprehend reality, can never be absolutely certain; therefore the best he can do is

> to submit all his theories again and again to the most critical reexamination. This means for the economist to trace back all theorems to their unquestionable and certain ultimate basis, the category of human action, and to test by the most careful scrutiny all assumptions and inferences leading from this basis to the theorem under examination. It cannot be contended that this procedure is a guarantee against error. But it is undoubtedly the most effective method of avoiding error.
>
> Praxeology – and consequently economics too – is a deductive system. It draws its strength from the starting point of its deductions, from the category of action. No economic theorem can be considered sound that is not solidly fastened upon this foundation by an irrefutable chain of reasoning. A statement proclaimed without such a connection is arbitrary and floats in midair. It is impossible to deal with a special segment of economics if one does not encase it in a complete system of action (*ibid*.: 68).

Given the language of the "properties of action" that I have introduced, I conclude that he means that to avoid error in theorem production, the economist must be capable of tracing back all theorems to the properties of action. To do this, she must be able to identify her specifically economic assumptions that are imbedded in her imaginary constructions. This is how the economist binds economics to praxeology. Is there other evidence to support my interpretation?

Tracing Economic Theorems Back to the Properties of Action: Case 1

Mises does not return in the treatise to the subject of how to bind economics to praxeology. He evidently thought that his treatment in his chapter 2 was sufficient. To determine how his procedure achieves this purpose, one must study the treatise looking for passages that contain the word "trace." There are two relevant instances. The first is in his discussion of economic calculation. He says that one of the biggest errors made by economists was that of taking for granted that individuals employ numerical measures of the value of using means to meet ends. The economists looked at the means for a collection of people to achieving their ends as if they could compare the loss in satisfaction resulting from use with the gain in satisfaction resulting from another use. They proceeded to advance theorems about how progress and improvement that were based on a false premise. Such calculation cannot be made unless there is a common denominator, or money. It follows that the deductions about action that an economist might make on the basis of the assumption for a market economy do not apply do a collective that does not use money. He writes that the economists "took [economic calculation] for a category of all human action [including that of Crusoe and the socialist planning board] and ignored the fact that it is only a category inherent in acting under special conditions" (*ibid*.: 201). The economists

> did not comprehend that money prices are the only vehicle of economic calculation. Thus most of their studies are of little use. Even the writings of the most eminent economists are vitiated to some extent by the fallacies implied in their ideas about economic calculation (*ibid*.).

The error of those economists was due to their inappropriate use of imaginary constructions. The economist uses such constructions, he says, because it expedient to do so. But this does not remove the obligation of tracing all economic phenomena that go into making an economic theorem back to the properties of action.

> In order to trace back the phenomena of the market to the universal category of preferring a to b, the *elementary theory of value and prices* is bound to use some imaginary constructions. The use of imaginary constructions to which nothing corresponds in reality is an indispensable tool of thinking. No other method would have contributed anything to the interpretation of reality. But one of the most important problems of science is to avoid the fallacies which ill-considered employment of such constructions can entail (*ibid*.: 201-2, italics added).

The "elementary theory of value and prices" to which he refers is the Austrian theory of value and cost. He goes on to write about this theory. He says that it employs the image of a market "in which all transactions are performed in direct exchange." But "one must carefully guard oneself against the delusions which this construction can...engender" (*ibid*.: 202).[15]

Mises's discussion of these errors does not refer to the entrepreneur role. In his economics, as best understood from the praxeological point of view, this role both announces and accepts the price bids that enable cost calculations to be made. It makes appraisement errors when there is an unexpected change in the quantity of money. Because Mises does not discuss this role until after he has introduced the imaginary construction of the evenly rotating economy, the typical reader is not in a good position to recognize that Mises has it in the back of his mind when he gives this early example. Thus, viewed in isolation, this early discussion of the appropriate method for tracing economic phenomena back to the category of action tells the reader very little about how his binding economic to praxeology helps the economist avoid error. Its main message is that in order to derive economic theorems, one must combine knowledge of the properties of action with imaginary constructions that do not correspond to reality. An example of such a construct, I will show, is the evenly rotating economy which is necessary to elucidate the entrepreneur role.

[15]Mises mentions two delusions. The first is that a person who uses this market image may forget that money is not a neutral factor. Near the beginning of the 20th century, he writes, the use of this image prompted a correction in the form of the monetary theory of the trade cycle (*ibid*.: 203). The second is that a user may forget that the determination of the costs of production requires the use of money and markets to calculate. A theory of value and cost that lacks money may lead to error. It cannot shed any light on an argument favoring a socialist system in which money is not, by definition, used to calculate opportunity costs (*ibid*.: 205).

Tracing Economic Theorems Back to the Properties of Action: Case 2

The next relevant use of the term “trace” is more useful, although I cannot expect the reader of this essay to acquire a full appreciation until later. Consider his discussion of how the prices of the factors of production are determined in the market (*ibid*.: 334). He writes that the “operation of this market is actuated and kept in motion by the exertion of the promoting entrepreneurs, eager to profit from differences in the market prices of the factors of production and the expected prices of the products” (*ibid*.). This sentence refers back to a chapter in which Mises defines the entrepreneur role and elucidates it by means of the two imaginary constructions of the evenly rotating economy and the “functional distribution” (*ibid*.: 246-255). I discuss these imaginary constructions and the entrepreneur role in greater detail in Part Two.

My interpretation of Mises’s belief is that in order to protect economics from the view voiced by a variety of critics, one must use the entrepreneur role to bind economics to praxeology. Such a bond, in conjunction with the correct use of imaginary constructions to elucidate the entrepreneur role, enables economists to produce theorems that can be traced back to the category of action. Unfortunately, I must ask the reader to wait for my complete defense until I elucidate the entrepreneur role.

Helping to Solve Problems Hitherto Not Adequately Seen

Mises asserts that binding economics to praxeology enables one to clarify and solve various problems. Unfortunately, he does not tell the reader which problems need to be clarified and solved. Indeed, it is unclear at this stage what he means by a problem. Later in the treatise, he uses the term "problem" to refer to the effects of a proposed market intervention. The economist, he writes, first studies interaction under pure market economy conditions and then turns to the study of problems raised by interference with the market (*ibid*.: 238). Here, however, employs a different meaning of the term "problem." He refers to the *problem* of economic calculation. He writes that there "is, especially, the fundamental problem of economic calculation" (*ibid*.: 7). What he really means, I believe, is that some arguments favoring intervention in an otherwise pure market economy can only be dealt with by understanding the prerequisites for economic calculation and how it occurs. Two cases come to mind: the effects of adopting a socialist program and the effects of an increase in the quantity of money. How does binding economics to praxeology help to deal with interventionist arguments relating to these phenomena?

My answer begins by recognizing that such effects are best expressed in terms of the entrepreneur role. Mises does not characterize his evaluation of the the socialist planning intervention in this way. He prefers to emphasize the inability of the central planners to calculate costs of production, particularly in the higher orders of supply chains. A moment's reflection suggests, however, that the planners' inability to calculate is the antithesis of the assumption that under pure market economy conditions, the entrepreneur role *can* calculate. What the socialist planners try to achieve are the results of market interaction without having an entrepreneur role and the money prices that play such a large part in the entrepreneur role's appraisement and production decisions. The praxeology-based economist recognizes that interaction under pure market economy conditions can be traced back to the properties of action via the entrepreneur role. Advocates of socialist planning, however, have no way to trace the results they claim socialism can achieve back to the properties of action. Part of the reason for this is that they do not assume a set of conditions in which individuals use money prices to calculate. Thus, there is no reason to believe that the socialist planners could achieve anywhere near the same extent of division of labor as can be achieved under pure market economy conditions.

Regarding the trade cycle, Mises’s revised version was based squarely on the concept of the entrepreneur role. In other words, he built a theory in which the phenomena depicted in the trade cycle, like those under pure market economy conditions, could be traced, via the entrepreneur role, back to the properties of action. He introduces his trade cycle by describing the “problems” that he plans for his analysis to solve. Originary interest plays a prominent role. He writes that the first problem is whether the changes in money can and will bring about “lasting changes in the final rate of originary interest and neutral interest.” The second is whether “changes in the gross money rate of interest” can cause “the net rate of interest included in it to deviate lastingly from the height which corresponds to the rate of originary interest...(*ibid*.: 538-9). To solve these problems, Mises must develop a theorem about how the entrepreneur role will act when there is a change in money and a change in the gross money rate of interest.

As in the case of securing economics against criticism, his argument ultimately refers to the entrepreneur role. Also, as before, my complete defense of Mises’s second reason for binding economics to praxeology must await a further discussion of the role.

Before concluding this part, I want to again point out the difficulty of interpreting Mises on this issue of binding economics to praxeology. It is indicative of the difficulty of interpreting his economics generally. Let me try to rephrase Mises’s contribution to the evaluation of interventionist argument relating to the trade cycle. The contribution is to recognize that if a central bank increases the quantity of money unexpectedly by introducing it into loan markets, it will cause a trade cycle.[16] This contribution should be stated as a theorem that is derived from the properties of action and assumptions about the conditions under which the actions occur. The theorem applies to the conditions of a pure market economy and is derived from other theorems that are already developed for that economy, including the theorem of consumer sovereignty. For Mises to refer to his exercise as a set of problems with which a theory of interest, credit expansion, and the trade cycle are designed to deal transmits the correct message only to a reader who has been able to recognize both the goal of producing such theorems and the methods that must be used in an economics that is bound to praxeology. Yet, I do not believe that the typical readers is able to recognize these things. Accordingly, it is easy to see, from Mises use of terms to refer to his trade cycle theory, why much of the rest of his treatise has not been well understood.

2. THE ENTREPRENEUR ROLE

The entrepreneur role plays a critical part in Mises's effort to achieve the ultimate purpose of his economics: to enable the economist to make value-free evaluations of arguments in favor of or against market intervention. It helps him represent all distinctly human action that causes the

[16]This way of phrasing the argument skips over the fact that the trade cycle theory is a counterargument to the interventionist argument that central bank intervention can be use to increase the production of goods that consumers value.

employment of means to meet ends and it helps him represent that part of distinctly human action that *always* causes wants to be satisfied under the conditions of the pure market economy.

In production, the entrepreneur role complements the roles of owners of the non-human factors and work. The entrepreneur's income is profit; the income of the owners of the non-human factors is interest; and the worker's income is wages. The owners of durable goods and factors may be able to earn a monopoly gain by charging a monopoly price. Charging a monopoly price is against the interests of consumers and, therefore, not a part of the entrepreneur role. Thus profit differs from monopoly gain.

Consumer sovereignty is the key to understanding Mises's economics in the sense that the name implies both the evaluation of interventionist arguments and the entrepreneur role. The entrepreneur role, however, also implies a bond between praxeology and economics, which the consumer sovereignty concept does not. Since this bond helps the economist avoid error, an understanding of the entrepreneur role is also a prerequisite for understanding Mises's economics.

Mises makes it very difficult for the ordinary reader to recognize how crucial the entrepreneur role is in his economics. At least three characteristics of his presentation contribute to this difficulty. The first concerns "originary interest." It is impossible to fully comprehend Mises's entrepreneur, as Mises presents it, without an understanding of his concept of originary interest. Yet, Mises gives the typical reader the impression that he has completed his definition of the entrepreneur before he even defines this term. Moreover, I will show that, insofar as one aims to make a simple and intelligible presentation of Mises's economics, the term "originary interest" is not only unnecessary but misleading. In using this term, Mises made the comprehension of the entrepreneur role more difficult than necessary without any compensating gain to the typical reader.

The second characteristic of Mises's presentation of the entrepreneur concept that increases the difficulty of comprehending the concept's importance is Mises's decision to employ a variety of terms to refer to it. The term "entrepreneur role" is my convention and I try to use it exclusively. Mises does not use the term at all.

A third characteristic is Mises's desire to separate the entrepreneur as a "category" from the assumption, or fact, that different individuals acting in the entrepreneur role are likely to perform it differently. This is evidenced by his introduction of a second entrepreneur concept – that of the promoter. Confusion arises because of the uncertainty to the reader about which meaning he is using.

My interpretation tries to account for each of these difficulties. I begin by introducing the entrepreneur role. Then I discuss each of the difficulties. As I noted, Mises does not use the term "entrepreneur role" in his treatise. My use of this term is based on the purpose Mises has of employing the entrepreneur concept and also on my desire to stick exclusively to a single term. I show later in this part of the essay why Mises's failure to do so is confusing. Until then, the reader will have indulge my use of this term. In this part, I first describe Mises introduction of the entrepreneur concept in the treatise. Then I discuss each of the difficulties. I end by describing Mises's contribution to the theory of value.

Introduction to the Entrepreneur Role: Entrepreneur as Category and Function

Mises introduces the concept of the entrepreneur in a discussion of the imaginary construction of the evenly rotating economy. Using object-centered grammar, he says that the evenly rotating economy (an object) is needed in order to elucidate the concepts of entrepreneurship and profit and loss (*ibid*.: 248). All of his introductory effort to define the entrepreneur concept is contained in a section entitled "The Integration of Catallactic Functions" and centers on what he calls the imaginary construction of the functional distribution. He begins his effort by writing about the difference, in economics, between ideal types and categories. "Economics, exploring the structure of acting in the market society without any regard to the ends people aim at and the means they employ, is intent upon discerning categories and functions" (*ibid*.: 252). In contrast, *economic history* and *descriptive economics* use the terms "entrepreneur, capitalist, landowner, worker and consumer" to refer to ideal types. In economics (i.e., economic theory), "entrepreneur" and these other terms refer to purely integrated *functions*. A reader who is attuned to Mises's desire to bind economics to praxeology and to his goal of evaluating interventionist arguments would assume that an elucidation of categories and integrated functions is meant to contribute in some way. A reader who is unfamiliar with these purposes is likely to regard such remarks about category and function as unclear in purpose.

Next Mises writes that discerning categories and discerning functions "are *two different tasks*," implying that discerning a *category* is different from discerning a *function* (*ibid*.: 252, italics added). He does not use the term "category" again in the chapter. However, he provides some words that seem intended to clarify. He says he will demonstrate the difference between the two tasks by "discussing the catallactic concept of the entrepreneur" (*ibid*.).

The Category of the Entrepreneur

He begins with a paragraph in which he distinguishes between (1) the rigid evenly rotating economy, which contains no entrepreneurship; (2) a solitary actor, who is always uncertain about the outcome of her action and therefore necessarily speculates when she acts; and (3) a "real and living economy" in which "every actor is always an entrepreneur and speculator" (*ibid*.). He does not tell how this paragraph helps to accomplish either task.[17]

Despite the absence of guidance and use of object-centered grammar, I am confident that he means for this first paragraph to be about discerning the *category* of the entrepreneur, whereas the several paragraphs of subsequent discussion refer to the task of discerning the entrepreneur *function*. To discern the entrepreneur category, I reckon, refers to discerning one or more properties of distinctly human that is present under pure market economy conditions. One can discern the category of the entrepreneur, I reckon, by contrasting (1) action under the conditions of a market economy with (2) behavior under the conditions of the imaginary construction of the evenly rotating economy. The property to which I am referring is a combination of the fundamental properties of action that I identified in Part One of this essay. It is the identification of the means and then their employment

[17]This paragraph contains a statement about dependents that is distracting, even though it is important to make at some stage in his treatise. Dependents, he says, are not actors and speculators. I presume that practically everyone would agree with this statement since practically everyone has experience with children, the aged, and the infirmed. On the other hand, the statement raises a question about the value neutrality of Mises's economics. Consider an argument that asserts that an intervention will benefit dependents even though it interferes with entrepreneurship and, therefore, reduces the achievement of earthly ends. Such an argument could not be completely evaluated on the basis either of the THRUI or the theorem of consumer sovereignty. Additional theorems in a praxeology-based economics would seem to be warranted to deal with dependents. In my view, in order to help dispel concerns about bias, his statement should be placed in his discussions of both ideology and the harmony of rightly understood interests. Yet it is conspicuously absent from them.

to meet perceived ends. It entails both the prediction of ends and means and the bearing of uncertainty. Mises defines the evenly rotating economy as follows:

> 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...prices – commonly called static or equilibrium prices – remain constant too (*ibid*.: 246-7).

Distinctly human action under market conditions represents the category of the entrepreneur, while the behavior in the evenly rotating economy represents routine performance of consuming and supplying factors of production. This is directly analogous to a contrast between the category of action, in general, and routine behavior by beings that lack the capacity to act.

Consider now the second image that Mises mentions in the paragraph – that of the solitary actor. He writes that action is always speculation even in the case of the imaginary isolated actor. My interpretation is that Mises's aim here is to convey the message that the entrepreneur concept embodies the uncertainty property of distinctly human action. It is worth referring back to where he elucidates the uncertainty property with respect to action in general. He does this very early in the treatise. In that discussion he contrasts speculating with two other modes of dealing with the future – gambling and engineering (*ibid*.: 112). In the social world,

> man is faced with the fact that there are fellow men acting on their own behalf as he himself acts. The necessity to adjust his actions to other people's actions makes him a speculator for whom success and failure depend on his greater or lesser ability to understand the future. Every action is speculation (*ibid*.: 113).

In light of this discussion, I interpret Mises's statement that every actor is a speculator to mean that, within the context of market interaction, every actor engages in the intersubjective understanding of others' actions – putting herself in their shoes. Uncertainty derives from the difficulty of predicting how others will act.

Uncertainty (and uncertainty-bearing), of course, is not the only property of action embodied in the entrepreneur role (category). The entrepreneur role also embodies the properties of appraisement and undertaking (see Part 1). The solitary actor, too, must engage in the analogous action of determining which actions to take and then causing goods to be produced. It is also noteworthy that by embodying the property of uncertainty in the entrepreneur role, one also embodies the property of time.

Regarding the image of a "real and living" economy, Mises wants to stress to the reader that every actor is always an entrepreneur and speculator. In my terms, everyone acts in the entrepreneur role. This idea presumably reminds the reader that "category of action" means a property that every being who is relevant to economics possesses.[18]

Although I believe that the goal of this paragraph is to elucidate the entrepreneur category, I do not think that Mises helped the reader understand that category very well. One reason is that the paragraph completely neglects two essential properties of that category: appraisement and undertaking. Moreover, it does not try to integrate this catallactic category with the complementary categories: consuming and supplying factors. Mises apparently does not regard presenting a full outline of the entrepreneur category as important at this stage of his discussion.[19] He also does not

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[18]Recall that minor family members and those who lack "vital energy" are excluded (*ibid*.: 252, 490).

[19]In later discussion, he seems to include in the entrepreneur category "promoters, speculators, and dealers in future and arbitrage." The inclusion of these different aspects of the entrepreneur role is necessary in order to deduce that there is a tendency toward the final state of rest, which I describe below.

see fit to point out this incompleteness and/or to provide the reader with a hint about how he plans to complete the definition of the entrepreneur role. It is especially troubling that he writes nothing about the use of means to meet ends that are time-specific. In other words, he says nothing about time preference. For these reasons, I see this paragraph as a deficient introduction.

The Entrepreneur Function

Mises's reference to the fact that everyone is an entrepreneur, provides an excellent transition to the concept of the entrepreneur function. In the several paragraphs that follow, he proceeds to give the examples of the financier (capitalist), landowner, and laborer. He concludes in each case that this class is also an entrepreneur. One part of this transition consists specifically of trying "to think the imaginary construction of a *pure entrepreneur* to its ultimate logical consequences" (*ibid*.: 253). Although this is his first mention of the pure entrepreneur, one reckons from the context that such an entrepreneur appraises, undertakes, and bears uncertainty yet is penniless. Since a penniless individual cannot bear uncertainty, Mises deduces, the "capitalists who have lent him the funds" (*ibid*.) must also be entrepreneurs and speculators. He does not define a capitalist in this discussion but one is left with the impression that this is a lender of money. The culmination of this reasoning is the imaginary construction of the *functional distribution*:

> In the context of economic theory the meaning of the terms concerned is this: 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 originary interest; the workers earn wages. In this sense we elaborate the imaginary construction of *functional distribution* as different from the actual historical distribution (*ibid*.: 254).

This is the end of Mises's discussion of the entrepreneur category and function in chapter 14. The ending is abrupt. What is most disturbing is the use of the term "originary interest." This is bound to surprise the ordinary reader, since Mises has not yet defined the term. The conscientious reader must realize that before she can fully comprehend Mises's concepts of the entrepreneur and profit, she must learn what Mises means by originary interest. Even a scholar of early neoclassical economics is likely to be puzzled. The functional distribution seems modeled on the theory of value described by Frank Fetter (1905: 412-20). Fetter, however, has not yet been mentioned in the treatise. Nor did Fetter use the term "originary interest."[20]778

I discuss originary interest in the next section in order to complete the task that Mises left unfinished. Before doing this, however, I must present the idea that competition among entrepreneurs pushes the price of each good toward its final price.

The Entrepreneur, Competition, and the Tendency Toward a Final State of Rest

The final state of rest is an imaginary construction in which the price of each good and factor of production equals its "final price." Mises makes his first definition of a final price without referring to entrepreneurs because he has not yet begun his definition of the entrepreneur category or function. The market, he writes, "at every instant is moving toward a final state of rest." Although "[e]very later new instant can create new facts altering this final state of rest...the market is always disquieted

[20]Although the term "originary interest" had been used by Bohm Bawerk, Mises's derivation and, ultimately, his meaning seems to have been totally new. I have not studied Bohm's works in depth. One can find the term, albeit not with the precise meaning that Mises ultimately assigns (see below), in the 1903 supplement to *Capital and Interest* (1903: 6). The term does not appear in William Smart's translation of the earlier volumes, however (1890 [1970]).

by a striving after a definite final state of rest" (Mises 1966: 245). In this imaginary state of rest, the final prices of each good prevail.

Later, he writes that the "concept of final prices [and, therefore, the final state of rest] is merely a mental tool for the grasp of...[the problem of] the emergence of profit and loss" (*ibid*.: 332).[21] Since he has defined profit and loss as the income of the entrepreneur function (*ibid*.: 254), it must also be a tool for helping to understand the entrepreneur concept. Consider how he uses this tool to help describe market interaction.

The "operation of [the] market," he writes, "is actuated and kept in motion by the exertion of the promoting entrepreneurs, eager to profit from differences in the market prices of the factors of production and the expected prices of the products" (*ibid*.: 334).

> The entrepreneurs, eager to earn profits, appear as bidders at an auction, as it were, in which the owners of the factors of production put up for sale land, capital goods, and labor. The entrepreneurs are eager to outdo one another by bidding higher prices than their rivals. Their offers are limited on the one hand by their anticipation of future prices of the products and on the other hand by the necessity to snatch the factors of production away from the hands of other entrepreneurs competing with them (*ibid*.: 335).

The final state of rest is the mental tool that enables the economist to show the effects of the entrepreneur role's functioning under different conditions. He also uses the final state of rest as a tool for organizing his theory of the trade cycle, as I show in the next subsection.

It is important to realize that Mises's final state of rest is not merely a mental tool. It is a deduction about what would happen under certain assumptions.[22] In his early treatment of this idea (*ibid*.: 245-

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[21] He writes the same thing about the evenly rotating economy at *ibid*.: 248, except that in this earlier case he includes the term "entrepreneurship" with that of "profit and loss." Thus, he seems to use different names to refer to an imaginary construction with the same use.

[22] I discuss this point further in Appendix 2.

8), he does not describe these assumptions. Indeed, he never does directly treat the final state of rest as a deduction based on assumptions. However, he does reveal the assumptions he is making to the attentive reader in the context of a criticism of other writers. He writes that the

> concatenation of the market is an outcome of the activities of *entrepreneurs, promoters, speculators, and dealers in futures and in arbitrage*. It has been asserted that catallactics is based on the assumption – contrary to reality – that all parties are provided with perfect knowledge concerning the market data and are therefore in a position to take best advantage of the most favorable opportunities for buying and selling...[S]ome economists really believed that such an assumption is implied in the theory of prices. These authors...erred in being unaware of the fact that they themselves did not resort to such an assumption in their own treatment of prices (*ibid*.: 327-8, italics added).

What Mises is saying here is that the final state of rest can be deduced from the assumptions that there is no change in the data and that entrepreneurs, promoters, speculators, dealers in futures, and arbitragers are present.[23]

More succinctly, the deduction requires the assumption of competing individuals acting in the entrepreneur role.

Having presented both my own and Mises's introduction to the entrepreneur, I can now elaborate on the three difficulties that must be overcome before one can understand the entrepreneur role.

[23] In his discussion of these "activities," Mises demonstrates the same looseness of terminology that he shows in his treatment of the entrepreneur role. In addition to referring to the four personages, or ideal types, described here "entrepreneurs, promoters, speculators, and dealers in futures and in arbitrage," he also uses "promoters, speculators, and entrepreneurs" (*ibid*.: 336), "enterprising men, the promoters and speculators" (*ibid*.: 355), and even speculators (*ibid*.: 329). I discuss Mises's looseness in terminology in referring to the entrepreneur role below.

First Difficulty: The Three Fundamental Roles and Originary Interest

Mises wrote about time preference and originary interest in his two successive chapters on time and interest (chapters 18 and 19). He applied the theorems he derived in those chapters in his chapter 20 on the trade cycle. I will argue in this subsection that the concept of originary interest was unnecessary and that it added to the difficulty of comprehending the entrepreneur role. That it was unnecessary can be shown by focusing on its use in the trade cycle chapter. I will argue in this subsection that his revised theory of the trade cycle can be fully understood without this concept. [24] I begin by reviewing the role played by originary interest in his trade cycle theory.

Originary Interest and Trade Cycle Theory

Mises begins his trade cycle theory with definitions. The first is the "gross market rate of interest" on loans. He writes that this rate differs from the "net rate of interest" on loans. The gross rate includes (1) an *entrepreneurial* component and (2) a *price premium* component (*ibid*.: 539-45). The net rate is found by conceptually subtracting these two components of the gross rate. He writes first about the entrepreneurial component. His main concern is with uncertainty. However, he also seems concerned with factors of production used to make the exchange since he writes that "[t]he

[24] I should note the difference between the theory of the trade cycle that Mises presented in 1912 and that of the treatise. In the earlier theory, he employed the Wicksellian notion of a natural rate of interest. In his treatise, he aimed to provide a praxeological foundation for a similar theory by tying the concept of interest to the human action property of time preference. To this end, he first elucidated the methodological issues related to employing the imaginary construction of a final state of rest that contains a final rate of interest. More specifically, he showed economists how to trace theorems that require the use of a final rate of interest back to the properties of action. Economists, including some of the closest followers of Mises, have erred as a result of their failure to recognize Mises's mandate of tracing back all economic pheomena to action. His followers have also failed to recognize another element he added to the later trade cycle theory – consumer sovereignty.

entrepreneurial component included in the creditor's gross proceeds is determined by all those factors which are operative in every entrepreneurial venture (*ibid*.: 540). That is, he also seems concerned with administrative costs.

He follows his discussion of the entrepreneurial component with one on the price premium component (*ibid*.: 541-5). The price premium component refers to the additional interest that lenders demand because (or if) they expect purchasing power, in general, to be lower when they are repaid than when they lend. The loan market that he seems to have in mind is that in which consumer-savers receive interest that is ultimately paid by producing entrepreneurs.

Following the price premium section, he turns his attention to the loan market. This section is very important to my analysis. Here he writes about the gross rate of interest guiding the "businessman."

> [The gross market rate of interest] shows him how far he can go in withholding factors of production from employment for want-satisfaction in nearer periods of the future and in dedicating them to want-satisfaction in remoter periods. It shows him what period of production conforms in every concrete case to the difference which the public makes in the ratio of valuation between present goods and future goods. It prevents him from embarking upon projects the execution of which would not agree with the limited amount of capital goods provided by the saving of the public (*ibid*.: 547).

By businessman, he means the entrepreneur as producer and guarantor of loans. He is saying that the gross market interest rate guides the "entrepreneurs and capitalists." Yet he also wants to keep the uncertainty-bearing properties of action separate from the time preference property. This is precisely why it is appropriate to use the entrepreneur role. The entrepreneur role represents both the appraisement and the undertaking of Mises's penniless entrepreneur and the uncertainty-bearing associated with fully guaranteeing that a loan made by the saving financier is repaid. The entrepreneur role adjusts production and his time horizon for production to the time-related consumer demands for goods. This guidance occurs, asserts Mises, because there is an "inherent tendency of the *net* rates of interest included in [the] gross rates [on loans in all sectors of the loan market] toward the final state of originary interest" (*ibid*.: 546). The "final state" refers to the final rate of interest in the final state of rest, which I discussed earlier.

What he has in mind is this. If an individual in the entrepreneur role perceives that he can earn a profit by borrowing to finance a production project of a given length that begins at a specific time, he does so. His bidding for funds causes the gross rate for that length and beginning at that time to rise higher than otherwise. If the entrepreneur role perceives that he will earn a loss, he refrains from bidding and the rate is unaffected. He thus adjusts his actions, in light of his appraisement of the factors of production to be used in the projects of different lengths, to the existing gross rate. This gross rate has been established by other individuals acting in the entrepreneur role – i.e., the entrepreneurs, promoters, speculators, and dealers in futures and arbitrage. At the same time, his adjustment can change the rate away from what it otherwise would have been, thereby affecting the adjustment decisions of the other entrepreneurs. Thus the gross rate of interest comes to reflect the appraisals and adjustments of all of the entrepreneurs. The collective of entrepreneur bidding causes the rate to rise or fall in each market, depending on the appraisals.

The net rate is always tending toward the final rate of interest in each market. Changes in the data, however, keep changing the final rate so that the net rate and gross rate in any future real economy is determined by both the tendency toward the final rate at one time and the subsequent adjustments by entrepreneurs to the change in the data at later times.

Given the conditions of a pure market economy and the absence of monopoly, the tendency toward the final net rate of interest is driven ultimately by consumers who possess preferences for goods and time preference. The entrepreneurs' bidding and adjustments conform to the theorem of consumer sovereignty. The tendency toward a final state of rest in this case is an extension of the theorem of consumer sovereignty (*ibid*.: 332-4) to the satisfaction of wants through time.[25]

Under normal conditions, entrepreneur calculations cause the net rate to tend to equal the final rate. Under certain conditions, however, an

> increase or decrease in the supply of money (in the broader sense) can increase or decrease the supply of money offered on the loan market and thereby lower or raise the gross market rate of interest although no change in the rate of *originary interest* has taken place. If this happens, the market rate deviates from the height which the state of *originary interest* and the supply of capital goods available for production would require. Then the market rate of interest fails to fulfill the function it plays in guiding entrepreneurial decisions. It frustrates the entrepreneur's calculation and diverts his actions from those lines in which they would in the best possible way satisfy the most urgent needs of the consumers (*ibid*.: 547, italics added).

The point that I want to emphasize in this section is that the same idea can be expressed without using the term "originary interest." I do so here with a broad brush. The entrepreneur role uses the gross market rate of interest as a signal of the time preferences of consumers. She uses this signal, in combination with her beliefs about the revenues she can earn from production projects of different lengths, to appraise the various factors of production. However, a change in the quantity of money can lead to actions that, under certain circumstances, cause the gross market rate of interest to mislead the entrepreneur role. The entrepreneurs mis-appraise the factors of production and their bidding for funds causes a tendency toward a net rate that is not the final rate. The gross rate "misleads" them because, unbeknownst to them, it reflects not only consumer time preference and the bidding of the other entrepreneurs but also the money creator's additional supply of loanable funds (and possibly a price premium). As a result, the entrepreneurs adjust to the wrong gross market

[25]See Part Three for a more complete discussion of these theorems.

rate. The result is movement away from the final state of rest. In this event, consumer sovereignty will not prevail.

The Capitalist and Capital Goods

The attentive reader will have recognized that Mises seems to use the term "capitalist" in two different ways. The first is as a lender. In his attempt to define the pure entrepreneur, he introduces the capitalist as a lender to the penniless entrepreneur. The capitalist lender, he says, must also be an entrepreneur (*ibid.*: 253). He uses the same concept of the capitalist in his theory of the loan market (*ibid.*: 539). Second, he refers to the receivers of originary interest in the imaginary construction of the functional distribution as"capitalists and landowners" (*ibid.*: 254). This originary interest seems to be a rental return to the owners of the capital goods and land.[26]

In what ways are these two definitions different? Is Mises referring to the same role from different points of view? In my interpretation, there is only one way to incorporate both roles in a coherent system. It is to build an image in which the capitalist as owner of capital goods is embodied in the same role as the capitalist as lender. This role also incorporates the *landowner* under the title of capitalist since, from the entrepreneur point of view, there is no difference between capital and

[26]The latter definition serves Mises in another way, of course. The idea that capital goods and land are owned by the factor-supplier role, and not by the entrepreneur role, is an essential part of the theorem of consumer sovereignty because it is a means to distinguish monopoly gain (to the capitalists and landowners) from profit and loss to the entrepreneurs. This theorem is the basis of his value-free economics.

land.[27] Such an image can be built by conceiving of a pure market economy that contains only two roles: the household role and the entrepreneur role. Mises did not consider such a household role; so my doing so is a deviation from Mises's presentation. I believe that an image of a pure market economy with these two roles is necessary in order to sort out the different markets that enable interest to be earned. I now proceed to describe such an image.

An Image of Interaction Between Households and Entrepreneurs

To show that originary interest is unnecessary, I build an image that draws inspiration from Mises's functional distribution, as quoted above. The only hope an economist has of comprehending market interaction is to divide the (inter)actors into roles that perform functions. Mises recognized this when he wrote of the functional distribution. However, the functional distribution represents only the roles associated with earning income from production. I want to add a role that represents the expression of preferences, including time preference and that receives satisfaction from consuming the goods that the entrepreneur role causes to be produced. Thus, my image contains four roles: (1) the consumer-saver, (2) the supplier of material factors of production (capital goods and land), (3) the supplier of work, and (4) the entrepreneur.

Mises's derivation of market economy theorems employs an economy that contains these four roles. But he did not pause to describe them in detail. I do so here. The goal of being able to trace

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[27]The absence of a difference between capital and land reflects the view that the Austrian theory of value and cost distinguishes between the factors of production only from the entrepreneur point of view. "The law controlling the determination of the prices of the factors of production is the same with all classes and specimens of these factors" (*ibid.*: 636). See below for Mises's definition of capital goods.

all economic phenomena back to the properties of action leads me to differentiate these roles according to whether they are *passive* and *active*. (Mises made the same classification implicitly, although he did not use these terms.) I classify the entrepreneur as an active role and the others as *passive* roles. The consumer-saver role passively selects, in accord with its preferences, among the consumer goods-buying options presented by the entrepreneur role. These selections indicate the consumer role's preferences for the different goods. The role indicates its time preferences with its saving. It selects in accord with its assumed time preference from among the interest-yielding packages offered by the entrepreneur role. It chooses how much to save, how to save, when to save, and for how long on the basis of its time preference. The material factor supplier role embodies the economic properties of passively supplying these types of factors to the entrepreneur role in return for interest income. The worker role passively supplies work for a wage. The passive roles do not bargain over interest rates. Their selections are mechanical, as if being made according to a maximizing algorithm. The entrepreneur role embodies the three properties of entrepreneurship. It identifies factors and compares costs of employing factors for the production of different consumer goods (it appraises), it directs the factors of production in order to cause consumer goods to be produced (it undertakes), and it bears uncertainty. It earns profit or loss. The height of prices and interest rates are determined through the bidding of the active individuals in the entrepreneur role.

Saving can occur in two ways. First, a consumer-saver can save money for various periods of time and beginning at various times. Second the supplier of material factors of production can acquire or capital goods or retain ownership of capital goods that he already owns. To help the reader understand the second way of saving more fully, I discuss the idea that land is a type of capital and, therefore, that owning land is a form of saving. The landowner rents out her land to entrepreneurs, just as a machine owner rents out his machine. The rental income it receives is a return on its previous land-purchases – i.e., on its previous saving. Alternatively, one may view the rental income as a return that is earned due to the decision not to sell off land in order to get money to buy more consumer goods. In either case, the earnings are a reward for saving. In everyday life, many owners of land act as entrepreneurs by using the land to provide consumption services directly, as in the case of living space and flower gardens. They also act as entrepreneurs when they improve the land's quality by employing other factors of production and they guarantee loans. However, in an imaginary construction in which the entrepreneur role is separated from the other roles, the passive landowner must rent out the land to the highest bidding entrepreneur before consumer or producer goods services or improvements can occur.

In attributing the provision of all land-based consumer goods and capital goods- producing services to the entrepreneur role, I am making land equivalent to a durable capital good. This brings me to my second point. Many machines, tools, buildings, etc. in everyday life are rented out; the producers who rent them use them to help produce consumer goods and other capital goods. But capital goods seem different from land, at least at first glance. They may be less durable or they may be completely used up in a production process or in satisfying consumer wants. (Yet minerals, farm animals, and ocean whales are instances of land that are similar.) Moreover, possibilities exist to extend the durability of some capital goods through what is ordinary called "maintenance." (Yet soil fertilization has a similar affects on some types of land.) Since land from the entrepreneur view is equivalent to capital goods, I disregard it as a distinct factor in subsequent discussion.

I wish to assume for the moment that all capital goods – and I treat land as a capital good – are owned by the household role and available in markets to be purchased, rented out or serviced by the entrepreneur role. By "serviced by" I am referring to entrepreneur actions that are intended to increase their market value to the entrepreneur role and thus the rental income that the capital goods owner earns by saving. Examples are machine maintenance, irrigation ditches, and other quality improvements. By responding to entrepreneur offers to increase market value, a capital goods owner can save. Then by renting out the higher-valued capital good, wh can earn additional revenue, just as she can by renting out durable capital goods and by purchasing capital goods that increase her rental income in the future.[28]

The existence of these different types of capital goods makes the representation of the factor of production more difficult than necessary. The same theorems can be derived more simply by assuming that all consumer good are completely or infinitely durable. For the purpose of isolating time preference, the simplest assumption is the latter.[29] This implies a production process that contains no factors that are used up in the production of consumer goods. Also, no maintenance of capital goods is necessary, although entrepreneur actions may raise the price of various capital goods by improving their productivity in producing various consumer goods that become available at

[28]For example, the purchase of and subsequent investment in swamp draining may yield a high future rental income when the land is rented out to a farmer.

[29]I will have to relax this assumption when I analyze Mises's treatment of capital goods under the conditions of the evenly rotating economy. I am also disregarding the material factors that are not replaceable at a reasonable cost. This assumption does not depart too much from reality because, under modern conditions, it is practically always possible to substitute for specialized factors. In any case, the assumption does not affect the conclusions about time preference that I reach in this discussion.

various times. The payment received from the entrepreneur role for the use of the assumed infinitely durable material factors, consists of what, in common parlance, is called rent.[30] The entrepreneur role rents the material factors from their owners for a specific period of time.

I briefly consider the other classical factor of production, labor. The workers who supply labor are treated differently from the suppliers of material factors because of the special problems faced by the entrepreneur role in controlling the hired work. The claims of an employer who acquires the legal right to control a worker's work differ from those of an employer of a material factor. In addition, whereas the owner of a material factor can sell the legal rights to its use completely to another person, the owner of work cannot. These differences are not relevant to originary interest or time preference. On the other hand, one must recognize that labor, as used by the classical economists, can be divided into two parts: (1) bare labor, consisting of the expenditure of energy and time, and (2) human capital. I assume that the human capital is like the other capital goods. It is infinitely durable. It is purchased and owned by the laborer, produced by entrepreneurs, and capable of market value increases through the production actions of entrepreneurs. Thus the income received by a worker includes a part that is comparable to the "rent" received by the owner of a material factor. Just as the material factor is the embodiment of past production activities, so is part of work the embodiment of past human capital production activities. These assumptions are also not relevant to the theorems concerning how time preference is accounted for in the imaginary construction I am building.

[30]The assumption that a factor is infinitely durable is not meant to imply that its rental price is always the same or even that the item in question will always be a factor of production. Entrepreneur-perceived changes in market conditions may change the bids for it and even render a factor obsolete.

The entrepreneur role represents both the appraisement and undertaking of Mises's pure, or penniless, entrepreneur and the uncertainty-bearing associated with fully guaranteeing that a loan made by the saving financier is repaid. This role is active.
The household role represents a combination of the two passive factor-supplier roles (worker and capital goods supplier) and the passive role of the consumer-saver.

The roles of the consumer-saver and the two types of factor-suppliers – capital goods and labor – are obviously related through income. The former uses the income received by the latter. I believe that an exposition of Mises's economic theorems relating to time and of originary interest is most easily achieved by means of a separate term to represent a combination of these roles. Thus I use the term *household* to represent this combination. I specify that the household role owns and supplies all of the factors of production. It also disposes of the income it earns in accord with its preferences for consumer goods and its time preference. As a combination of passive roles, the household is also passive.

The passive household stands in contrast to the active entrepreneur role. The latter sets the prices of the consumer goods and factors of production and interest rates on loans. From the standpoint of consumer sovereignty, the interaction of differently talented individuals acting in this role leads to the pricing of consumer goods, factors of production, and loans, enabling the household role to benefit as a consumer-saver.[31]

Markets in Which Time Preference and Originary Interest Are Relevant

In my two-role image, the household owns all capital goods. As a combination of passive roles, it is also passive. It selects the best rental prices offered by competing entrepreneurs for the use of

[31]The entrepreneur role also exercises its imagination, creativity, and inventiveness in identifying new means of production and new factors of production. The other roles do not possess these characteristics. However, these characteristics are not relevant to the discussion here.

the capital goods. And it selects the highest wage for its bare labor energy. As an owner of capital goods, a household may be in a position to earn a monopoly gain. However, this is not important in deriving theorem from the property of time preference or in comprehending Mises uses of the "originary interest" concept.

The entrepreneurs produce capital goods.[32] They act according to the theorem of consumer sovereignty in producing more or fewer capital goods of a given type and increasing market value.

I now turn to a discussion of markets in which the entrepreneurs interface with households as savers. The form of entrepreneur action depends on (a) the types of such markets that I assume exist and (b) when the owners of the factors are paid. I shall refer to three classes of such markets: (1) the market for capital goods in which entrepreneurs rent capital goods from households (*ibid*.: 531), (2) the inter-household market for loans (Mises calls these consumption loans – *ibid*.: 540), and (3) the market for loans from households to producing entrepreneurs (and, as I will show, ultimately back to other households) (*ibid*.). There is no better way in a praxeology-based economics to introduce these markets than by describing how time preference gets expressed in the action of a solitary actor.

Consider the time preference situation faced by a hypothetical Crusoe. One could imagine a Crusoe who had just been washed up on the island starving and without shelter. However, I wish to focus on a Crusoe who has already adjusted to his environment. I assume that he has already produced

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[32]In the case of land, they produce it by discovering uses of otherwise "natural" resources and space that were not previously recognized.

capital goods.[33] I can say, in this situation, that Crusoe has only one way to save more than otherwise – to produce more capital goods than otherwise. To do so necessarily entails a sacrifice of consumer goods in the nearer future. It follows that his choice to produce capital goods depends on his time preference. If his time preference changes, other things equal, his production of capital goods will change. For him, saving and capital goods production are synonymous.

The Crusoe example is a good introduction because it alerts the economist to the fact that a change in household saving, other things equal, puts into motion the entrepreneur incentives to produce more or fewer capital goods than otherwise. The incentive is due to a change in profit expectations. Any given household can increase its saving by lending more in the loan market or by buying additional capital goods. Other things equal, such behavior makes it more profitable than otherwise for entrepreneurs to produce more capital goods. Similarly, if households as a whole reduced their savings, entrepreneurs would face incentives to not produce new capital goods and to allow existing capital goods to fall in market value as conditions change.

I now proceed to consider the three markets in which interest plays a part. Because of the importance of the market in which consumer-savers lend to producing entrepreneurs, I do so in two stages. In the first, I assume that such a market does not exist. Making this assumption yields an

[33] At this stage, it is appropriate to refer to Mises's notion of capital goods as intermediary stations in the effort by Crusoe or consumers in a market economy to attain more consumer goods in the future than otherwise. The purpose for such a concept is obvious. There are numerous and varied goods and services that actors produce and/or use as intermediary stations. Durable consumer goods also qualify as capital goods, or intermediary stations, under this designation. My imaginary construction is designed to capture this generalized form of the concept of capital goods.

image of an economy that contains only the other two markets. In the second stage I add the third market.

If there is no market for loans between households and producing entrepreneurs, the entrepreneurs have no means of financing advance payments for the factors of production. Because of this, the only way the (presumed penniless) entrepreneurs could acquire capital goods and other factors of production is by making advance contracts, which they promise to pay off after they sell the products they produce. In this circumstance, the owners of existing capital goods would rent them out for a period of time and then receive payment at the end of the production period.[34] In this case, a household that wanted to increase saving would buy additional capital goods. A household could dis-save by selling some of its capital goods. The money paid in rent by the producing entrepreneurs would be regarded by a household as earnings on the stock of capital goods it owns. It is a return on the household's saving and it reflects the households' time preferences.

The second means of saving consists of inter-household lending. This lending is arranged by entrepreneurs in the loan market. If the time preference of one household falls, while that of other households remains the same, the rate of interest in this loan market would fall.[35]

To summarize, in this two-market model, a household can save (dis-save) either by buying (selling) capital goods on which it earns future rental income or by inter-household lending, for which it earns

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[34]Since entrepreneurs must bear all of the uncertainty, some out-of-model assumption must be made about how this occurs. One such assumption is that someone posts guaranty. To the lender, such guaranty would constitute a kind of insurance. I discuss this below. For the moment, however, guaranty can be safely disregarded because the focus is on the "pure" return earned by the owners of the capital goods.

[35]As before, some provision must be made for the uncertainty to be borne. Again, however, this fact is not relevant because the return on saving is my focus.

market interest. The household earnings per amount saved during a given period tend toward a final rate. Household selection of the market with the highest rate implies a tendency for rate differences in the two markets to disappear.[36] This final rate would reflect the household's time preference.

In referring to the rental income of capital goods – what Mises might have called the net interest income – it is essential to specify that the rental income is not received until after the period of provision has passed. The period of provision refers to the time between when the production plan begins and when the produced qcgs are consumed (*ibid*.: 480-1). To assume otherwise is tantamount to conceiving of a market economy in which individuals can enjoy the benefits of consumer goods before they are produced. Such an assumption would break the bond between economics and praxeology. Just as Crusoe cannot enjoy goods before they are produced, the people under market economy conditions cannot do so either.

When Mises wrote about originary interest in an evenly rotating economy, he had something like this in mind. However, to fully understand his notion of originary interest, it is necessary to add the third market – the loan market between households and producing entrepreneurs. For convenience and to distinguish this market from the inter-household loan market, I call this the *household-producer-household loan market*. The reader might expect that I would call it a household-producer loan market. This is the way most economists, including Mises, conceive it. However, this conception is incomplete. The desire to bind economics to praxeology (and, more broadly, to avoid error in one's reasoning) leads me to recognize that advance payments have the same function as loans to the factor owners. Thus, a complete picture of the market in which households lend to

[36] Arbitragers may also act to facilitate a tendency toward the same final rate.

producer entrepreneurs in order to finance production must include the subsequent market in which the producer entrepreneurs lend to household suppliers of factors by paying them in advance.[37]

Through the actions of loan entrepreneurs, the rate of interest on this loan, net of the entrepreneurial component, tends to equal the other two interest rates. In other words, the final rates are equal. If this were not so, there would be an incentive for maximizing households to shift from saving that yields a lower rate to one that yields a higher rate.

A complete understanding of Mises's use of the concept of originary interest requires the reader to recognize its manifestation in three different markets: the market for capital goods rental, the inter-household loan market, and the household-producer-household loan market. In addition if one assumes that capital goods are not completely durable, the household's election to buy capital goods and to replace capital goods that are used up during the production period would also be made on the basis of time preference. In Mises's terminology, the rent on capital goods and interest payments in all of these markets would reflect originary interest. There would be a tendency in each market for the net rental income rate and net loan market interest to equal the final price or final interest. I must presume that when Mises said that the net rate of interest in loans tends toward the originary interest rate, he was thinking of all three of these rates and of their connexity via the mental tool of the tendency toward a final price.

[37]Because factor owners are paid in advance, the income received by a household from allowing its capital goods to be used in production would contain two different components. The first positive component would be the rental income that I have already discussed. The second component – which is negative – is the discount the household pays because it receives its rental income in advance of the end of the period of provision.

Is Originary Interest Necessary?

I have said that the interest rates in these three markets, if they are stripped of their entrepreneurial component, correspond to Mises's originary interest. I now review two of Mises's statements about originary interest. The first is in his theory of the trade cycle. In presenting his theory, he writes of the connexity among the loan markets (*ibid*.: 546). My interpretation is that he is referring to the various rates of interest in the three markets I have described.[38] When he uses the term "originary interest" in the statement that the net rate of interest tends toward the originary rate of interest, he is referring to the final rate in each of these markets. He means that the net rate tends toward the final rate. This final rate represents the time preferences of the households. It should be evident that if Mises's sole aim in employing the term "originary interest" was to show the relationship between the gross rate of interest and time preference, the term is superfluous.[39] Both the final rate of interest and the rate of originary interest can only be isolated in the imaginary construction of the evenly rotating economy (final state of rest). Under this condition, each represents time preference in the same way and to the same extent. Moreover, outside of this condition, neither is present. The concept

[38]In addition, he may be referring to the fact that different loans are for different lengths, of time and have different starting points. I take this for granted.

[39]Mises's use of the term seems to have less important aims, however, and it seems likely that he preferred the term "originary interest" to help him achieve these. Perhaps the most important was to relate his contribution to the subject to that of his admired predecessors and contemporaries. This is evidenced by his references to Bohm Bawerk, Fetter, F. A. Hayek, Schumpeter, and Lionel Robbins. Mises writes at the beginning of his chapter 19 that "[t]ime preference manifests itself in the phenomenon of originary interest" (*ibid*.: 524). With the possible exception of Fetter, these writers were, to various degrees, confused about how to employ the imaginary constructions of the evenly rotating economy and final state of rest in relation to time preference. Rather than describe the errors of each one separately on this ground, he may have taken the shortcut of framing their errors in terms of originary interest. The result, in my view, is a set of analyses that are bound to confuse all but the most knowledgeable and patient reader.

of a discount of future goods as against present goods is only a vague reference to time preference outside these conditions.

The second statement I review is that “the imaginary construction of the evenly rotating economy...made it possible to distinguish precisely between originary interest and entrepreneurial profit and loss” (*ibid*.: 537). The idea here is that owners of capital goods in the evenly rotating economy must be rewarded in order to induce them to replace the capital goods that are used up in the production of consumer goods. Otherwise, the goods produced during each period could not be the same, which is a requirement of the evenly rotating economy. It should be evident that the concept of originary interest is not necessary to communicate this. It is sufficient to note that both the demands for capital goods and the supplies of savings are manifestations of consumer-saver time preference.[40]

Mises’s unstated reason why it is important to distinguish the two incomes of profit and originary interest is that he intends to separate (1) the passive expression of time preference and preferences for goods from (2) the active entrepreneurship that is responsible for the production of the consumer goods that satisfy those preferences. He wants to relate the receipt of interest to the passive use of

[40]The importance in the treatise of representing a facsimile of time preference in the evenly rotating economy derives from its application in representing the three markets just described. When Mises writes about the evenly rotating economy enabling the economist to separate interest and profit, he is implying that he wants the reader to appreciate the entrepreneur role’s function of accounting for time preference in the theorem of consumer sovereignty. He is, in an important sense, completing his definition of the entrepreneur role. However, at the point where he “proves” that originary interest exists in the evenly rotating economy, his focus is on Schumpeter, who he says asserted that there is no interest in the evenly rotating economy (*ibid*.: 530-1). Mises writes that contrary to Schumpter, interest is necessary in the evenly rotating economy because, otherwise, there would be no motivation for the replacement of used-up capital goods. This is a distraction. The more correct argument is simply that economists want to build an evenly rotating economy in which time preference is simulated because they ultimately want to elucidate entrepreneurship and make theorems for conditions in which time preference is present.

money to buy consumer goods at different times but not to the active entrepreneur role that causes the consumer good to be produced. One can conceive of an animal or robot society that routinely saves and receives a return on that saving. No distinctly human action is entailed in the existence of interest as a ratio of future goods as against present goods.[41] It is different with the active appraisement, undertaking, and uncertainty-bearing and with the characteristics of imagination, creativity, and inventiveness. A robot or animal society with these properties or characteristics is impossible. Thus, my view is that when Mises writes that the functions in the functional distribution are nicely integrated, he has in mind differentiating between (1) the passive functions of selecting the highest interest income from the offers made by the entrepreneur role to capital goods owners and savers and (2) the distinctly human action entailed in determining which offers to make, directing production and bearing uncertainty.

My main point is that the concept of originary interest is not necessary in order to make this separation. It would have been more accurate and informative as well as more direct for Mises to have expressed himself in the following way. Since the payment made by the entrepreneur role to the owners of capital goods is, to the owners, a return on saving in different forms, it is appropriate to call it interest. Wages are the return to the mere supply of work energy (as opposed to human capital which also earns interest). Thus, to distinguish between interest, wages, and profit is a means of channeling all distinctly human action through the profit-making entrepreneur role. If Mises had pointed this out, I believe that he could have avoided much confusion.

[41]This is not to deny, of course, that time preference is itself a property of action.

I have shown that Mises's originary interest concept was superfluous, given his intentions to bind economics to praxeology and to develop theorems to facilitate the evaluation of interventionist arguments. This is significant because his means of communicating the full meaning of the entrepreneur role relies on the reader's ability to comprehend originary interest. Substituting the "final rate of interest," which is related to other final prices, would reduce the communication difficulty.

I believe that there is an even more important reason for Mises to have avoided the term "originary interest." I believe that it led him away from two characteristics of household property ownership in a real market economy that one must acknowledge in order to form an even richer understanding of the entrepreneur role. The first is the important fact that a property owner can use his property as guaranty for a loan. Using it as guaranty is very different from renting it out to a producer entrepreneur; and the kind of property that can be used as guaranty need not be a factor of production.[42] Mises considers this issue from a legal standpoint. He recognizes that enforceable contracts may reduce the creditor's exposure (*ibid*.: 540). However, he concludes that the "legal aspects" of such contracts need not be scrutinized in detail by economists in making theorems about the pure market economy. In fact, contract-enforcement and, more generally, the trustworthiness of individuals who promise relief in the event that a loan is not repaid (or that some other promise is not kept) helps to determine the extent of the division of labor. To exclude these elements from an economics in which the criterion used to evaluate interventionist arguments is the THRUI is shortsighted.

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[42] I am referring here to Mises's notion that capital goods are intermediary stations.

The importance of guaranty becomes evident when considering the precipitating event, in Mises's theory, for the trade cycle. A change in the quantity of money may affect the decisions of producing entrepreneurs not only via a change in the market rate of interest but also via a change in the amount of guaranty offered for loans. In any case, the guaranty is certainly affected when, during the downturn of a trade cycle, loans are not repaid. A theory of the trade cycle that does not include interaction based on the prices of the property used as guaranty must, in my view, be incomplete.[43]

The second characteristic of household property ownership that Mises disregarded is incentive divergence due to the joint and collective ownership of capital goods and the titles to, or liens on, them. When joint and collective ownership is entailed, such as it is in the corporation, the contracts or agreements that dictate the actions that, occur in the event of the non-payment of a loan necessarily make one role an *agent* an another a *principal* in a *principal-agent relationship*. The principal-agent relationship can also be affected by a change in the quantity of money.

It is not my intention here to fill the gaps in Mises's economics. I only want to note the potential for error resulting from the use of the "originary interest" concept.

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[43]The so-called financial meltdown of the late 2000s can be attributed directly to an overvaluation of such guaranty.

Second Difficulty: A Grammar That Emphasizes the Entrepreneur Role

Decision to Avoid Using the "Entrepreneur Role"

As I have pointed out, Mises did not use the term "entrepreneur role." Apparently in an effort to constantly remind readers that everyone acts as an entrepreneur, he used a number of other terms to refer to this role. For example, he writes that consumer sovereignty applies to "entrepreneurs, capitalists, and farmers," to "capitalists, entrepreneurs, and landowners" (*ibid*.: 270), to "owners of the material factors of production and the entrepreneurs" (*ibid*.: 272), and to the "entrepreneur in his entrepreneur capacity" (*ibid*.: 358). In his theory of the trade cycle, he uses the term "businessman," (*ibid*.: 547). The most common term is "entrepreneurs and capitalists" and "capitalists and entrepreneurs," as indicated by a word search of the treatise. In all of these cases he is referring to these individuals acting in the entrepreneur role, as I have defined it. Such a variety of terms obviously detracts from the use of the "entrepreneur concept" to capture all of the distinctly human action under market economy conditions. It thereby distracts the reader from the project of tracing all economic phenomena back to the properties of action. In my view, his failure to consistently use a single term like the entrepreneur role to describe market interaction was another obstacle that readers had to overcome to understand his economics.

Outcome-Centered Grammar

Another detraction is due to the fact that Mises often described market interaction in terms of its outcomes, such as prices and quantities. For example, at the start of chapter 14, he says that economics has always been concerned with "the analysis of the determination of money prices of goods and services exchanged on the market" (*ibid*.: 234). This description is perhaps understandable since he had not y et introduced the entrepreneur role. However, he continues to use the same type of description even after he introduces the entrepreneur role. It is true that such descriptions are interspersed with others which, to the alert and discriminating reader, would only be a nuisance. Nevertheless, one must ask why he foregoes an opportunity to reinforce the bond he aims to establish between economics and praxeology? The only sensible answer is that he implicitly makes heroic assumptions about his readers.

Mises would have better communicated with readers if he relied entirely on subject-centered grammar. He could have stated his goal of evaluating interventionist arguments based on the THRUI. To best achieve this goal, he could say, he must build the image of a role whose actions always expand the division of labor and, in so doing, always serve individuals' rightly understood interests. This is what he actually does. In the treatise, he defines this role as that of the entrepreneur in relation to the consumer role and proceeds to construct the theorem of consumer sovereignty. Then he expands the consumer role into a consumer-saver role in order to add time preference. Correspondingly, he expands the entrepreneur role and produces more complex theorems that are most simply and accurately expressed by referring to that role.

Third Difficulty: Entrepreneur as Promoter

I will only briefly mention the third difficulty. Immediately following his discussion of the entrepreneur function in the functional distribution, he writes that economics has always used the term “entrepreneur” in a different way – to refer to particular individuals

> who are especially eager to profit from adjusting production to the expected changes in conditions, those who have more initiative, more venturesomeness, and a quicker eye than the crowd, the pushing and promoting pioneers of economic improvement (*ibid*.: 254-5).

He calls these individuals “promoters” and notes that this notion, unlike the previous one, “cannot be defined with praxeological rigor” (*ibid*.: 255). He goes on to say that the “driving force of the market, the element tending toward unceasing innovation and improvement, is provided by the restlessness of the promoter and his eagerness to make profits as large as possible” (*ibid*.). Such statements must surely confuse readers. After all, one would presume that, by definition, the entrepreneur category, function or role is the driving force of the pure market economy.

Mises uses the promoter concept to describe competition and to derive what are best regarded as economic theorems relating to economic growth, the distribution of gains from technological advance and the selection of individuals to act in the entrepreneur role. Also, as shown above, he expands the class of the promoter to include speculators and dealers in future and arbitrage.” It is difficult for the reader to recognize the connection between these theorems, however, and the entrepreneur role. I describe the theorems in Part Five.

Mises's Contribution to the Theory of Value

I have been critical of Mises's presentation. The reader should not take this as a criticism of his economics. Quite the contrary. I believe that his work had the potential of making one of the most important contributions ever to economics and to public policy evaluation. The classical economists had paired the incomes of wages, rent, and interest respectively with three factors of production: labor, land, and capital. They regarded the most fundamental factor as labor and proceeded to develop a labor theory of value. The early neoclassicals succeeded in shifting the pairing from the respective factors of production to roles that perform functions. On the one hand, they shifted the source of value away from labor to the role of the consumer. They saw that the incomes earned by the owners of factors are derived from the marginal productivity of the particular factor in question. On the other hand, they developed the entrepreneur concept as an appraiser, undertaker and uncertainty-bearer.

Mises went further. First, he incorporated time preference into the neoclassical theory by identifying the means used by individuals to save. This transformed the idea of the marginal productivity of capital goods. It remained true that, from the entrepreneur view, a portion of the price of the product could be attributed to the marginal amount of a specific type of capital good used in its production. However, since capital goods are a means of saving, that portion of the final price that the entrepreneur attributes to the capital goods he employs had to equal the final rate of interest on household saving. Thus, rather than being an income to role of the entrepreneur as capital goods owner or landowner, interest became an income to the role of the household as saver. Thus, in Mises's economics, interest is reward for saving and the final rate of interest must be traced to time preference, not to the supplier of a capital good or the “marginal value product of capital.” Capital goods supply is not a property of action even though this action can be identified in the image of an isolated actor.

Second, he advanced the early neoclassical concept of the entrepreneur by showing how to employ it to bind economics to praxeology. In terms of economic theory proper, his work was different from that of Smith, Jevons, Menger, Walras and Clark. His contribution was to provide the epistemological basis for the new science created by these and similar writers. Had he been successful at communicating his ideas, such subjects as Keynesian macroeconomics, mathematical economics and theoretical welfare economics would not have achieved the credence they did. In addition, econometrics would have been driven by a totally different purpose – that of testing whether the assumptions of economic theorems match observable reality. Accompanying such success might have been a set of policy prescriptions that are based on economic theorems rather than on the scientistic interpretation of the past or by an ideology that is uninformed by the fundamental economic theorems.

A benefit of this new theory of value was a clearer understanding of monopoly. By associating the supply of material factors with ownership, Mises paved the way for a theory of monopoly that was dissociated from the role of the entrepreneur role. In my view, the recognition of the entrepreneur role as a contributor to value that complements the consumer role was Mises’s most important and lasting contribution to economics. I hope that it will someday be appreciated.

3. THE ECONOMIC THEOREMS DERIVED FROM CONSUMER SOVEREIGNTY

Mises does not systematically identify economic theorems. This is one reason why students of Austrian economics have been unable to comprehend his economics. A goal of this part is to make up for this deficiency by reviewing Mises's statements about market interaction under pure market economy conditions and translating them into theorems. In other words, I aim to describe Mises's economic theorems. Most of these are derived from the theorem of consumer sovereignty. First, however, I must define a theorem. Since economics is a branch of praxeology, I begin with praxeological theorems.

Theorems in Praxeology and Economics

My understanding of Mises's economics is that it consists of a set, or system, of theorems. Mises does not actually say this and he certainly does not present his economics by referring to a system of theorems. My interpretation is based on what I believe he does in the treatise. If I had to defend my proposition, I would partly refer to the following statement, which he makes after he completes his presentation of the elucidation of interaction under pure market economy conditions. It is the introductory statement in his chapter 23 entitled "The Data of the Market." The title of the introductory section in which the statement appears is "The Theory and the Data."

> Catallactics, the theory of the market economy, is not a *system of theorems* valid only under ideal and unrealizable conditions and applicable to reality merely with essential restrictions and modifications. All the theorems of catallactics are rigidly and without any exception valid for all phenomena of the market economy, provided the particular conditions which they presuppose are present. It is, for instance, a simple question of fact whether there is direct or indirect exchange. But where there is indirect exchange, all the general laws of the theory of indirect exchange are valid with regard to the acts of exchange and the media of exchange. As has been pointed out, praxeological knowledge is precise or exact knowledge of reality. (*ibid*.: 646, italics added).

This negative statement seems to confirm that catallactics – that is, economics – is a system of theorems that is useful in evaluating interventionist arguments so long as the conditions assumed in the theorems correspond to reality. A skeptic, however, might point to the paucity of references to economic theorems. On this basis, she might claim that the "theorem" is less important to Mises's economics than I make it out to be. I would have to agree that Mises does not clearly identify economic theorems and that he does not often use this term. He uses the term "economic theorem" sparingly in his treatise. As a result, the theorems he actually identifies do not stand out. Even where he writes that such and such is an economic theorem, he does not actually derive the theorem from the properties of action and subsidiary assumptions. He thus does not confirm statements about how to build an economic theorem (see below). This looseness of his presentation is an obstacle to understanding Mises's economics. It runs a close second to his failure to define and use the term "entrepreneur role."

Nevertheless, in my defense, I can cite the numerous uses of the term "theorem" in Mises's chapter 2 entitled "The Epistemological Problems of the Sciences of Human Action." A "science of human action" refers to a branch of praxeology. The most developed branch, Mises writes, is economics (*ibid*.: 885). Thus, Mises intends the chapter to be about the epistemological problems relating to praxeology and to its branches. The purpose of this part is to justify the importance I attach to the "economic theorem" by showing how Mises treats this concept in the treatise. My emphasis is on his chapter 2.

What is a Praxeological Theorem?

Mises's first mention of a theorem is in a section entitled "The Formal and Aprioristic Character of Praxeology," he writes the following paragraph:

> Human knowledge is conditioned by the structure of the human mind. If it chooses human action as the subject matter of its inquiries, it cannot mean anything else than the categories of action which are proper to the human mind and are its projection into the external world of becoming and change. All the *theorems* of praxeology refer only to these categories of action and are valid only in the orbit of their operation (*ibid*.: 36, italics added).

This paragraph at first seems a puzzle. Literally it is about what happens if "human knowledge" choose to study human action. Obviously, the paragraph would be easier to understand if he referred to a distinctly human actor studying human action. To study human action, he means, is to study the categories of action. But what are the categories of action? Mises does not have a chapter or section of the treatise in which he identifies these.

The only way I know to find out what he means is to search the early chapters for the word "category" or some variation. The word does not appear until part five of his chapter 1, which is entitled "Acting Man." He uses the term in this section to refer to *causality* and to *cause and effect*.

> Man is in a position to act because he has the ability to discover causal relations which determine change and becoming in the universe. Acting requires and presupposes the category of causality. Only a man who sees the world in the light of causality is fitted to act. In this sense we may say that causality is a category of action. The category *means and ends* presupposes the category *cause and effect* (*ibid*.: 22).

In this passage he seems to identify two categories: (1) means and ends and (2) cause and effect (causality). In light of what he writes in his chapter 2, he apparently wants the reader to learn that a praxeological theorem may refer to means and ends and to causality.

Properties of Action

Does Mises use the term “categories of action” to refer to anything else? I believe that he does. However, before identifying the other ideas, I want to change the term. I believe that the term “category” is best used in the singular. So I will state the convention that I plan to use to describe these ideas. I use the term “category of action” to refer to the apriori assumption of distinctly human action. That is, to say that “human beings act” is a reference to the category of action. I use the term“properties of action” to refer to the implications of the category of action. The category of action, I will say, implies the existence of the two properties that Mises identifies in chapter 1: (1) means and ends and (2) cause and effect.

Using this convention, I set my task as that of searching the treatise for ideas that might qualify as a property of action. I begin with section 2 of chapter 1, where Mises discusses “The Prerequisites of Human Action.” In that section he identifies three prerequisites: (1) “felt uneasiness,” (2) an actor’s “image of a more satisfactory state,” and (3) “the expectation that purposeful behavior has the power to remove or at least to alleviate the felt uneasiness” (*ibid*.: 13-4). Here, then are three candidates for the title “properties of action” in spite of the fact that Mises does not use the term “category” to refer to them.

His next discussion of categories is in chapter 4, which is entitled “A First Analysis of the Category of Action.” The first section in the chapter is “Ends and Means.” In this section he writes that the words “goal” and “aim” are synonyms for “ends” (*ibid*.: 92). He also associates “means” with plans. The actor makes plans and, in so doing, comes to identify means of achieving ends. That means are limited is an implication of action (*ibid*.: 93). He goes on to distinguish consumers’ goods from producers' goods. The purpose of this distinction is to "provide a basis for the theory of value and prices of the factors of production" (*ibid*.: 94). Next he refers to the custom of saying that actors possess a scale of wants or values (*ibid*.: 95). However, "value" refers only to

> the importance that acting man attaches to ultimate ends. Only to ultimate ends is primary and original value assigned. Means are valued derivatively according to their serviceableness in contributing to the attainment of ultimate ends (*ibid*.: 96).

He goes on to define the "cost" as the value of a foregone satisfaction (*ibid*.: 97) and to define "profit" or "net yield." It is the "difference between the value of the price paid (the costs incurred) and that of the goal attained..." (*ibid*.: 97). If this is negative it is called a "loss."

Are there any candidates in this discussion for the title "properties of action?" One can answer "yes" if he regards a new term as a property. In this the making of plans, consumer goods, producer goods, value, cost, profit and loss are properties of action. Every action entails a comparison of values, a cost, and a profit or loss, the making of plans and a consideration of whether the outcome will be consumers' goods or producers' goods.

Following chapter 4 is chapter 5 with the simple title "Time." The chapter begins with a section entitled "Time as a Praxeological Factor." He begins the chapter by linking time with change. He notes that "change and time are inseparably linked together (*ibid*.: 99). Since the goal of action is change, time is implied by action. Thus, I conclude that time can be regarded as a property of action. The concepts of future and past are also implied by action and might also be regarded as properties of action. In addition, he discusses the "economization of time," by which he means the arrangement, in the planning actor's mind, of satisfactions he expects according to when they will be enjoyed (*ibid*.: 101-2). This suggests that time preference is a property of action.

Mises last chapter in the series, chapter 6, is entitled "Uncertainty." He points out that because human actors do not know the future, they must face uncertainty of two types: uncertainty about natural phenomena and uncertainty about acts of choice (*ibid*.: 104). Uncertainty implies probability. Mises calls the probability related to acts of choice *case probability*: "Case probability means: We know, with regard to a particular event, some of the factors which determine its outcome; but there are other determining factors about which we know nothing" (*ibid*.: 110). When dealing with case probability, an actor employs a mode of reasoning that Mises calls the "specific understanding of the historical sciences" (*ibid*.: 112, 118). It entails attempting to identify other actors' motives.

> In the real world acting man is faced with the fact that there are fellow men acting on their own behalf as he himself acts. The necessity to adjust his actions to other people's actions makes him a speculator for whom success and failure depend on his greater or lesser ability to understand the future. Every action is speculation (*ibid*.: 113).

It is a truism that the isolated actor does not face this kind of uncertainty. She may face uncertainty about her own choices. She may not know exactly what her ends and means will be in the future. Mises does not discuss this kind of uncertainty. His eye is on uncertainty about others' actions. I call this "intersubjective uncertainty."

Properties of Action

1. Ends and means.
   A. Felt uneasiness.
   B. An image of a more satisfactory state (profit or net yield).
   C. The expectation that purposeful behavior has the power to remove or at least to alleviate felt uneasiness (profit or loss).
   D. Plans and planning (consumer goods, producer goods).
   E. Comparisons of values (costs).
2. Time (past, present, future).
   A. Time preference.
3. Uncertainty: intersubjective uncertainty (prediction, probability, understanding).

I want now to take stock of what I have called properties of action. I do so in the attached box. I divide the set of properties into three distinct classes: ends and means, time, and uncertainty. I say that these are the properties of the category of action that Mises has in mind in his treatise when he uses the phrase "categories of action." When he says that “all the theorems of praxeology refer only to these categories of action,” I claim that he is referring to these properties.

I do not wish to give the impression that Mises uses his terms consistently and completely in accord with my interpretation. One of the interesting facts about the treatise is that although he obviously regards praxeological theorems as important, he does not once give an illustration that he calls building or deriving a theorem. Similarly, although he writes frequently about being able to trace theorems back to the category of action, he does not give an example to show the reader how to do this.

Praxeological Theorems as Properties of Action

I would like to consider what he does have to say about praxeological theorems. Two passages in his chapter 2 in a section entitled “The Procedure of Economics” come closest to informing the reader about building or deriving a theorem. He writes:

> The scope of praxeology is the explication of the category of human action. All that is needed for the deduction of all praxeological theorems is knowledge of the essence of human action. It is a knowledge that is our own because we are men; no being of human descent that pathological conditions have not reduced to a merely vegetative existence lacks it. 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. We must bethink ourselves and reflect upon the structure of human action.
>
> All the concepts and theorems of praxeology are implied in the category of human action. The first task is to extract and to deduce them, to expound their implications and to define the universal conditions of acting as such (*ibid*.: 64).

This is very loose language. To explicate the category of action, as he writes in the first sentence, seems to mean the same thing as I have called identifying the properties of action. To identify them, as I pointed out in Chapter 3, one uses the method of imaginary constructions to construct counterfactuals. Then, in the second sentence he writes about deducing praxeological theorems. Later in the paragraph, in telling how to achieve a cognition of the theorems, he uses the term "logical analysis." Then he writes about bethinking and reflecting upon the structure of action. In the second paragraph, he uses the term "extract and deduce." Then he writes of expounding their implications and of defining universal conditions.

Although Mises's language is loose, it nevertheless makes perfect sense to me, since my aim in reading the treatise has been exegesis. To communicate the sensibility of Mises's points to the less thorough reader of the treatise, or even to a non-reader, I have found it necessary to employ my own terminology. The reader will recall from Chapter 3 my description of how Mises employed what he called the method of imaginary constructions to elucidate action. I wrote that he used the imaginary construction of a being that does not possess some proposed property of action. If that being can still act even though she does not possess the proposed property, then the proposed property must be rejected. It is not a property of action. On the other hand, if the being cannot act without possessing the proposed property, then it must be accepted. I showed that Mises actually used this method to identify the properties of ends and means, time and uncertainty. It was this description that led me to organize the properties of action as I do in the attached box.

Praxeological Theorems:

1. Action implies ends and means. It also implies:
   A. Felt uneasiness.
   B. An image of a more satisfactory state (profit or net yield).
   C. The expectation that purposeful behavior has the power to remove or at least to alleviate felt uneasiness (profit or loss).
   D. Plans and planning (consumer goods, producer goods).
   E. Comparisons of values (costs).
2. Action implies an actor's sense of time (past, present, future).
   A. It also implies time preference.
3. Action implies uncertainty. Action in society implies intersubjective uncertainty (prediction, probability, understanding).

But now I turn to the question of defining a praxeological theorem? In writing of praxeological theorems, is Mises referring to the properties of action that he “extracted and deduced” in this way? Does using an imaginary construction to elucidate a property of action correspond to explicating a category of action? And does Mises mean to imply that a praxeological theorem is merely a property of action? I believe that the answer is yes. The praxeological theorems he refers to are merely the properties of action that are derived by means of the method of imaginary constructions. An economic theorem is different. This leads me to make a list of the praxeological theorems by modifying my previous list of properties of action.

Building Economic Theorems

Mises does not tell how to build a praxeology theorem. However, he does give instructions on how to build an economic theorem. He does this in his chapter 2 immediately after his discussion of praxeological theorems in his “The Procedure of Economics” section. He points out that once the economist has identified the properties of action, she must go further in order to deal with the “special modes of acting” (*ibid*.: 64). One special mode is acting under the conditions of the market economy. In this case, “praxeology restricts its inquiries to the study of acting under those conditions and presuppositions which are given in reality.” For example, economists assume the disutility of labor (*ibid*.: 65). He writes:

> Economics does not follow the procedure of logic and mathematics. It 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. It does not strictly separate in its treatises and monographs pure science from 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 (*ibid*.: 66).

The last statement would be more understandable if Mises had established that building economic theorems is the method that economics adopts to present its results. Then it would be obvious that *an economic theorem consists of a combination of properties of action and assumptions pertaining to economic reality*.[44]

After Mises's instructions on building an economic theorem in his chapter 2, he says practically nothing about the theorem production process in the rest of the treatise. Indeed, he seldom identifies the theorems he produces and he often refers to a theorem by other names, such as "law." Thus, he does not directly reinforce his instructions. A reader of the treatise who did not know his purposes could easily miss the formal theorem production aspect of his economics. In order to elevate this aspect, I have decided to translate his major statements about interaction under market economy conditions into economic theorems. Economics, he says, "tries to elucidates the operation of the pure market economy" (*ibid*.: 238). I interpret this to mean that the economist aims to produce theorems about market interaction under pure market economy conditions.

I do not intend in this chapter to try to identify every theorem in the treatise. My interest is in identifying those that he derives from the theorem of consumer sovereignty, which I regard as the theorem that best represents the ultimate purpose he aims to achieve in the treatise. By identifying these theorems, I will also be demonstrating my thesis that consumer sovereignty is the key to understanding Mises's economics. In this essay, I focus on theorems that pertain specifically to the pure market economy.

[44] In interpreting the above passage, it is helpful to define "concrete historical and political problems" in accord with Mises's ultimate purpose of the treatise. What he really has in mind is the production of economic theorems that are relevant to making value-free evaluations of interventionist arguments.

The Theorem of Consumer Sovereignty

> **Theorem of Consumer Sovereignty**: Under the conditions of the pure market economy, the entrepreneur role always and exclusively acts in the interests of individuals in the role of the consumer.

I have already stated the theorem of consumer sovereignty. It is repeated in the attached box for the reader's convenience. In this subsection, I document this theorem by referring to Mises's section on "The Sovereignty of the Consumer." He writes that in the market economy individuals are subject to the mandate of the consumer. The

> capitalists, entrepreneurs, and landowners...are not free to spend money which the consumers are not prepared to refund to them in paying more for the products. In the conduct of their business affairs they must be unfeeling and stony-hearted because the consumers, their bosses, are themselves unfeeling and stony-hearted.
>
> The consumers determine ultimately not only the prices of the consumers' goods, but no less the prices of all factors of production. They determine the income of every member of the market economy (*ibid*.: 270-1).

There is only one instance under market economy conditions in which individuals do not act in the interests of consumers. Owners of property may charge monopoly prices (*ibid*.: 272). This, of course, is the theorem of consumer sovereignty. Mises does not call it by this name, however, and this helps explain why its key role has been overlooked.

Although Mises presents the theorem in chapter 15, he does not complete the presentation until he demonstrates in chapter 16 that monopoly can ultimately be traced to a monopolized factor of production. He demonstrates this at *ibid*.: 358. There he writes about the owners of saleable goods. Since freedom of enterprise assumes that there is competition among producers of saleable goods, the source of the monopoly must be some monopolized factor. The owner of such a factor may fare better by restricting supply and selling the unrestricted amount at a higher price per unit (*ibid*.).[45]

One might be inclined to say that monopoly is an exception to consumer sovereignty. However, to say this would be an inaccurate description since the logic of Mises's argument requires the theorem of consumer sovereignty to refer to the entrepreneur *in his entrepreneurial capacity* – i.e., to what I have called the entrepreneur role. The proper way to express this is to say that the monopoly price is an exception to the notion that, under pure market economy conditions, every individual in every action intends to act in a way that the economist can deduce will benefit consumers. Mises's statement about the exception is carefully worded: "There is in the operation of a *market economy* only one instance in which the proprietary class is not completely subject to the supremacy of the consumers. Monopoly prices are an infringement of the sway of the consumers (*ibid*.: 271-2)."[46] He attributes monopoly prices to the owners of the factors of production (the proprietary class) because he wants the entrepreneur role to always be subject to consumer sovereignty. The strict separation that he maintains between these concepts is a means of binding economics to praxeology.

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[45]The analysis here is of the state toward which the market and prices are tending – the final state of rest. It is, of course, possible for a retailer, over a short period, to charge a monopoly price by restricting her sale of a consumer good for which substitutes cannot be quickly produced. That this is so is evident from Mises's example of candles (*ibid*.: 360-1).

[46]Although this statement is carefully worded in one sense, it is not so in another. When Mises writes "in a market economy," he means "under the conditions of a pure market economy." I discuss this imprecision further later in this part of the essay.

After introducing the theorem, Mises includes three sections, respectively, entitled "Competition," "Freedom," and "Inequality of Wealth and Income." These sections, with the minor exception of a brief part of the section on competition, are ground-clearing. The meat of the chapter lies with his discussion of entrepreneurial activity and competition among entrepreneurs in sections 8-14. His discussion of the entrepreneur is an extension of the consumer sovereignty theorem. The following quote from Section 8 characterizes the approach:

> The specific entrepreneurial function consists in determining the employment of the factors of production. The entrepreneur is the man who dedicates them to special purposes. In doing so he is driven solely by the selfish interest in making profits and in acquiring wealth. But he cannot evade the law of the market. He can succeed only by best serving the consumers. His profit depends on the approval of his conduct by the consumers (*ibid*.: 290-1, partly quoted above).

Here he labels what I have called the theorem of consumer sovereignty the "law of the market." This terminology again reflects a kind of looseness that increases the difficulty for the typical reader to follow. There is nothing wrong with using the term "law" but it is wise grammatically and didactically to use the same term consistently.

The Theorems Concerning the Prices and Quantities of Consumer Goods

There are two theorems regarding the prices and quantities of consumer goods. The first one is a theorem about prices. It is that, under the conditions of the pure market economy, the price of every unit of a good of like kind and quality, net of transportation costs, tends toward the final price (*ibid*.: 330-331). This theorem is based on two assumptions: (1) that households maximize utility and (2) the entrepreneur role is performed by many competing individuals whose particular actions include speculation, arbitrage, and dealers in futures (*ibid*.: 327-8). Maximizing households always buy at the lowest prices. And the entrepreneur role takes in the form of producer, speculator, arbitrager, and dealer in futures advantage of every bona fide profit opportunity. This theorem, like all theorems of the final price under pure market economy conditions, providess a tool for understanding market interaction – i.e., the actions of the entrepreneur role in relation to the consumer role. It also helps the economist comprehend why changes in market conditions cause the price of a product to rise or fall, helping her to understand other events such as an increase or decrease in factors of production being allocated to producing the various good.

Two Theorems Concerning the Prices and Quantities of Consumer Goods:

1. **Theorem of the Prices and Quantities of Consumer Goods**: The prices and quantities of consumer goods produced and sold under pure market economy conditions are determined by the entrepreneur role in accord with the theorem of consumer sovereignty.
2. **Theorem of One Price**: Entrepreneurial bidding, in light of household maximization of income and entrepreneurial profit maximization, operates to make the final price of a unit of each type of consumer good identical to the final prices of other units of that good, net of transportation costs.

The second theorem is that the prices and quantities of consumer goods produced and sold under pure market economy conditions are determined by the entrepreneur role in accord with the theorem of consumer sovereignty. There is no specific passage to which I can refer in order to document this theorem. Mises does write that the "ultimate source of the determination of prices is the value judgments of the consumers" (*ibid*.: 331). However, this statement does not necessary imply consumer sovereignty. Nevertheless, the consumer sovereignty theorem and its applicability to the prices and quantities of consumer goods as well as to the prices and quantities of the factors of production is demonstrated in detail by the following passage:

> The entrepreneur is the agency that prevents the persistence of a state of production unsuitable to fill the most urgent wants of the consumers in the cheapest way. All people are anxious for the best possible satisfaction of their wants and are in this sense striving after the highest profit they can reap. The mentality of the promoters, speculators, and entrepreneurs [individuals acting in the entrepreneur role] is not different from that of their fellow men. They are merely

> superior to the masses in mental power and energy. They are the leaders on the way toward material progress. They are the first to understand that there is a discrepancy between what is done and what could be done. They guess what the consumers would like to have and are intent upon providing them with these things. In the pursuit of such plans they bid higher prices for some factors of production and lower the prices of other factors of production by restricting their demand for them. In supplying the market with those consumers' goods in the sale of which the highest profits can be earned, they create a tendency toward a fall in their prices. In restricting the output of those consumers' goods the production of which does not offer chances for reaping profit, they bring about a tendency toward a rise in their prices. All these transformations go on ceaselessly and could stop only if the unrealizable conditions of the evenly rotating economy and of static equilibrium were to be attained 335-6.

By evenly rotating economy in this passage, Mises means the final state of rest and, therefore, final prices.

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The Theorem of the Prices and Quantities of the Factors of Production

Theorem of the Prices and Quantities of the Factors of Production: The prices and quantities of the factors of production produced and sold under pure market economy conditions are determined by the entrepreneur role in accord with the theorem of consumer sovereignty.

Mises's first treatment of factor prices is in his section on consumer sovereignty. He first writes that if an individual performing the entrepreneur role "does not strictly obey the orders of the public as they are conveyed to him by the structure of market prices, he suffers losses, he goes bankrupt, and is thus removed from his eminent position at the helm" (*ibid*.: 270). Then he points out that although only the sellers of consumer goods are "in direct contact with the consumers" (*ibid*.), others higher up the supply chain are affected indirectly. Thus the "consumers determine ultimately not only the prices of the consumers' goods, but no less the prices of all factors of production" (*ibid*.: 271). I call this the theorem of the prices and quantities of the factors of production. It applies to all factors of production and is stated in the attached box.

His second treatment is in a section entitled "The Prices of the Goods of Higher Order," where he points out 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. As a consequence of this dependence they are ultimately determined by the subjective valuations of all members of the market society (*ibid*.: 333).
>
> The decisions of the consumers to buy one commodity and to postpone buying another determine the prices of factors of production required for manufacturing these commodities. The competition between the entrepreneurs...makes effective the subsumed decisions of the consumers as to what purpose the nonspecific factors should be used for and to what extent the specific factors of production should be used (*ibid*.: 338).

> [In the real world], the economic problem is to employ these factors in such a way that no unit of them should be used for the satisfaction of a less urgent need if this employment prevents the satisfaction of a more urgent need. It is this that the market solves in determining the prices of the factors of production. The social service rendered by this solution is not in the least impaired by the fact that for factors which can be employed only cumulatively no other than cumulative prices are determined (*ibid*.: 339).

This, of course, is the Austrian theory of value and cost. Consumer sovereignty in the last quotation is partly concealed by Mises's use of object-oriented grammar. Instead of writing about the entrepreneur role, he employs the term "the market." However, a simple substitution of "competing entrepreneurs" for "market," which is warranted by virtue of his previous uses of these terms, makes his meaning clear.

The Prices and Quantities of Work and Natural Resources

One who doubts that the theorem of consumer sovereignty is the foundation for Mises theorems about the prices and quantities of the factors of production can follow up by reading his chapters on the particular class of factor in question. An example is chapter 21 on "Work and Wages." Mises approaches the determination of wages (the price of bare labor) and unemployment from the point of view of the consumer. Regarding how wages are determined, he writes: "It suffices to observe incidentally that the employers deal with labor as they do with commodities because the conduct of the consumers forces them to proceed in this way" (*ibid*.: 593). In his discussion of catallactic unemployment, he writes: "Wage rate fluctuations are the device by means of which the sovereignty of the consumers manifests itself on the labor market" (*ibid*.: 599). He also refers to the pure market economy. He writes:

> Unemployment in the unhampered market is always voluntary. In the eyes of the unemployed man, unemployment is the minor of two evils between which he has to choose....The final wage rate is that rate at which all job-seekers get

> jobs and all employers as many workers as they want to hire. Its height is determined by the marginal productivity of each type of work (*ibid*.).

An “unhampered market” is a less precise name than the pure market economy. But since he had previously used this term (*ibid*.: 237), it is clear that he is writing about pure market economy conditions.

The phrase “determined by the marginal productivity” is less revealing than the phrase “determined by the competing bids of appraising entrepreneurs on the basis of their respective expectations about the marginal revenue that employing a job seeker will yield.” However, a reader who is familiar with the marginal productivity theory of distribution, as it came to be represented in the writings of early neoclassical economists like Knight and Davenport, would surely make the desired connection to consumer sovereignty.[47]

Mises’s chapter 22 is about natural resources, or land. He does not state the price and quantity theorem directly but he does so indirectly. He writes that the “law controlling the determination of the prices of the factors of production is the same with all classes and specimens of these factors” (*ibid*.: 636). Note again that instead of referring to the *theorem*, he refers to a *law*.

[47]This is not to say that Knight or Davenport would focus so much on consumer sovereignty. On the contrary, Knight assigned a narrow orbit to technical economics and regarded statements about entrepreneurship as largely outside that orbit. Davenport, while given entrepreneurship high import, was much more concerned than Mises about the way individuals had acquired ownership of the capital goods that were subject to consumer sovereignty.

Theorem Concerning the Selection of Entrepreneurs

Mises points out that economic "competition is emulation between people who want to surpass one another" (*ibid*.: 274). Moreover, consistent with the principle of consumer sovereignty, he writes:

> To assign to everybody his proper place in society is the task of the consumers. Their buying and abstention from buying is instrumental in determining each individual's social position. Their supremacy is not impaired by any privileges granted to the individuals qua producers. Entrance into a definite branch of industry is virtually free to newcomers only as far as the consumers approve of this branch's expansion or as far as the newcomers succeed in supplanting those already occupied in it by filling better or more cheaply the demands of the consumers. Additional investment is reasonable only to the extent that it fills the most urgent among the not yet satisfied needs of the consumers (*ibid*.: 275).

Later in the same chapter, he refers to this assignment of people as the "selective process."

> The selective process of the market is actuated by the composite effort of all members of the market economy. Driven by the urge to remove his own uneasiness as much as possible, each individual is intent, on the one hand, upon attaining that position in which he can contribute most to the best satisfaction of everyone else and, on the other hand, upon taking best advantage of the services offered by everyone else. This means that he tries to sell on the dearest market and to buy on the cheapest market. The resultant of these endeavors is not only the price structure but no less the social structure, the assignment of definite tasks to the various individuals. The market makes people rich or poor, determines who shall run the big plants and who shall scrub the floors, fixes how many people shall work in the copper mines and how many in the symphony orchestras. None of these decisions is made once and for all; they are revocable every day. The selective process never stops. It goes on adjusting the social apparatus of production to the changes in demand and supply. It reviews again and again its previous decisions and forces everybody to submit to a new examination of his case. There is no security and no such thing as a right to preserve any position acquired in the past. Nobody is exempt from the law of the market, the consumers' sovereignty (*ibid*.: 311).

> **Theorem Concerning the Selection of Individuals for the Entrepreneur Role**: The entrepreneur role selects individuals into active or passive roles in the pure market economy, depending on its appraisal of their entrepreneurial capacity in accord with the theorem of consumer sovereignty.

In his discussion of this process, Mises describes how the various function-performing roles are influenced by the selective process. He writes about how the capitalists, landowners, and workers are subject to "the selective function" (*ibid*.: 311-2). Then he writes about how the selective function, or process, also applies to the promoters and the "captains of industry." "Everybody has the opportunity to take his chance...The point of view from which the consumers choose the captains of industry and business is exclusively their qualification to adjust production to the needs of the consumers" (*ibid*.: 313). As in the earlier example, this discussion uses the phrase "law of the market" to refer to consumer sovereignty.

It would be possible to verbalize this theorem by saying that individuals are selected for the entrepreneur role in accord with the theorem of consumer sovereignty. However, the proper representation would recognize the entrepreneur role as determining which individuals are "slected in," so to speak. The theorem should state that the entrepreneur role selects individuals into active or passive roles in the pure market economy, depending on its appraisal of their entrepreneurial capacity. This latter way of representing the role is necessarily praxeological.

Growth Is Due to Saving and Technological Change

> **Theorem Concerning the Causes of Economic Growth**: Growth is due to entrepreneur responses to changes in saving and technological change in accord with the theorem of consumer sovereignty.

Mises's theorem of growth is based on the assumption that people agree on what growth is. People agree, Mises assumes, that growth is an increase in consumer goods from one period to the next. He represents this assumption by describing growth only in a "progressing economy." This is an imaginary construction in which "the per capita quota of capital [goods] invested is increasing" (*ibid*.: 294).[48] In this construct, there are two ways for an increase in capital goods to occur. The first is saving – consumers deciding to consume fewer near-future consumer goods (and more distant-future goods) than otherwise. Or it can occur as a result of technological advance. In a somewhat

[48] It is worth keeping in mind Mises's definition of capital goods as intermediary stations (*ibid*.: 493).

poetic statement, he calls these two sources of growth the "vehicles" of progress. The "agents" of progress are the promoting entrepreneurs. The logic is captured in the following quotation:

> The vehicle of economic progress is the accumulation of additional capital goods by means of saving and improvement in technological methods of production the execution of which is almost always conditioned by the availability of such new capital. The agents of progress are the promoting entrepreneurs intent upon profiting by means of adjusting the conduct of affairs to the best possible satisfaction of the consumers (*ibid*.: 297).

In this discussion, the competing promoting entrepreneurs are the distinctly human cause of growth. This is consistent with an earlier statement that the promoter's restlessness and "eagerness to make profits as large as possible" is "[t]he driving force of the market (*ibid*.: 255). Since Mises has defined the entrepreneur in such a way that it always acts according to the theorem of consumer sovereignty, it is implicit that the growth due to saving and technological change is in the interest of the consumer role.

A remarkable fact about Mises's discussion is that he does not stress deliberate efforts by the individuals to conduct research on new methods of production. He does not, for example, mention that improvement in technological methods may be the consequence of deliberate research and experimentation.[49]

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[49]A reader might interpret the discussion differently. She may interpret "unceasing innovation and improvement" (*ibid*.: 255, as quoted above) as implying the possibility of deliberate research. Also later in the treatise Mises writes about the wise investment by entrepreneurs (*ibid*.: 609). However, it is unclear how much weight he attaches to these statements and even whether he recognizes that additional saving is not necessary for entrepreneurs to have an incentive to use their imagination, creativity, and inventiveness to invent new products and methods of production. Since this is so obvious, however, I regard his failure to be explicit as an oversight.

Distribution of Gains From Growth

> **Theorem of the Distribution of the Gains from Growth:** Bidding by individuals in the entrepreneur role tends to cause gains from growth to be distributed to the household role in the form lower prices and higher incomes.

In the same section, Mises discusses the distribution of the gains from exchange under market economy conditions. He repeats that there is "an inherent tendency for profits and losses to disappear. The market is always moving toward the emergence of the final prices and the final state of rest" (*ibid*.: 295). Then he writes that as this occurs, the "laws of the market divide this additional wealth between the entrepreneurs and the suppliers of labor and those of certain material factors of production in such a way that the lion's share goes to the nonentrepreneurial groups" (*ibid*.: 294). "All these changes in the prices of the factors of production begin immediately with the initiation of the entrepreneurial actions designed to adjust the processes of production to the new state of affairs (*ibid*.: 296)":

> What happens is this: The entrepreneurs embarking upon the utilization of the newly accumulated capital goods and the improved technological methods of production are in need of complementary factors of production. Their demand for these factors is a new additional demand which must raise their prices. Only as far as this rise in prices and wage rates occurs, are the consumers in a position to buy the new products without curtailing the purchase of other goods. Only so far can a surplus of the total sum of all entrepreneurial profits over all entrepreneurial losses come into existence (*ibid*.: 297).

If the additional wealth is due to increased saving, the owners of capital goods gain, due to "their restraint in consuming." The owners of existing capital goods may gain or lose depending on whether their prices rise. However, their gains are temporary, since the gains will decline as more, or new and rival, capital goods are produced due to the profit inducement toward higher capital goods production. Landowners also gain (*ibid*.: 296).

In this discussion of the distribution of the gains from growth, Mises defines growth in such a way that it must conform with the theorem of consumer sovereignty. This is largely concealed by his (1) mode of expression and (2) the structure of his treatment of the progressing economy. The mode of expression difficulty is exemplified by the last two sentences in the above quotation. The first of the two sentences says that the consumer role benefits because it can buy the new products without buying less of other goods. The second sentence says that the assumption of a progressing economy – that the total sum of the profits exceed the losses – implies the increase in consumer benefits. Regarding structure, later in the same section on the progressing economy, he writes directly about the "entrepreneur function" and consumer sovereignty (*ibid*.: 299).h

Theorems of Time Preference and the Theory of the Trade Cycle

Economic Theorem of Time Preference

Economic Theorem of Time Preference: Because the household role possesses time preference through its saving and its purchases of capital goods, individuals under pure market economy conditions take account of consumer time preference when they act in the role of the entrepreneur.

Time preference as a property of action means that an actor evaluates satisfaction on the basis of when she expects to receive it. An actor, by definition, can choose between satisfaction in the nearer future and satisfaction in the more distant future.[50] From this theorem, it can be deduced that in their actions to remove uneasiness, they take this into account. For

[50]One of Mises's best known theorems relates to this. It is that a good in the near future is preferred over a good, or set of goods, of like kind and quality, in the more distant future. This theorem is both unimportant and misleading. So I omit it here. I demonstrate its shortcomings in appendix 3 to this essay.

the isolated farmer, this means that he takes the time at which he expects a good to become available for consumption into account in his evaluations of what he regards as factors of production and in his use of them to help produce this or that source of satisfaction. For the market economy, it means that because the consumer role possesses time preference, individuals under market economy conditions take account of consumer time preference when they act in the role of the entrepreneur. I call this the economic theorem of time preference. The entrepreneur role discovers changes in time preference by means of consumer saving and (2) households' demands for capital goods.

Mises is not able to state the economic theorem of time preference in this way because he makes originary interest the foundation of his grammar. Nevertheless, his reasoning relating to the evaluation of interventionist arguments is based on a full understanding of the theorem, as I have stated it. The problem I face is how to demonstrate this by using Mises's words. The only feasible solution is to translate every economic theorem he produces relating to time preference (which contains the phrase "originary interest") into a theorem about the entrepreneur role in relation to the household role and its time preference. In some cases, I must substitute the phrase "final rate of interest" for "originary interest." This is warranted by my analysis of Mises's use of the term "entrepreneur" in relation to profit in Part Two of this essay.

Theorems Concerning the Final Rate of Interest

As I pointed out in Part Two, originary interest, in Mises terms, is equivalent to the final rate of interest. It thus refers to a rate that would be established by entrepreneurs if there was no further change in the data. When Mises writes that the "activities of the entrepreneurs tend toward the establishment of a uniform rate of originary interest in the whole market economy" (*ibid*.: 536), he is implying an economic theorem. He is implying that the final interest rate "in all markets" tends to be the same. And when he writes about the "final state toward which" the rate of originary interest is tending (*ibid*.: 538), he is also implying an economic theorem. The latter theorem is the foundation on which he builds another theorem – the theorem of the trade cycle. Thus, there are three theorems relating to the final rate of interest. The first two are listed in the attached box.

Two theorems relating to time preference and the rate of interest received by households:

1. **Theorem of the Equality of Final Interest Rates Paid to Consumers in all Markets Where Consumers Save**: Households' maximization of income from saving and entrepreneurial bidding, based on profit maximization, operate to make the final rate of interest on each type of saving identical.
2. **Theorem of the Rate of Interest Paid to Savers and Capital Goods Suppliers**: The final rate of interest paid to households is determined by the entrepreneur role in accord with the theorem of consumer sovereignty as it applies to the preferences of consumers over time.

Theorem of the Trade Cycle

Mises's most famous theorem is that of the trade cycle. He bases this theorem partly on the theorem of the rate of interest paid to households in the role of savers and capital goods suppliers.

The base theorem is derived as follows.[51] Individuals in the entrepreneur role adjust to changes in time preference by shifting factors of production between two general classes of production: (1) consumer goods for the near future and (2) capital goods (intermediary stations). All capital goods are expected by the entrepreneur role to ultimately be employed to produce consumer good for the more distant future. The interest rate paid to households in the role of consumer-savers and capital goods suppliers tends toward a final state of rest which conforms to the theorem of consumer sovereignty through time. According to other theorems, the prices of consumer goods and the factors of production also tend toward a final state of rest.

Starting with these theorems, Mises proceeds to propose the theorem of the trade cycle. The cycle begins with an unexpected increase in the quantity of money that enters through the market for loanable funds. Such a change may distort entrepreneurs' calculations by causing interest rates to change in a way that is similar to how they would change if there was a decrease in consumer demands for near-future goods (and a corresponding increase in their demands for more distant-future goods). Such a change would both (1) increase household saving, prompting a fall in the loanable funds rates of interest and (2) increase household demand for capital goods. In both cases, entrepreneurs would find it profitable to shift factors from the production of consumer goods to the production of capital goods. Individuals acting in the entrepreneur role adjust to the lower loan market interest rates by shifting factors toward the production of capital goods and away from the production of consumer goods. The entrepreneurs borrow proportionately more money to increase

[51] I have altered some of the minor details of Mises's presentation in order to present it within the framework of the two role model I introduced earlier.

their production of capital goods for households. Their efforts bid up the prices of the factors that are specialized in producing the capital goods relative to the prices of factors specialized in producing consumer goods.

The capital goods structure shifts as entrepreneurs and households adjust to what they perceive to be a relative decrease in the costs of producing more distant future consumer goods. The higher interest rates on capital goods give prospective household owners of those goods an incentive to order more of them at the expense of buying more consumer goods. Households shift away from spending on nearer future consumer goods and lending in lower-interest loan markets toward saving in the form of capital goods. This turns out to be an error because the time preferences of households have not changed.

Theorem of the Trade Cycle: Under particular circumstances, an increase in the quantity of money can interfere with the economic theorem of time preference, leading the entrepreneur role to erroneously produce factors and goods that are more suitable for the satisfaction of more distant-future wants than is in the interests of the consumer role. The entrepreneur role errs in using the current market rate of interest as a signal of the relative profitability of completing projects aimed at satisfying consumer wants in the more distant, as opposed to the nearer, future. This error causes a trade cycle when the entrepreneur role recognizes its error and abandons its production of some of the factors and goods.

As time passes, prices of consumer rise, partly because of the inflation of the quantity of money but also partly because the profits due to employing factors in the production of new capital goods has bid up the prices of the factors that are substitutable as between the production of consumer goods and capital goods. The interest returns on capital goods, already high, do not increase further.

This alteration in the prices and interest returns faced by households ultimately reverses the trend initiated by the increased money. What happens first is that households realize that disthe proportionate increase in consumer goods prices has caused them to allocate too little of their money income to the satisfaction of near future wants. They increase the proportion of their incomes spent on consumer good and reduce the proportion devoted to saving and the purchase of capital goods. In response, entrepreneurs come to regard many of the recently produced, specialized factors of production as malinvestments. The entrepreneurs had produced a disproportionately large amount of factors that are specialized in helping to cause wants in the more distant future to be satisfied. Realizing this, they take actions that cause the capital goods structure to shift again. A readjustment, which is interpreted by observers as a business cycle contraction, occurs. Thus, the unexpected increase in money causes a trade cycle.

Mises recognized that his theory of the cycle is derived from the theorem of consumer sovereignty. The proof of this is his preliminary remarks about the cause. He begins by supposing that new money is introduced first into loan markets. He then writes that the new money can cause the gross rate of interest to fall even though there has been no change in household saving or demands for capital goods.

> Then the market rate of interest fails to fulfill the function it plays in guiding entrepreneurial decisions. It frustrates the entrepreneur's calculation and diverts his actions from those lines in which they would in the *best possible way satisfy the most urgent needs of the consumers* (*ibid*.: 547, italics added).[52]

The Trade Cycle and the Market Process

Mises presents a revealing discussion in this chapter on why he included the theory of the trade cycle in Part 4 of his book. He first points out that if the increase in quantity of money is due to government intervention – for example, to the policies of a central bank (Mises calls this the

[52] See also the discussion at *ibid*.: 553, 564, and 565.

"monetary authorities") – one might want to "relegate" a discussion of the problems "to the analysis of interventionism." He discusses intervention in part 6 of his treatise. He defends his decision to place the theory in part 4 by saying that

> the right place for the analysis of the problems involved is not in the theory of interventionism but in that of the pure market economy. For the problem we have to deal with is essentially the relation between the supply of money and the rate of interest, a problem of which the consequences of credit expansion are only a particular instance (*ibid*.: 573).

Here he helps to confirm that he intends part 4 of his treatise to be about the pure market economy. This is consistent with my interpretation that he structured the treatise in accord with the incontestable procedure described earlier in this essay.

Economic Theorems and the Market Process

Mises writes that the state of the market is the price structure and that this state is caused by the *market process*. The market process, in turn, is "the adjustment of the individual actions of the various members of the market society to the requirements of mutual cooperation" (*ibid*.: 257-8). Mises introduced the process in the context of the pure market economy. Thus, one can safely deduce that Mises means for his description of the market process to enable him to demonstrate the theorem of consumer sovereignty. In other words, to speak of the Misesian market process is equivalent to speaking of Mises's production of the economic theorems. I have shown that the most outstanding theorems are derived from the theorem of consumer sovereignty.[53]

In light of this interpretation, I translate the concept of "elucidating the market process" into "producing economic theorems about interaction under the conditions of the pure market economy." It follows that my listing of economic theorems in this chapter is equivalent to a systematic description of Mises's market process. Unfortunately, Mises's market process has not been understood in this more formal way by other interpreters of Mises. This fact suggests that the last three and a half decades have been a dark episode in the history of Austrian economics. The "profession" of economists who associate themselves with the label "Austrian" has grown.

Conclusion

In this part, I have transformed Mises's theory of the pure market economy, as he presented it, into a set of theorems derived from the theorem of consumer sovereignty. The purpose has been to more clearly describe that economics. I do not mean to try to capture all of Mises's economics in a few simple theorems. The main service of this chapter has been to systematize the deductions relating

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[53]It is not easy for the skeptical reader to verify my interpretation. One problem is the failure of Mises to refer to the pure market economy at the point where he introduces the concept of the market as a process (*ibid*.: 257). That he is referring the pure market economy must be inferred. Evidence comes from his discussion of the incontestable procedure (*ibid*.: 238) in combination with the fact that his introduction of the market process occurs at the beginning of his first chapter following the scope and method chapter (*ibid*.: 257-9). Additional evidence is his statement that "the system of market economy has never been fully and purely tried (*ibid*.: 264), his assertion that economists place "the pure market economy in the center of their investigations (*ibid*.: 267), and the numerous reference in his chapter 16 to the market in light of the fact that he uses a variety of market-related terms to refer to the pure market economy (see Part Two of this Chapter).

to the pure market economy that Mises regarded as most important in the task of making value free evaluations of interventionist arguments.

4. RELATED LITERATURE

So far as I know, only two authors, Israel Kirzner and Richard Gonce, have previously proposed that consumer sovereignty was a central feature of Mises's economics.[54] Both authors also assessed the concept and tried to put it into a broader context. I begin with Kirzner.

Kirzner on Mises's Consumer Sovereignty

In at least three of his writings, Kirzner discusses the centrality of consumer sovereignty to Mises's economics (Kirzner 1996: 170-72; 1999: 220-1; and 2001: 108-110, 169-170). The following is probably his most representative statement:

> Mises believed, as a proposition of positive economics, that, with certain exceptions, market outcomes are determined by consumer preferences. Decisions by producers and by resource owners are, in a free market society, motivated by the desire to anticipate the spending decisions of consumers...There are grounds for believing that, in his criticism of what he judged to be unsound economic policies, Mises was simply assuming that his readers held consumer sovereignty to be a desirable feature in an economic system...A free market will tend to generate decisions that can be successfully implemented and which respect and do express consumer sovereignty (2001: 169-170).

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[54]Murray Rothbard has written critically about the concept of consumer sovereignty, although the object of his criticism was not Mises but Hutt (Rothbard 2004: p. 619ff). His critique of Hutt does not recognize a legitimate purpose of consumer sovereignty. However, since he does not discuss the purposes for which Mises employed the construct, the critique is not at best not relevant to my concerns.

The positive economics proposition implicit in the notion of consumer sovereignty, says Kirzner, is that prices tend, with the exception of monopoly, toward a level that corresponds to consumer preferences. The normative judgment is provided by "readers," namely, that such prices are desirable.

In other passages, Kirzner explains in greater detail what he means by market outcomes being determined by consumer preferences. What he has in mind is a legacy of Carl Menger:

> [F]or Mises the doctrine of consumer sovereignty was much more fundamental and significant than its being a normative application of positive economics. The doctrine of consumer sovereignty was, in its own right, an important part of positive economics; it was a scientific theorem marking the completion of Menger's vision (Kirzner 1999: 221).

In this vision "[e]very act of production, every market transaction, is set in motion and wholly governed by consumer preferences" (*ibid*.: 220). "[C]onsumer valuation of output...tends to be reflected in the market prices of the relevant inputs...(*ibid*.: 219).

Two viewpoints are represented in these passages and, more generally, in Kirzner's overall interpretation of Mises. First, in analyzing Mises's contribution to economics, one can profitably use the distinction between positive and normative. Second, the part of Mises's economics in which consumer sovereignty is important is best regarded as an extension of Menger's vision. I assess both of these viewpoints.

Positive and Normative Economics

The distinction between positive and normative economics comes from modern welfare economics. It is also used to distinguish between economic history and the making of judgments about historical events that have an economic character and their causes. One can learn something about the distinction in modern welfare economics from its use in history. The essential point to understand about its use in history is that apriori praxeological theory is necessary in order to organize the presentation of historical facts – in order to describe what I call an *historical event*. An historical event is an event that is at least partly caused by a distinctly human action – a choice of a distinctly human being. Since economic history is a branch of history, in general, and since history in general is by definition about distinctly human actors, apriori praxeological theory is required in order merely to describe an economic event. It is true that the economic historian must also make hypotheses about whose choice or choices contributed to the cause of each relevant historical event. No interpretation of an event is possible without such hypotheses. Such hypotheses entail judgments. Disputes over interpretation are about whether such judgments are reasonable in light of the historical events that are known and that can be discovered. A judgment must also be made regarding whether a particular fact from the past is, indeed, an historical event. That is, it must be decided whether it was partly caused by a distinctly human action. But invoking apriori praxeological theory to organize the presentation of historical events is not open to question. If one aims to explain the results of distinctly human action in the past, one must employ praxeological theory.

One who claims that history in general is normative cannot be making her claim about the judgment to use praxeological theory. Economic history is somewhat different. The economist must also make subsidiary assumptions that distinguish historical events in general from events that are relevant to economics. Judgments must also be made about what assumptions to make. One who claims that economic history is normative may be referring to judgments about these assumptions. She might be correct to assert that the maker of such assumptions has chosen them on the basis of a desire to persuade rather than on a desire to represent reality. Such assumptions must be judged on the basis of their relevance to the goal of the person making them. From this standpoint, a critic may reasonably argue that the assumptions made by an economic historian in building his economic theory are biased, or normative. Of course, this kind of judgment does not apply to the apriori assumptions of praxeology. These are not open to scrutiny.

The distinction in theoretical welfare economics between positive and normative is based on the unstated assumption that economic phenomena are no different from any other kind of phenomena. This view maintains implicitly that an economic event need not be caused by distinctly human action. Given this assumption, it asserts that the statement that events are caused by distinctly human action and, therefore, intended to benefit distinctly human actors is normative. It is evident from this that a theoretical welfare economist would also have to call the law of the higher productivity of the division of labor "normative."

This kind of framework simply cannot be employed to present or to help understand Mises's economics. On the contrary, its use is bound to obfuscate rather than elucidate. The problem of theoretical welfare economics is that it is not economics because it does not limit the alternative environments for which it aims to specify policy options to the class that result at least partly from distinctly human action. Once one grants that the alternatives must come from a feasible and relevant set, theoretical welfare economics encounters the same class of problems as that of the historian. The welfare economist needs praxeology-based economics in order to specify relevant alternatives.

The reasoning here is incontestable. But then the question arises as to which alternatives are relevant. Although Mises did not approach modern theoretical welfare economics in this way, he did answer the question. His answer was that the alternatives should be restricted to those in which full advantage is taken of the universal law of the higher productivity of the division of labor (Mises 1966: 145) and of association (*ibid*.: 159). Economists, he implicitly argued, must recognize this discovery by their classical precursors. Moreover, having recognized this, economists must also recognize the advances due to the Austrian theory of value and cost (early neoclassical economics). The culmination of this advance was the isolation of the entrepreneur role, described above, as the exclusive servant of the consumer under pure market economy conditions.

Would it be correct to say that Mises's restriction of the alternatives in this way is "normative?" I do not think that the label matters here. What is essential is this. Suppose that one asserts that the "universal law" in its early neoclassical variant is an example of normative economics. Then, logic dictates that she must also define the term "positive economics" in this context as "without relevance to policy." For unless one limits the alternatives in some way that enables the evaluation of policies that are capable of achieving the goals of the policy makers, efforts to specify the alternatives are bound to fail.

To clarify further, consider the following statement by Mises:

> It is true that economists have drawn from their investigations the conclusion that the goals which most people, practically even all people, are intent on attaining by toiling and working and by economic policy can best be realized where the free market system is not impeded by government decrees. But this is not a preconceived judgment stemming from an insufficient occupation with the operation of government interference with business. It is, on the contrary, the result of a careful unbiased scrutiny of all aspects of interventionism (*ibid*.: 238).

Mises does not present the conclusion described in this paragraph as a judgment. He represents it as a deduction based a comparison of the states of the world that would result from the existence of alternative institutional structures. So long as one of the goals of policy makers is the attainment of "earthly ends" (see above), Mises argues, the choice of which alternative structure to compare must account of law of the higher productivity of the division of labor. In post-classical terms, it must account for the theorem of consumer sovereignty. It is possible to specify alternatives that would appeal to the ascetic. But economics has traditionally not been concerned with this.

As I see it, the welfare economics enterprise, as most economists understand it, is not economics at all because it does not restrict the alternative institutional structures in light of what the classical economists taught about the higher productivity of the division of labor.

I do not know how Kirzner defined the terms "positive" and "normative." So I do not want to describe his thinking as not being economics. I only want to remark that his use of the terms in the above-cited quotation and elsewhere in his descriptions of Mises's ideas on consumer sovereignty show no appreciation of the deeper issues that Mises had considered in employing the theorem of consumer sovereignty. Of course, Mises provided little guidance here. It is not easy to discover how Mises achieves the purposes that he claims he wanted to accomplish in the treatise.

Gonce on Mises's Consumer Sovereignty

So far as I know, only one other author – a non-Austrian who was largely critical of Mises – has previously promoted the centrality of consumer sovereignty *in Mises's economics*. In 1988, Richard Gonce published an essay in a history of economics collection. In his introduction, he wrote:

> The thesis of this essay is that the idea of consumer sovereignty, assured by a principle of harmony of rational interests in the long run, but engendered by a notion of entrepreneurial driving-force, is the overarching doctrine identifying [Mises's version of substantive Austrian economic theory] (Gonce 1988: 136).

After a fine elucidation of the consumer sovereignty concept, Gonce concludes that *Human Action*

> is a brilliant polemical accomplishment. As an example of results produced by the method of laying down axioms and proceeding by ratiocination, it is ingenious and admirable. As a contribution to technical economic theory, however, it is less impressive: focusing on the case of pure capitalism and the long-run time period, it draws on existing economic theory, but sets up a series of definitions, distinctions, and assumptions, and on them mounts arguments that pass over or eliminate any considerations that might compromise consumer sovereignty, harmony of interest, and optimality of consumer satisfaction.
>
> The greatest value of his contribution lies in its provocativeness (*ibid*.: 144).

Unlike Kirzner (and every other student of Mises of whom I am aware), Gonce understood the centrality of consumer sovereignty to Mises's economics and the foundation upon which it is based.

Gonce did not try to evaluate Mises's success at preempting those who use economic theory to support interventionist arguments. In other words, he did not see that by defining the pure market economy as already containing a division of labor, Mises compelled the proponent of an interventionist argument to show how the proposed intervention would affect the already existing division of labor (or in terms used by the early neoclassical economists, how it would affect the performance of the entrepreneur role). Nor did he see the significance of providing a praxeological foundation for this relatively new science of economics. Conspicuously absent from Gonce's report – and, more broadly, from the reports by practically all self-proclaimed historians of economic thought – is an effort to define the subject matter with which they deal – namely, economics. If Mises's economics is not a contribution to technical economic theory, then of what does such a contribution consist? Mises developed an action-based set of theorems intended to evaluate interventionist arguments made by individuals who accept the "universal law" of the higher productivity of the division of labor. If this is not the subject matter of economics, then what is?

A more reasonable conclusion for Gonce to have reached is that Mises did not complete his project. Mises failed, Gonce could have argued, to more fully explore the implications of the fact that a real market economy differs from the image of the pure market economy. For one thing, Gonce could have argued that Mises did not expand on his brief discussion of incomplete private property rights in his chapter on "The Data of the Market." Second, Gonce could have criticized Mises for giving insufficient treatment to deception and fraud. Third, Gonce could have pointed out the potential errors due to separating entrepreneurship from ownership in a real market economy. The prospect for monopoly gain competes with the prospect for gain from specialization and the division of labor. The entrepreneur's imagination, creativity, inventiveness and human capital may be employed in an effort to achieve both kinds of gains.[55] Nevertheless, I can only marvel that someone outside of neo-Austrian economics was able to attain a better grasp of the key role of consumer sovereignty in Mises's economics than all of the insiders of whom I am aware.

Eshelman on Harmony of the Rightly Understood Interests

One commentator on Mises's work has recognized the THRUI without seeing, or being interested in, its relationship to consumer sovereignty. An example is Larry Eshelman (1993) who aimed to place what he called Mises's utilitarianism in a broader moral philosophy framework. Eshelman was able to flush out the fact that Mises's evaluations of policy were based on a moral principle derived from the theorem of the rightly understood interests. He deserves high marks for this, since a number

[55]To my knowledge, the closest Mises comes to recognizing the limitations of using the pure market economy to evaluate interventionist arguments is to say that for people who consider a definite restrictive measure as justified, "[t]he decision about each restrictive intervention is to be made on the ground of a meticulous weighing of the costs to be incurred and the prize to be obtained. No reasonable man could question this rule" (Mises 1966: 748). This statement, which comes toward the end of his treatise, is hardly sufficient to allay the concerns of a skeptical reader who is inclined to treat the treatise as a polemic.

of Austrians had asserted that Mises's evaluations were based on a simple Benthamite-type utilitarian moral philosophy (Gunning 2005a and 2005b). Eshelman was not concerned with the fact that Mises attributed this theorem to the classical economists' evaluations of interventionist arguments and that Mises made the evaluation of interventionist arguments the goal of his economics.[56]

Mises Partly to Blame

Mises himself is partly to blame for the subsequent misinterpretation of his economics. First, he neglected to describe the relationship between value judgments and economic theory to his readers in the appropriate places. Second, he neglected in his evaluations of interventionist proposals to deal with the more complex cases, particularly those associated with incomplete private property rights. He seems to have implicitly assumed, albeit incorrectly, that if he provided the guiding light, as it were, his readers would make the appropriate applications. Finally, his presentation of his economics was not focused on the goal of communicating with the typical reader.

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[56] I should also briefly mention Joseph Salerno's paper on Mises as a social rationalist. Salerno (1990) also recognized the important role of the division of labor in Mises's writings. However, he was not interested in the evaluation of policy arguments. His concern was with the division of labor's role in helping Mises interpret history.

5. CONCLUSION

Mises's pathbreaking contributions to economics are today in danger of being neglected. This is partly because his presentation was deficient and partly because his interpreters have been insufficiently diligent. In this essay, I have tried to begin the painstaking process of restating and reviving Mises's economics by identifying his purposes and how he set out to achieve them. The two main purposes of *Human Action* were to bind economics to praxeology in order to establish a firm epistemological foundation for this new science and to define the new science in such a way that it could not legitimately be charged with being biased in achieving the ultimate, traditional purpose of economics – to evaluate interventionist arguments. To achieve both purposes, he employed a combination of closely linked concepts. The most important of these were the pure market economy, consumer sovereignty and the entrepreneur role. Only after a reader appreciates Mises's purposes and the crucial concepts he used to achieve them can she attain a position to recognize Mises's now neglected contribution to economics.

In the last half century – and, indeed, going back several centuries – economic globalization has had the effect of greatly expanding the orbit of market interaction. It has increased human capital diversity and enabled an ever-increasing number of individuals in the role of consumers to benefit from what the classical economists called the greater division of labor. The greater human capital diversity has virtually swamped the losses due to efforts by particular governments to achieve what are, in effect, unachievable goals through market intervention.

Professional economists have helped promote economic globalization to be sure. But they have also hindered the achievement of greater division of labor by supporting various interventionist proposals. Perhaps if more attention is devoted to the study of Mises’s unrecognized achievements, a better understanding of how to evaluate such interventionist proposals will help to cancel this negative contribution. For this to occur, however, students will have to demote Mises’s reputation as a champion of freedom in order to promote his unique vision of economics as a new science that can be value free.

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APPENDIX 1

MISES'S CONFUSING DISCUSSION OF CONSUMER SOVEREIGNTY

I have made a convincing case that consumer sovereignty is the foundation of Mises's economics. Why was this not discovered earlier? After all, 45 years of post-Mises, neo-Austrian revivalist economics have passed, during which numerous writers have touted Mises as the grand master of 20th century Austrian economics. I can suggest several answers. My first is that Misesian scholars have not recognized the part played by the THRUI in providing the basis for the theorem of consumer sovereignty. To understand this answer, recall that Mises takes it for granted that a person making an interventionist argument accepts the THRUI as a criterion for determining the effects of the intervention (see part 1 of this essay). There is no reason to expect the ordinary reader of the treatise to recognize this. Indeed, to my knowledge no one has.[57] Yet a person who fails to recognize the THRUI criterion is hardly in a position to accept the theorem of consumer sovereignty. If a reader fails to understand this, it is obvious from part 2 of this chapter that she is in no position to understand Mises's other economic theorems. Finally as I just pointed out she is in no position to understand what Mises meant by the market process.

I cannot blame the typical reader of the treatise or even the Misesian scholar for this lack of recognition. The unwary reader faces a number of obstacles. Among these, the most salient seem to be the following. First, Mises does not sufficiently emphasize his ultimate purpose of making value-free evaluations of interventionist arguments. Of special significance is his failure to provide the reader with a clear, identifiable roadmap for the treatise. Second, he does not carefully and clearly emphasize the fact that the classical criterion of the THRUI is equivalent to the early neoclassical criterion of the theorem of consumer sovereignty. Third, he does not emphasize that the theorem of consumer sovereignty is the fundamental theorem from which he derives the other theorems that pertain to the pure market economy. Fourth, he makes it difficult to understand the widespread application of the theorem of consumer sovereignty. On the one hand, he does not consistently use the term "theorem" and, in any event, does not give the reader sufficient help in defining an economic theorem. On the other hand he fails to use a single term to refer to the entrepreneur role.

In this appendix, I will identify another obstacle – Mises's loose terminology in describing the pure market economy. Strictly speaking the theorem of consumer sovereignty applies only to a pure market economy. Yet his four-page section on "The Sovereignty of the Consumers" uses the term the pure market economy only once. All other references are to surrogates of that imaginary construction such as the "market society," "the market," "the market economy," "a market economy," and "an unhampered market economy." The use of so many terms to mean the same thing

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[57]A possible exception is Larry Eshelman (1993) who aimed to place what he called Mises's utilitarianism in a broader moral philosophy framework. However, Eshelman was not interested in linking the THRUI to the theorem of consumer sovereignty. His essay was not in economics but in ethical philosophy.

suggests a flexibility that a reader may readily mistake for a lack of clear thinking. Indeed, the typical reader would probably be justified in thinking that the concept of consumer sovereignty is part of a polemic aimed a persuading rather than a theorem that provides the foundation for all other theorems about interaction under pure market economy conditions.

The Pure Market Economy and the Market Society

Mises introduces his section on consumer sovereignty in his chapter 15 with the following paragraph.

> The direction of all economic affairs is in the *market society* a task of the entrepreneurs. Theirs is the control of production. They are at the helm and steer the ship. A superficial observer would believe that they are supreme. But they are not. They are bound to *obey unconditionally* the captain's orders. The captain is the consumer. Neither the entrepreneurs nor the farmers nor the capitalists determine what has to be produced. The consumers do that. If a businessman does not strictly obey the orders of the public as they are conveyed to him by the structure of *market* prices, he suffers losses, he goes bankrupt, and is thus removed from his eminent position at the helm. Other men who did better in satisfying the demand of the consumers replace him (*ibid*.: 269-70, italics added).

In this paragraph, Mises argues that all entrepreneurs, capitalists, and farmers (later on the same page, he adds landowners and subtracts farmers and still later he substitutes the term "businessman") in *the market society* are subject to consumer sovereignty. I have noted that this is true for the entrepreneur role in *the pure market economy*. I have also pointed out that he recognized an exception to consumer sovereignty in the sense that a person in his capacity of factor owner may waste or withhold some of the factor in order to charge a monopoly price (*ibid*.: 272). Mises also recognizes a possible exception for a market economy that is not pure due to externalities, which exist when private property rights are incomplete (*ibid*.: 654-663). And he recognizes the exception of fraud and deception, which he had ruled out earlier in the text for the pure market economy by assuming the absence of fraud.[58] In light of these facts, his statement appears to be about the *pure market economy*. Does he really mean for it to apply to the *market society* also?

In the section immediately preceding the "consumer sovereignty" section, he seems to distinguish between the market society and the market economy:

> The analysis of the problems of the *market society*, the only pattern of human action in which calculation can be applied in planning action, opens access to the analysis of all thinkable modes of action and of all economic problems with which historians and ethnographers are confronted. All noncapitalistic methods of economic management can be studied only under the hypothetical assumption that in them too cardinal numbers can be used in recording past action and planning future action. This is why economists place the study of the *pure market economy* in the center of their investigations (*ibid*.: 266-7).

In this quotation, he seems to be using the term "market society" to refer to "capitalism" as it has evolved through history. Also in the introductory section of the chapter that contains this section, he uses the phrase "market society" to discuss the possibility of mixed system. Referring to a "society based on private ownership by the means of production," he writes that there is no such thing as a mixed economy – a system that would be in part capitalist and in part socialist (*ibid*.: 258). Later in the treatise, he writes that so long as a government, or socialized sector of the society, does not become entirely separated; it is part of the *market society* (*ibid*.: 716). Also read what he says when he introduces the term in *Human Action*:

> The classical economists sought to explain the formation of prices. They were fully aware of the fact that prices are not a product of the activities of a special group of people, but the result of an interplay of all members of *the market society* (*ibid*.: 62).

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[58]Fraud is not mentioned in Mises's initial definition of the pure market economy. Mises says only that the government protects "the market" against "encroachments" (*ibid*.: 237, as quoted above). This fact may be another source of confusion. However, at the beginning of chapter 15, where he describes the "Characteristics of the Market Economy," he writes the following:

> The state, the social apparatus of coercion and compulsion, does not interfere with the market and with the citizens' activities directed by the market. It employs its power to beat people into submission solely for the prevention of actions destructive to the preservation and the smooth operation of the market economy. It protects the individual's life, health, and property against violent or *fraudulent* aggression on the part of domestic gangsters and external foes. Thus the state creates and preserves the environment in which the market economy can safely operate (*ibid*.: 257, italics added).

It seems to me that one is compelled to assume that the "market economy" at the beginning of chapter 15 is the same as the "pure market economy" that he defined in chapter 14 and that "the state" in this quote is the same as the government in his earlier definition. Given these assumptions, one can deduce that Mises means for this paragraph to help clarify the concept of protecting the market against encroachments. By encroachments, he is referring, among other things, to "fraudulent aggression." It is difficult to interpret this paragraph in any other way. After all, it comes at the beginning of his chapter on the market; and his chapter on the market is the first step in his task of elucidating the pure market economy. Nevertheless, his failure to mention fraud in the initial definition is likely to add to a reader's confusion.

Surely he could not reasonably assume that his readers would equate the term "market society," as he used it in this introductory statement in the consumer sovereignty section, with the pure market economy, as he defined it in chapter 14. However, the two phrases must have the same meaning in his chapter 15 for his statements regarding consumer sovereignty to be logical deductions.

Other Market Concepts

I now discuss other references to the pure market economy in Mises's section on consumer sovereignty. He points out that there are many producers at different orders in the structure of production. Many of these do not produce goods for consumers. He thereby directs his readers' attention to the notion that consumer sovereignty entails messages being communicated up and down each factor supply chain. Taking account of all of the producers and factor suppliers who help produce a product, he writes that consumers "determine the income of every member of the *market economy*" (*ibid*.: 271, italics added). Here he uses the term "the market economy." One assumes that he means the same thing that he did when he used the term "market society" and "pure market economy."[59] However, he does not actually say this and his introduction of yet a third term to mean the same thing is confusing.

He then digresses to discuss an idea promoted by Frank Fetter that the consumer is like a voter in a democracy. Mises says that a more correct version of the metaphor would be to say that "a democratic constitution is a scheme to assign to the citizens in the conduct of government the same supremacy the *market economy* gives them in their capacity as consumers" (*ibid*., italics added). Here he uses "the market economy." But he goes on:

> It is true, in the *market* the various consumers have not the same voting right. The rich cast more votes than the poorer citizens. But this inequality is itself the outcome of a previous voting process. To be rich, in a *pure market economy*, is the outcome of success in filling best the demands of the consumers (*ibid*., italics added).

In making his point, Mises uses three different terms: "the market economy," "the market" and the "pure market economy." As in the previous case, he presumably means all of these terms to refer to the "pure market economy." And again, his use of more than one term serves to confuse, especially since he uses those other terms more broadly elsewhere in his treatise.[60]

Mises goes on to describe the one exception to the idea that consumer wants determine actions:

> There is in the operation of a *market economy* only one instance in which the proprietary class is not completely subject to the supremacy of the consumers. Monopoly prices are an infringement of the sway of the consumers (*ibid*.: 271-2, as quoted above).

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[59]He also uses the term "market economy" in a more general sense in chapter 14 where he seems to distinguish it from the pure market economy (*ibid*.: 252-3).

[60]Referring specifically to his term "the market," that is the title of chapter 15. However, the title is quite *inappropriate*. The reason is that his chapter is about the *pure* market economy, as I have previously shown.

Here he uses the phrase "*a* market economy," implying that the concept of consumer sovereignty applies to all classes of market economies. However, he must be referring to the pure market economy. Failure to modify "market economy" with "pure" and his use of the generalized "a" is misleading again.

Next Mises refers to a metaphor that is often used by people who do not think deeply about the market economy. People often compare the bosses of businesses with the leaders of government. This type of comparison is shallow, he asserts. "The position which entrepreneurs and capitalists occupy in *the market economy* is of a different character. 'A chocolate king' has no power over the consumers, his patrons" (*ibid*.: 272, italics added). Here he writes about the market economy but, again, he would have been wise to refer to the "pure market economy."

Finally, anticipating the argument that businesspeople may entice government officials to give them special privilege, he asserts that the capitalists and entrepreneurs *cannot* influence government officials. He writes that "[i]n an *unhampered market economy* the capitalists and entrepreneurs cannot expect an advantage from bribing officeholders and politicians" (*ibid*.: 272-3, italics added). In the preceding chapter 14, he had written of "the pure or unhampered market economy" (*ibid*.: 237, as quoted above). Now he leaves out the term "pure," presumably because he wants to stress the pure market economy's nature of being unhampered by government. However, this procedure reveals again a certain looseness of terminology that leaves a hint that Mises may be playing with words in order to manipulate the reader into supporting an ideology that she otherwise would not support. Clearly, it is an avoidable ambiguity that can have no other result than to detract from his message.

I do not wish to be misunderstood. There is nothing logically wrong with using many terms to refer to the pure market economy. However, since it is not customary to use the terms in this way, their use defeats Mises's purpose of elucidating his new economics – a praxeological-based economics concerned with evaluating arguments based on the THRUI or at least on the criterion stated by the person making an argument.

APPENDIX 2

THE FINAL STATE OF REST AND ENTREPRENEURSHIP

In my discussion of Mises’s elucidation of the entrepreneur role and of profit and loss, I cited his idea that the final state of rest is a mental tool for elucidating entrepreneurship and profit and loss. I believe that this approach to the problem of elucidating interaction under market economy conditions is misleading. The ultimate goal of the economist in using the final state of rest is to produce economic theorems that can be employed to help evaluate interventionist arguments. Such theorems consist of a beginning point, an ending point and a sequence of distinctly human action which, during the interim and under the specified conditions, cause the endpoint to occur. Because distinctly human action under market economy conditions is the equivalent of entrepreneur action – that is, because the entrepreneur role is defined as distinctly human action under these conditions – it is not wrong to say that the final state of rest is a mental toll for elucidating entrepreneurship. However, Mises does not explicitly define the entrepreneur role in this way. Nor does he define an economic theorem. For both of these reasons, I believe that the Mises’s approach is misleading. My interpretation has attempted to correct for this misleading way of representing how economic reasoning is used to put oneself in a position to evaluate interventionist arguments.

APPENDIX 3

MISES'S THEOREM OF INTEREST

I give the name "Mises's theorem of interest to the theorem that states that a good in the near future is preferred to a good, or set of goods, of like kind and quality, in the more distant future. This theorem passes the test of logic. Consider a consumer who is indifferent between consuming the good in the nearer future or more distant future. Such a consumer would not care whether she consumed in the nearer or more distant future. She would be just as satisfied if she received all of her potential satisfaction in the next moment as she would be if she postponed her satisfaction indefinitely. In light of this implication, the economist could not deduce that she would consume at all. Accordingly, the economist could not regard her as an actor. No bona fide actor can be indifferent between consuming the same good (i.e., a good that yields the same satisfaction) in the immediate future and postponing consumption until the indefinite future, since to be willing to postpone all satisfaction until the indefinite future implies that a person does not get satisfaction from consuming goods.

The theorem is also practically irrelevant to market interaction. The reason is that the assumptions used to produce it are unrealistic. There is no real world in which an individual faces a choice between consuming a good *that she regards as fixed in desirability* in the near future and postponing its consumption for the indefinite future (Knight . To see this, consider how Mises treats an alleged exception to the theorem. It is alleged that if one possessed ice in winter, it would be valued lower than if he possessed it next summer. However, the allegation that this is an exception is mistaken, Mises writes, because the ice performs different "functions" in the two seasons. The ice has the same physical structure but it is not fixed in desirability (*ibid*.: 489-90). This case is representative of the entire class of cases in which the economist must be presumed not to know the function for which a particular good of given physical characteristics may be used. In a praxeology-based economics, the term "function" in this example must be interpreted to mean "desirability to the consumer." Thus, to say that the good performs different functions is, in this context, identical to saying that it is not fixed in desirability.[61] It is not a good of the same kind and quality.

It is true that the theorem represents the apriori praxeological theorem of time preference. However, there is no need to transform this theorem by making unrealistic assumptions about the consumer role. Moreover, it can be misleading to do so.[62]

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[61]Mises's discussion of this issue (*ibid*.: 489-90) is, in my view, insufficient to communicate this essential distinction.

[62]The misleading nature of stating the theorem in this form is due to the fact that the most relevant system in which the theorem's assumptions prevail is the evenly rotating economy. In that imaginary construction, the presence of originary interest indicates the necessity of replacing capital goods that are used up in order to maintain the existing amounts of the different consumer goods (*ibid*.: 531). However, the evenly rotating economy has only one use, which has practically nothing directly to do with time preference (continued...)

[62](...continued)
(*ibid*.: 248).

As Mises viewed the matter, stating what is properly regarded as the praxeological theorem of time preference in this way had become the customary mode of expression (*ibid*.: 489). However, in my view, this mode of expression is so strange from the standpoint of someone unfamiliar with the history of economics upon which Mises draws that such an approach to time preference can have no other effect but to confuse an ordinary reader.