

Economics as a Science of Human Action

Outline

1. Science and Epistemology as Action
 - a. Epistemology
2. [The Sciences of Human Action Vs. The Natural Sciences](#)
 - a. Regularity in the Natural Sciences
 - b. [Regularity in Economics and the Sciences of Human Action](#)
 - c. Finality
3. Two Branches of the Sciences of Human Action
 - a. Two Meanings of Praxeology
 - b. The Economics Branch of Praxeology
 - (1) Conditions of Capitalism
 - (2) Action That Is Not Part of the Scope of Economics
 - c. The Deductive Method – Ratiocination
4. Economics and History

In his 1966 treatise *Human Action* (HA) Ludwig von Mises taught that economics is a science (HA: 3) of the means.¹ This science comes from two fundamental sources of knowledge: (1) *a priori* knowledge of the nature of action and (2) the insight of the classical economists that market interaction enables individuals to multiply the amounts of material goods they produce due to the “great basic principle...of cosmic becoming” of the higher physical productivity of the division of labor (ibid.: 145). I have called the first source the [prerequisites and necessary characteristics of action](#) and the second source the [division of labor law](#). Economics is useful to human beings in the pursuit of their aims to satisfy their material wants because it enables them to evaluate arguments favoring or

¹The full meaning of the idea of a science of the means is explained in my essay “[The New Science of Economics in Mises’s Treatise](#).”

opposing market intervention.² By choosing to pursue this ultimate goal, economists can attain the value freedom required in a scientific endeavor.³

Mises was the first to elaborate the *a priori* knowledge. Accordingly, his defense of the scientific character of economics was totally new. Moreover, the division of labor law and its offspring, consumer sovereignty, had been neglected or transformed by professional economists. Many professional economists associate the law with an ideology rather than a characteristic of interaction.

The purpose of this essay is to present Mises's argument that economics is a science and to show how he presents that science in his treatise. Part One presents Mises's argument that both science and epistemology are actions. Part Two distinguishes the sciences of human action from the natural sciences. Part Three praxeology shows the relationship between science in general and economic science. Part Two supports this presentation by showing how he presents his economics in his treatise.

1. SCIENCE AND EPISTEMOLOGY AS ACTION

"Science," writes Mises, "is the application of reason for a systematic description and interpretation of phenomena" (Mises 1944: 36).⁴ People who write sentences containing the word science often treat it as an object. This is misleading. Distinctly human actors have created the word to describe a class of their actions. In doing so, they necessarily associate it with a particular class of actions.

An actor can conceive of the action of systematically describing and interpreting phenomena either as an end itself or as a means (i.e., as a tool that helps them achieve an end or ends), or as both. In either case, if it turns out to be of practical use, it will be employed to achieve ends. Thus in his final book "The Ultimate Foundation of Economic Science," (1962 – UF), Mises writes first that the

²Mises writes:

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

Social cooperation means cooperative action that enables individuals to take advantage of the higher physical productivity of the division of labor.

³See the section entitled "Economics as a Science" in my essay "[The New Science of Economics in Mises's Treatise.](#)"

⁴Mises defends this definition in his various discussions of "the logical structure of the human mind" in HA. He also differentiates this definition of science from the more common modern usage that associates this term only with the natural sciences (Mises 1962: 38-9). In a related footnote he quotes G. Collingwood as follows:

There is a slang usage, like that for which 'hall' means a music hall or 'pictures' moving pictures, according to which 'science' means natural science. [But] in the tradition of European speech . . . continuing unbroken down to the present day, the word 'science' means any organized body of knowledge.

function of knowledge “is to advise man how to proceed in his endeavors to remove uneasiness.” He follows this by writing that at

the higher stages of man’s evolution from the conditions of the Stone Age to those of the age of modern capitalism, uneasiness is also felt by the mere prevalence of ignorance concerning the nature and the meaning of all things, no matter whether knowledge about these fundamental things would be of practical use for any technological planning. To live in a universe with whose final and real structure one is not familiar creates in itself a feeling of anxiety (UF: 35).

In short, an actor may conceive of the knowledge she acquires as having a “practical use.”⁵ Or she may conceive it merely as a means of removing uneasiness due to her anxiety about her uncertainty (or, what amounts to the same thing, a manifestation of her curiosity).

When actors produce knowledge, they may expect it to have a practical use. Nevertheless, it may turn out to not be useful. On the other hand, actors may produce knowledge that they do not conceive of having a practical use but it may turn out to have such a use anyway. In any case, the results of some types of knowledge production are bodies of knowledge that have no known practical use. People who study and contribute to bodies of knowledge that have no practical use satisfy their curiosity.⁶ But they learn nothing of practical use that extends beyond the status or prestige they may earn in their sentimental interaction with others.⁷ Many people study the history of the writings and discoveries of natural scientists and economists. Such people may increase their wisdom and status. But, as students of history, they are not concerned with the practical use of the knowledge they acquire their studies.

Epistemology

According to this definition of science, epistemology is also a science. Mises writes that “the theory of human knowledge...is a branch of sciences of man” (UF: 1). As such it, too, may or may not have a practical use. *Properly undertaken*, the production of knowledge in the field of epistemology

⁵Mises often uses the concept of a “pragmatic” view of action as a substitute for a view of action that accounts for the practical use of the action’s consequences. For example, he writes about the success of the natural sciences in the minds of those who might otherwise have resorted to mysticism. He writes:

The contrivances designed according to the scientific theories run the way the theories predicted and thus provide a pragmatic verification for their correctness. On the other hand the magic devices did not come up to expectations and do not bear witness to the magic world view (Mises 1957: 248).

A term that he uses in his last book to refer to knowledge that is produced for the purpose of achieving a practical use is “activist basis of knowledge” (UF: ch. 2).

⁶Mises writes that the “study of history makes a man wise and judicious. But it does not by itself provide any knowledge and skill which could be utilized for handling concrete tasks” (HA: 31).

⁷It may be useful to present a distinction here that, to my knowledge, Mises did not make or at least did not emphasize. The historian may study the history of religion or of groups of individuals who subscribe to a particular ethic, such as natural law. Such a study may increase her wisdom and make her more judicious. Alternatively, an individual may join with colleagues who share her religion or ethical views in an effort to clarify them or to add to their views in some way. In this case, she is not an historian but an ethicist. The term “theologian” is representative of this distinction. On the one hand, it may mean an historian who describes studies of concepts of god. On the other hand, it may mean the study of a particular concept of god.

enables one to compare the knowledge produced by the economists and other scientists of human action (e.g., historians) with that produced by natural scientists. Accordingly, it necessarily provides a criterion for evaluating all forms of [positivism](#).

Yet epistemologists have acquiesced in these ideologies. This prompts Mises to write that the

main deficiency of traditional epistemological attempts [to deal with man as he thinks and acts] is to be seen in their neglect of the praxeological aspects. The epistemologists dealt with thinking as if it were a separate field cut off from other manifestations of human endeavor. They dealt with the problems of logic and mathematics, but they failed to see the *practical aspects of thinking*. They ignored the *praxeological a priori*...The most characteristic trait of modern epistemology is its entire neglect of economics, that branch of knowledge whose development and practical application was the most spectacular event of modern history (UF: 2, italics added).

In using the term “praxeological *a priori*,” he is referring to the [a priori knowledge](#) of the nature of action, which is one of the two fundamental sources of knowledge for economics. To reinforce this statement, he writes that “general epistemology can be studied only by those who are perfectly familiar with all branches of human knowledge” (UF: vii). This, of course, includes Misesian economics.

Note his reference to the practical aspects of thinking. “What the epistemology of the sciences of human action has to remember about the natural sciences,” he writes, “is that their theorems, although abstracted from experience, i.e., from what happened in the past, have been used successfully for designing future action” (UF: 305). Among other things, this refers to the fact that the knowledge produced by the classical economists helped to transform their government’s policy and thereby expanded the sphere of capitalism and the satisfaction of material consumer wants. Even the technological advances that are so revered by natural scientists and positivists are mostly the consequence of this transformation. Thus Mises writes that what “transformed the stagnant conditions of the good old days into the activism of capitalism was not changes in the natural sciences and in technology, but the adoption of the free enterprise principle” (UF: 123). And he writes that what “begot all those technological and therapeutical achievements that characterize our age was not science, but the social and political system of capitalism” (UF: 127).

2. THE SCIENCES OF HUMAN ACTION VS. THE NATURAL SCIENCES

The subject matter of human action is best characterized not as *homo sapiens* but as *homo agens* (HA: 14). The distinct feature of this subject matter is that the phenomena think and choose.⁸ Natural scientists study phenomena that do not think and choose. The differences between the sciences of

⁸Some human beings do not act. Some are not fully developed actors while others are senile or mentally deficient. The concern of the scientists of human action with the acting character of human beings leads them to produce a science about individuals who possess this character.

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

The phrase “practically not human” should be interpreted to mean “not human from the standpoint of the purpose of building the concepts and theorems produced in the sciences of human action.”

human action and the natural sciences can be traced to the difference in the subject matter. Thus in his 1933 *Epistemological Problems of Economics* (EP), Mises writes that “in spite of the unity of the logical structure of our thought, we are compelled to have recourse to two separate spheres of scientific cognition: the science of nature and the science of human action” (EP: 137).

Regularity in the Natural Sciences

Neither the science of human action nor the natural sciences could be the subjects of study if they did not exhibit what Mises calls *regularity*.⁹ But the regularity in the two types of science differs. In

the orbit of natural events of the external world...[one observes] what appears to be an inexorable regularity in the concatenation and sequence of phenomena. There are constant relations between entities that enable the scientist to establish the process called measurement” (UF: 7).

The most obvious of these regularities were observed by the earliest of human ancestors. They are regularities related to the operation of gravity, to the orbit of the earth around the sun, and to the seasonal appearance of foodstuffs that could be acquired by means of various kinds of work. With the advent of the scientific method, natural scientists greatly expanded their knowledge of regularity through experimentation. They discovered what Mises calls *constants*.¹⁰ These constants “enable the scientist to establish the process called measurement (UF: 7).

Due to regularities, humankind and natural scientists learned that their own actions could cause predictable effects. This led the natural scientists to produce laws about how to cause effects. Mises calls the research on cause and effect carried out by natural scientists “causality research.”

The archetype of causality research [is]: where and how must I interfere in order to divert the course of events from the way it would go in the absence of my interference in a direction which better suits my wishes? In this sense man raises the question: who or what is at the bottom of things? He searches for the regularity and the ‘law,’ because he wants to interfere (HA: 22).

Regularity in Economics and the Sciences of Human Action

In contrast, the “field of the sciences of human action is the orbit of purpose and of conscious aiming at ends; it is teleological” (TH: 240). Teleology refers to the concept of cause studied by the

⁹Mises writes that the “natural sciences are possible only because there prevails regularity in the succession of external events” (UF: 27). The same is true of the science of human action and economics (HA: 1).

¹⁰He writes:

In the realm of physical and chemical events there exist (or, at least, it is generally assumed that there exist) constant relations between magnitudes, and man is capable of discovering these constants with a reasonable degree of precision by means of laboratory experiments (HA: 55).

scientists of human action.¹¹ It means “purposeful behavior” (HA: 11, 25), which implies that it is behavior caused by an act of will.¹²

The regularity in the sciences of human action was not discovered by epistemologists or by people who set out to study distinctly human action. It was discovered by the early business writers. They discovered that bad money tends to drive out the good, that a change in the quantity of money tends to cause a change in prices in the same direction, and that a change in the supply of a particular good tends to cause an opposite-sign change in the price of the good. These discoveries ultimately led to the theorem of the elimination of price differences. These tendencies are not like the regularities in the natural sciences. No numerical constants of the sort that are discoverable by natural scientists are present.

These discoveries were followed a centuries-long investigation into the causes of the regularity expressed by such tendencies. The investigation culminated in a set of theorems in the field of study that became known as economics, or catallactics. Only after the economists began to produce such theorems did Mises raise the question of the mental tools they employed to produce them. He showed that the tendencies described are due to two fundamental elements. First, they are caused by action. Second, they are caused by individual striving to attain the benefits from the higher physical productivity of the division of labor. The second is the division of labor law, through which enlightened actors discover that they can best serve their own interests by specializing and trading with others.

The division of labor law was discovered first; a century later, Mises identified the prerequisites and necessary characteristics. It was only after Mises elaborated pure praxeology in his treatise that he was able to fully present the ideas that he had incompletely expressed in his 1933. For the patient reader, his treatise and his later 1957 and 1962 books provided a complete picture of economics in relation to the broader fields that he called the science of praxeology and the sciences of human action.

Two sources of regularity in human interaction:

1. Actors share the same prerequisites and necessary characteristics of action.
2. Under certain conditions, the participant actors tend to act in observable ways that can be interpreted to be in accord with a theorem that has a praxeological foundation.

Finality

Mises introduces the terms “category of finality” (HA: 646) and “final cause” (HA: 23) as a complement to teleology. His use is best illustrated in the following quotation.

¹¹Mises tells the reason for the term “science of human action” at UF: 62. In HA, he used the terms “science of human action” and “sciences of human action” more or less interchangeably.

¹²The advanced reader might wish to refer to Mises’s statement that actors cannot “imagine categories at variance with...the principles of causality and teleology” (HA: 35). By “principles” of causality and teleology, he means the distinctions made by actors between two different classes of causality of observable events – *physical causality* and distinctly human action. Thus he writes that aprioristic reasoning is required in science because “man does not have the creative power to imagine categories at variance with the fundamental logical relations and with the principles of causality and teleology...” (HA: 35). Also see his reference to the “principle of action” at EP: 15.

What differentiates the realm of the natural sciences from that of the sciences of human action is the categorical system resorted to in each in interpreting phenomena and constructing theories. The natural sciences do not know anything about final causes; inquiry and theorizing are entirely guided by the category of *causality*. The field of the sciences of human action is the orbit of purpose and of conscious aiming at ends; it is teleological (TH: 240, italics).

In this passage, he uses the term causality to refer to physical causality. The final cause in the science of human action refers to the employment of means to attain a first-order, or final end. The behavior that a person performs cannot be traced any farther than to her final end – or final cause.¹³ So far as the natural scientist knows, there is no connection between the physical cause and effect that she observes and a final cause – i.e., a teleological cause.

A natural scientist's observation and experimentation may be driven by his desire to discover the purpose of a prime mover, or creator. However, in spite of the tremendous advances in the natural sciences, there has yet been no convincing argument that such a cause has, in fact, been discovered. On the other hand, the scientist of human action takes it for granted that all distinctly human action is traceable to the final causes actors's means and ends.

3. TWO BRANCHES OF THE SCIENCES OF HUMAN ACTION

Mises divides the sciences of human action into two branches: praxeology and history (HA: 30). The rationale for this separation is twofold. First, economics has a practical use that differs from that of history. Second, economics is a theoretical science while history is not. To illustrate these differences, the section begins by defining praxeology. Then it shows why Mises regards economic science as a branch of the science of praxeology. The science of history is discussed in the next part.

Two Meanings of Praxeology

Mises used the term “praxeology” in two senses. This double meaning can be a source of confusion. First, he used it in a narrow sense to refer to the exclusive mental task of conceiving the prerequisites and necessary characteristics of action in the abstract. Second, he used it to refer to the hypothetical study of action under all possible particular circumstances faced by actors. In this second sense, praxeology consists of a class of studies that includes economics. Accordingly, he writes frequently that economics is a *branch* of praxeology.

To avoid potential confusion between the two meanings, I have introduced the term *pure praxeology* to refer to the study of action in the abstract. Mises used various other terms to refer to pure praxeology, including the study of action as a concept or category, the study of action in general or in the abstract, and the study of the meaning of action. Yet another substitute term is the study of the acting character of human beings.

<p>Pure Praxeology: the study of action as a category or action in general. In other words, it is the study of the <i>acting character</i> of human beings.</p>
--

The second meaning of praxeology refers to the study of all of the possible consequences of action. This includes the action of an actor who is isolated from others and interaction among individuals who

¹³Another term for final cause that Mises frequently uses is “ultimate given” (e.g., HA: 17). His messages to readers would probably have been clearer if he had only used one phrase.

are members of groups. It is the second meaning that leads in the direction of economics as a branch of praxeology.

The Economics Branch of Praxeology

Mises points out that, in her study interaction, the praxeologist has, up to now, only succeeded in the field of economics. In earlier works, he wrote that economics is the most developed branch of praxeology. In his 1962 book, however, he changed to say that up “to now the only part of praxeology that has been developed into a scientific system is economics” (UF: 42).

To understand his second meaning of praxeology, one must examine his statements about the relationship between the two studies. He introduces this relationship in a section of his treatise entitled “The Procedure of Economics” in his chapter 2. The section begins by pointing out that the economist, as pure praxeologist, first produces “the universal conditions of acting as such” (HA: 64). Then he goes on to discuss the theorems of economics. To deduce these theorems, he writes, “one must go further and define – of course, in a categorial and formal sense – the less general conditions required for special modes of acting.” It would be possible to build theorems for action under “all thinkable conditions.”¹⁴ “But the end of science is to know reality” (HA: 64-5). He does not say why this is the “end” of the science of economics. Nor does he tell the aspects of reality that the economist aims to study. The following edited excerpt tries to capture the true thrust of his discussion in a way that anticipates what Mises writes about the scope of economics in his chapter 14:

Experience...directs our curiosity toward certain problems and diverts it from other problems. It tells us what we should explore...In our actual world...[studies that assume the disutility of labor and indirect exchange] are an essential part of economic theory. [Economists' interest in indirect exchange and other real conditions under which actors operate] does not alter the aprioristic character of its reasoning. But it marks the way in which economics, up to now the only elaborated part of praxeology, presents the results of its endeavors...In introducing assumptions into its reasoning, it satisfies itself that the treatment of the assumptions concerned can render useful services for the application of its theorems to the solution of concrete historical and political problems. It adopts for the organized presentation of its results a form in which aprioristic theory and

¹⁴His statements here are similar to those made in his 1933 book. It would be possible, he writes there, to

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

However, “we are satisfied with the less universal system that refers to the conditions given in the world of experience.” What “we owe to experience is the demarcation of those problems that we consider with interest from problems that we wish to leave aside because they are uninteresting from the point of view of our desire for knowledge” (*ibid.*: 16). Both sets of quotations tell the reader, in essence, that economics is a branch of praxeology and that its students are concerned with “special conditions” that are of interest to the economist.

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

the interpretation of historical phenomena are intertwined...From the unshakable foundation of the category of human action praxeology and economics proceed step by step by means of discursive reasoning. Precisely defining assumptions and conditions, they construct a system of concepts and draw all the inferences implied by logically unassailable ratiocination”¹⁵ (HA: 65-67, italics added).

In this excerpt, Mises uses the term “aprioristic theory.” He is referring to the aprioristic reasoning that is required to identify the prerequisites and necessary characteristics of action. His reference to historical phenomena is intended to prepare the reader to recognize that economics is the study of interaction under the conditions of capitalism which the study of history reveals.

Conditions of Capitalism

He does not describe the conditions of capitalism until later in his treatise. In Part One of his chapter 14 on the scope and method of economics, he writes that economists have always agreed that economics is about “the determination of the mutual exchange ratios of the goods and services negotiated on markets, their origin in human action and their effects upon later action” (HA: 232). In other words, economists have traditionally been interested in choices that result from and are affected by prices and markets (*market phenomena*). In market interaction the intermediate aim of each person is to first obtain money in exchange.

Market phenomena could not exist in the absence of what Mises called the conditions of the market economy – i.e., under the [conditions of capitalism](#) (HA: 237-238). To describe these, one must conceive first of interaction under the *conditions of pure capitalism*. These are complete private property rights, completely free enterprise, the use of money in exchange, the absence of fraud and deceit, and a government that collects taxes and establishes and enforces the other conditions. A government is defined as a set of government agents who collectively possess and are in a position to exercise a monopoly over coercion and compulsion.¹⁶

After he produces all of the theorems about market interaction under pure capitalism that he expects to need,¹⁷ the economist “turns to the study of the various problems raised by interference with the market on the part of governments and other agencies employing coercion and compulsion (HA: 238). In other words, he begins to pursue what I have called the ultimate goal of economics. In the pursuit of this goal, he may relax the conditions of pure capitalism. He may introduce impure capitalism if the proponent of an intervention argument assumes such conditions and if they are realistic.

Action That Is Not Part of the Scope of Economics

Problems of precisely defining the scope of economics arise because the choices that result in the market phenomena cannot be separated, in reality, from other choices. One class of such choices are those made in order to satisfy non-material wants, such as the want for affection or a want to act in accord with spiritual beliefs. Other classes include choices to acquire material consumer goods that

¹⁵Indirect exchange refers to exchange that entails first acquiring money and then exchanging the money for the thing that is desired. It is discussed at length in my essay “[The Basic Economic Functions and Roles in Mises’s Economics](#).”

¹⁶HA: 285, 324.

¹⁷The need depends on the particular intervention arguments that he plans to evaluate.

are outside the nexus of capitalism, including barter, theft, extortion and fraud. The economist qua student of action in the abstract knows that choices of all kinds are related. It is not possible in reality to separate “economic choices” from “non-economic” choices. “In the actual scales of value material and ideal things are jumbled together” (HA: 233). Yet he must artificially make such a separation in order to do economics in its traditional sense. Thus,

considerations of expediency and traditional convention make us declare that the field of catallactics or of economics in the narrower sense is the analysis of the market phenomena. This is tantamount to the statement: Catallactics is the analysis of those actions which are conducted on the basis of monetary calculation (HA: 234).

What method does he use to make this separation? He answers this question by saying that the economist must build imaginary constructions. The builder of “imaginary constructions...abstract[s] from the operation of some conditions present in actual action” (HA:). In particular, the economist builds the image of interaction under pure capitalism in order to help define the scope of economics as traditionally considered.

The Deductive Method – Ratiocination

In his 1933 book, Mises writes that the economist uses the method of deduction to produce his economic theorems.¹⁸ This method consists of combining the (1) the starting vocabulary he produces by identifying the prerequisites and necessary characteristics of action, (2) the vocabulary he produces with the imaginary constructions that enable him to write intelligibly about the interaction under the conditions of capitalism, (3) imaginary constructions he uses to build theorems of interaction under the conditions of pure capitalism, and (4) imaginary constructions he uses to build theorems by adding the assumptions made by the proponent of an intervention argument.¹⁹

¹⁸He writes:

The theorems of economics are derived not from the observation of facts, but through deduction from the fundamental category of action...[T]hey are of aprioristic derivation and therefore lay claim to the apodictic certainty that belongs to basic principles so derived (EP: 18).

In the treatise, he uses the term “ratiocination.” He writes that economics proceeds “step by step by means of discursive reasoning. Precisely defining assumptions and conditions, they construct a system of concepts and draw all the inferences implied by logically unassailable ratiocination” (HA: 67). One might summarize by saying that ratiocination is a deductive system in which the aprioristic reasoning of pure praxeology is combined with subsidiary assumptions to produce economic theorems. In producing such theorems, the economist combines the prerequisites and necessary characteristics of action with assumptions about individual action in the world.

In introducing assumptions into its reasoning, [economics] 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 (HA: 66).

¹⁹In his 1933 book, he refers generally to this method as the “axiomatic method.” He writes that it

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

Economic Science Vs. The Natural Sciences

So, far the distinction between the sciences of human action and the natural sciences has been based on the difference between the type of phenomena studied and between the type of regularity that they, respectively, exhibit. To distinguish specifically between economics and the natural sciences, one must recognize that the value-free character of economics derives from the ultimate goal that the economists pursue. Economists assure their value freedom by directing their attention to the evaluation of intervention arguments. To properly distinguish between economics and natural sciences, one must carve out, from the broad class of natural scientists, the subclass who aim to help individuals better satisfy wants for material consumer goods by either proposing new interventions or interventions in the material world that differ from those of others. In accord with this difference, Mises writes:

the same pragmatic proof that can be advanced in favor of the exclusive use of causal research in the field of nature can be advanced in favor of the exclusive use of teleological methods in the field of human action. It works, while the idea of dealing with men as if they were stones or mice does not work. It works not only in the search for knowledge and theories but no less in daily practice (TH: 248).

To say that “it works” means that it results in knowledge that has a practical use.

Experiment Vs. Theorem-building

Once one sets up the proper comparison, he turns to the obvious fact that the phenomena studied by economists differ from those studied by natural scientists. The economist studies phenomena that think and choose. The natural scientist studies phenomena that do not. In line with this, one recognizes that the regularity in the material world permits the natural scientist to accurately predict the effects of a particular intervention by studying the effects of the same type of intervention under comparable conditions in the past and present. This means that, to the extent that she can duplicate the conditions she expects to prevail in the future in an experimental intervention, she can be confident that she can predict its effects.

In the case of economics, the situation is different. There is no way to duplicate in the present the conditions that will prevail in the future. This is due to the fact that the events that the economist aims to predict are due to the separate wills of numerous interacting individuals. The phenomena is different not only because they are teleological but also because they actors who make choices try to take account of the other actors who, in turn, try to take account of them. Austrian economists have used the term “complexity” to refer to this difference. More descriptive term would be *inter-subjective complexity* or *interaction complexity*.

Due to inter-subjective complexity, prediction of economic outcomes are beyond the capacity of economists to make. Not only are the experimental interventionist methods used by natural scientists useless in economics, attempts to employ past observation to predict future outcomes would fail completely if it weren't for the second source of economic knowledge and of regularity of the phenomena studied by the scientists of human action, namely, the division of labor law. It is the division of labor law that ultimately led to the discovery of a tendency toward a final state of rest, given the absence of other changes. This tendency is what enables the economist to build economic

He does not use the term “axiom” in this context in his later books.

theorems that enable him to evaluate intervention arguments on the grounds of whether they take account of the higher productivity of the division of labor.

Pattern Predictions

Some Austrian economists assert that while the economist cannot be successful in making exact predictions of the effects of some policy, they can make predictions about the patterns of future interaction. Three examples are the patterns described by the early business writers and described above, such as the quantity theory of money. It must be emphasized that the only reason why such predictions are possible is the prevalence of the division of labor law. For example, the higher prices that are predicted after an increase in the money supply are due to the change in signaling carried out by entrepreneurs as they adjust to the higher money demands for their consumer goods.

Two Types of Theorems in Economics

This means that the economist only builds two types of theorems. The first are built to represent the choices that take place under the conditions of pure capitalism. This means that their only special distinction is that they require money as a medium of exchange and entail monetary calculation by the entrepreneur role and price comparisons by the consumer-saver role and the factor supplier roles. Such choices are “economic” in the traditional sense. When viewed as a complex, the choices exhibit the characteristic of economic calculation which can be influenced by government intervention in markets, including the market for transferable deposits. The second type of theorems are built to evaluate specific intervention arguments. In building them, the economist represents the particular assumptions made by the proponent, representing them as assumptions. The resulting theorems represent

Economics as a Theoretical Science

Once one recognizes the types of theorems that economist produces in an effort to achieve his ultimate goal, he is prepared to understand the following statement which Mises made in his 1933 book before he had written about the theorem-production process.

The science of human action that strives for universally valid knowledge is the theoretical system whose hitherto best elaborated branch is economics. In all of its branches this science is a priori, not empirical. Like logic and mathematics, it is not derived from experience; it is prior to experience. It is, as it were, the logic of action and deed (EP: 13).

Note that he compares economics with logic and mathematics, and not with the natural sciences. He plans to later argue that in order to make the latter comparison, a comparer one must focus on the practical use of the science. Accordingly, in the same context, he writes:

Human thought serves human life and action. It is not absolute thought, but the forethought directed toward projected acts and the afterthought that reflects upon acts done. Hence, in the last analysis, logic and the universally valid science of human action are one and the same. If we separate them, so as to contrast logic and practice, we must show at what point their paths diverge and where the special province of the science of action is to be found (EP: 13-4).

In his 1933 book, he does not evaluate arguments favoring market intervention. Accordingly, he does not show where logic and practical use diverge in this field. He does so in the field of history, where he distinguishes between conception (theory) and understanding (practical use for the purpose of

increasing wisdom). He does this in his chapter 3. Thus, he was not yet prepared in this chapter or in other chapters of that book to compare economics and the natural sciences on the basis of their practical use.

Yet he planted the seeds of this extension when he wrote:

Now it was learned that in the social realm too there is something operative which power and force are unable to alter and to which they must adjust themselves if they hope to achieve success, in precisely the same way as they must take into account the laws of nature...[This learning] “had enormous significance for men’s action. It led to the program and policies of liberalism and thus unleashed human powers that, under capitalism, have transformed the world. (EP: 3-4).

Mises makes comparable statements in his treatise (HA: 280, 885), where he writes that [praxeological law limits the freedom to choose](#).

A Priori and a Posteriori Sciences

In defending his claim that economics is a theoretical science Mises made use of a distinction in epistemology between *a priori* and *a posteriori* knowledge. He writes that the sciences of economics, logic, mathematics, and geometry are *a priori* sciences. The natural sciences are *a posteriori*. They begin with observation and behavior in the physical world. However, these behaviors tell the natural scientist nothing about causes (EP: 10, 13). There is no way to complete the task of producing natural science hypotheses and theorems without *interpretation*. Interpretation requires a mind that possesses the necessary characteristic of the concept of physical causality. To produce knowledge in the field of the natural sciences, one must already possess the *a priori* knowledge of logic. And it is helpful also to know mathematics and geometry.

The *a priori* sciences enable humankind to transform observation and behavior in the world into causal hypotheses, some of which can be tested through experimentation. This does not mean that they are *innate* – i.e., that they are inherited (UF: 16). The capacity to produce the sciences may be regarded as innate.²⁰ But the sciences themselves are not. On the contrary, “logic, mathematics, and praxeology are...imposed upon us by the world in which we live and act and which we want to study” (UF: 14). They could not be produced without observation and behavior in the physical world. This idea can be expressed by referring to Mises’s definition of the much abused word “experience.” “Experience,” he writes, “is a mental act on the part of thinking and acting men” (UF: 15). As such, the event of experience could not occur unless an actor already possessed the prerequisites and necessary characteristics of action. Experience requires both (1) observation and behavior in the physical world and (2) the capacity to identify regularities. The *a priori* sciences are built without

²⁰To explain the innateness of capacity, one might form an evolution hypotheses about there development, as Mises does in a section entitled “A Hypothesis about the Origin of the A Priori Categories” (UF: 14-17).

reference to specific experience, although they could not be produced at all in the absence of experience.²¹

Now consider economics. What does it mean to say that economics is an *a priori* science? It has already been pointed out that economics, in simplistic terms, is a set of theorems in which pure praxeology and subsidiary assumptions are combined. Pure praxeology is obviously *a priori* knowledge. No reference to particular experiences is necessary to produce it. Mises aims to put the theorems of economics in the same *a priori* class by proposing that the theorems that are produced by means of ratiocination (i.e., the deductive method, or the axiomatic method, as described above) are also independent of particular experience. One can accept this proposition, he maintains, even though the purpose of particular theorems is to evaluate particular intervention arguments about particular experiences that are proposed to occur in the future. This is the basis for his writing that economics is an *a priori* science (UF: 68) and a branch of praxeology (UF: 62-3).²²

4. ECONOMICS AND HISTORY

Unlike praxeology and economics, history as a science of human action is not a theoretical science. The former are *a priori*; the latter is *a posteriori*. Moreover, the purposes of economists and historians are different. The economist aims to contribute to the solution of “political problems” by evaluating intervention arguments. The historian aims to provide wisdom by making and trying to support hypotheses that particular final causes – particular actions of particular actors combined to cause some historical event to occur. To achieve this, he needs information about individuals’ ideologies and about how some people influenced others. The economist confines his theorems to an image of interaction under capitalist conditions in which individuals aim to satisfy their wants for

²¹Thus, anticipating his proposition that praxeology and economics are *a priori* sciences, he writes about these that our science:

disregarding the accidental, considers only the essential. Its goal is the comprehension of the universal, and its procedure is formal and axiomatic. It views action and the conditions under which action takes place not in their concrete form, as we encounter them in everyday life, nor in their actual setting, as we view them in each of the sciences of nature and of history, but as formal constructions that enable us to grasp the patterns of human action in their purity (EP: 14).

²²A defense of the idea that economics is an *a priori* science can be approached by considering what the actions that would be required to “attack” a praxeological or economic theorem. Mises writes:

He who wants to attack a praxeological theorem has to trace it back, step by step, until he reaches a point in which, in the chain of reasoning that resulted in the theorem concerned, a logical error can be unmasked. But if this regressive process of deduction ends at the category of action without having discovered a vicious link in the chain of reasoning, the theorem is fully confirmed. Those positivists who reject such a theorem without having subjected it to this examination are no less foolish than those seventeenth-century astronomers were who refused to look through the telescope that would have shown them that Galileo was right and they were wrong (UF: 71-2).

material consumer goods by first acquiring money. The historian tries to take account of all of the factors that the relevant individuals are thought to take into account in making their choices to act

[Other Austrian Economics Commentary](#)

Please send feedback:

Email: gunning@nomadpress.com

[Go to Pat Gunning's Pages](#)

References*

Mises, Ludwig von. (2003) *Epistemological Problems of Economics*. Translated by George Reisman. Auburn, Alabama: Ludwig von Mises Institute. Third edition. (Originally published in German in 1933).

Mises, Ludwig von. (1966) *Human Action: A Treatise on Economics*. Chicago: Henry Regnery Company (First published in German in 1940).

Mises, Ludwig von. (1985 [1944]). *Omnipotent Government: The Rise of the Total State and Total War*. Spring Mills, PA: Libertarian Press.

Mises, Ludwig von. (1944b) "The Treatment of 'Irrationality' in the Social Sciences." *Philosophy and Phenomenological Research* 4: 4. In Ludwig von Mises. (1990) *Money, Method, and the Market Process: Essays by Ludwig von Mises* (Edited by Richard Ebeling). The Netherlands: Kluwer Academic Publishers.

Mises, Ludwig von. (1985) *Theory and History*. Auburn University, Alabama: The Ludwig Von Mises Institute. Originally published in 1957.

Mises, Ludwig von. (1978) *The Ultimate Foundation of Economic Science: An Essay on Method*. Kansas City: Sheed, Andrews and McMeel. Originally published in 1962 by Van Nostrand, Princeton, N.J.

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