

Pure Praxeology, the Vocabulary of Action and Aprioristic Reasoning

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The first step in the [four-step procedure](#) of reaching a position to evaluate intervention arguments is to produce a vocabulary that can be used to describe action. Such a vocabulary starts with the identification of the *prerequisites and necessary characteristics of action*. I call the field of study that contains individuals who identify and articulate these “pure praxeology.” I use the term “pure praxeologist” to refer to a person who produces such a vocabulary but who does nothing more. Ludwig von Mises was, to my knowledge, the only expositor of pure praxeology. He wrote his exposition in his treatise *Human Action* (1966 – HA).¹

Pure Praxeology: the study of the acting character of humankind and the elaboration of a vocabulary to enable the student to describe various aspects of that character.

¹Mises used the term “praxeology” in two senses. 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. This sense corresponds to what I call pure praxeology (HA: 12, 44, 47, 761). Second, he used it to refer to the hypothetical study of action under all possible particular circumstances faced by actors (HA: 65). In this second sense, praxeology consists of a set of studies one subset of which is economics. Accordingly, he writes frequently that economics is a *branch* of praxeology (e.g., HA: 885).

The use of the term “praxeology” in two senses can be confusing. The reader of HA must be prepared to identify his meaning from the context.

Mises also 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, and the study of the meaning of action. The reader must be prepared in this case to substitute terms.

2 Pure Praxeology, Vocabulary, and Apriorism

Some human beings do not act. Some are not fully developed actors while others are senile or mentally deficient. But the economist is concerned with those who act. Accordingly, he produces a science about individuals who possess the acting character.²

In order to achieve his aim, the pure praxeologist must use a method that Mises called “ratiocination.” To use this method one must employ a mode of investigation that Mises called “aprioristic reasoning.” Moreover, one must be convinced that his own mind possesses a “logical structure.” These terms and mental procedures are unfamiliar to most economists and have been misunderstood by many self-proclaimed Austrian economists. I discuss them in greater detail below.

That the mind has a logical structure has long been assumed by economists and natural scientists. It has been challenged, however, by critics of economics. Mises was especially concerned with critics who he called polylogists. Marxist polylogists, for example, assumed that the logical structure of the mind of a presumed member of the capitalist class differs from that of the mind of a member of the presumed laboring class. It was partly the writings of such critics that prompted Mises to introduce the new field of study and the vocabulary required to describe it.

The purpose of this essay is to present the results of Mises’s pure praxeology, to show how he achieved his results and to introduce the reader to his vocabulary. To do this in the most efficient way I know, I will have to make some minor changes to that vocabulary. Part One identifies what I call the prerequisites and necessary characteristics of action and shows how Mises used aprioristic reasoning and counterfactual imaginary constructions. Part Two shows how aprioristic reasoning presupposes a mind that has a logical structure. It then shows how Mises links the aprioristic reasoning of pure praxeology to ratiocination in economics. Part Three shows how aprioristic reasoning is used in the natural sciences.

The author could find only one place where Mises used the term “pure praxeology.” It was in the notes he made for a seminar in 1934 (Mises: 1934: 327). Whether he uses the term in the same way as it is used here is unclear.

²Mises writes that man is

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

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

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

If no members of the species *homo sapiens* acted, there could be no study of action. Not only would there be no actors to study, there would be no scientists.

1. THE PREREQUISITES AND NECESSARY CHARACTERISTICS OF ACTION³

The pure praxeologist can identify three prerequisites of action: uneasiness, the power to alleviate the uneasiness, and the expectation that the uneasiness will be alleviated by an act of will.⁴ If a person did not feel uneasiness, she would have no incentive to act. She would not be an actor. Similarly, if she did not expect a particular action to remove her uneasiness, she would have no reason to act. Finally, if she did not make the act of will that she believes is required to alleviate the uneasiness, no action would occur.⁵ The necessary characteristics of action refer to (1) ends and means, (2) time and (3) uncertainty.

The prerequisites and necessary characteristics of action: uneasiness, the power to alleviate the uneasiness, the expectation that the uneasiness will be removed by an act of will, which implies ends and means, time and uncertainty.

³To refer to these prerequisites and necessary characteristics of action, Mises used the term “category of action” (HA: 35, 64, 68). Regrettably, he also used this term to refer to some of the particular prerequisites and necessary characteristics (HA: 22, 393). For example, he called the preference for the same good, albeit at different future times, a category of action (HA: 527). To avoid any ambiguity, I use the longer but more descriptive phrase.

⁴Mises’s initial statement about prerequisites of action is in his opening chapter. He writes:

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

He goes on to call these “the general conditions of human action.” This seems misleading. The term “conditions” can have many meanings. What he should say, in order to avoid any ambiguity, is that these are the prerequisites of action as a category or of action in general. In writing of the acting character of actors, the praxeologist *means* that actors, by definition, possess these prerequisites.

⁵Much later in the treatise, Mises calls these counterfactual constructs imaginary constructions and asserts that building imaginary constructions is the method of praxeology and economics (HA: 236-7). His use of imaginary constructions is evident in the following passage:

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

And

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

The imaginary constructions in this case consist of “counterfactual” images. No actor can be perfectly content and no one can act if she does not expect her action to remove felt uneasiness.

The method used to identify the prerequisites and necessary characteristics of action is a combination of aprioristic reasoning and counterfactual imaginary constructions.⁶ In this subsection I discuss each in turn.

Aprioristic Reasoning

I define aprioristic reasoning as the use of the mental tools that normal distinctly human actors develop during the period of cognitive growth that enable them to identify the prerequisites and necessary characteristics of action.⁷ Such mental tools help the praxeologist identify what such a person can know exclusively by reflecting on her own action. Correspondingly, they help her create a vocabulary for articulating this knowledge.

The praxeologist can identify acting character because she is a distinctly human actor herself. So far as is known, no human being is born a distinctly human actor. Each must develop the mental tools required to fit this designation. Such development generally occurs without help from medicines or other therapeutic procedures. The baby possesses senses that enable it to form a primitive concept of physical causality.⁸ Perhaps the most primitive concept is its coming to associate

Aprioristic reasoning: the use of the mental tools developed during the cognitive growth of the normal distinctly human actor to identify the prerequisites and necessary characteristics of action.

particular noises and other sensations with an alleviation of hunger. As the child grows, it comes, among other things, to differentiate between physical causality and human causality. For example, it comes to see its mother as different from the inanimate objects in its environment and to associate the mother's appearance with its being fed. As the child grows further, it develops a sense of ego, informing it that other human beings are different from it.

Nothing more is needed than this sense of ego – the individual's recognition that she alone can cause changes that she can observe. Her attainment of this stage of development is sufficient to put her in a position to employ counterfactual images to deduce the prerequisites and necessary characteristics of action. Assuming that she has developed language, she can then articulate what she has deduced. When a person uses counterfactual images in this way, her mode of reasoning is *aprioristic*.

Origin of Aprioristic Reasoning

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

⁶The phrase “prerequisites and necessary characteristics of action” makes explicit what Mises has in mind by “category of action” and “action in general.”

⁷The existence of these tools corresponds to the fact that the distinctly human mind has what Mises called a logical structure. This structure is described in Part Three of this essay.

⁸This primitive concept of physical causality is later expressed in its most advanced form in the a priori sciences of geometry and mathematics (HA: 39-40).

service they provided distinctly human actors in the competition for food, avoidance of predation, and surviving the elements.⁹

The Counterfactual Imaginary Constructions

In employing aprioristic reasoning to identify the prerequisites and necessary characteristics of action, the pure praxeologist must use what I have called counterfactual imaginary constructs. In each case, she uses counterfactual images of beings who do not possess these characteristics to confirm their necessary character. In doing this, she tries to build a concept of action that lacks a property that she has learned to associate with the words “more (less) satisfactory,” “ability to attain a more satisfactory state,” “expectation,” “choice,” “ends,” “means,” “time” and “uncertainty.” She tries to imagine an action in which she does not expect a more satisfactory state, an action for which she has no means of improving her state of well-being, a timeless action and an action for which the outcome is certain. When she recognizes that she lacks the ability to conceive of an action in which one of these characteristics is absent, she confirms that the characteristic is part of the acting character. She can then feel confident that these words represent prerequisites and necessary characteristics of action. She needs these words to communicate her descriptions of action and interaction under any conceivable set of conditions, including capitalism.

The Vocabulary of Action in the Material World

The economist wants to depict the production of material consumer goods by means of other materials, knowledge, and work. To prepare for this, he dons the hat of the praxeologist in order to make a vocabulary of production and consumption that he expects to need. He introduces the term “factor of production” or “resource”

Factor of production: a means of production that is part of the vocabulary of economics.

Two types of factors of production:

- A. Material factors
- B. Human factors.

⁹Thus Mises writes that animals

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

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

one thing is certain...[T]he a priori categories have enabled man to develop theories the practical application of which has aided him in his endeavors to hold his own in the struggle for survival and to attain various ends that he wanted to attain, these categories provide some information about the reality of the universe. They are not merely arbitrary assumptions without any informative value, not mere conventions that could as well be replaced by some other conventions. They are the necessary mental tool to arrange sense data in a systematic way, to transform them into facts of experience, then these facts into bricks to build theories, and finally the theories into technics to attain ends aimed at (Mises 1962: 16).

to refer to a means of production. And he places the means of production into two broad classes: the material factors and human factors of production.¹⁰

He further classifies the material factors according to how the isolated actor intends to use them. This is best illustrated by an example. The illustration begins with baked bread, which is a consumer good. Mises, following Menger, called this a good of the *first order*.¹¹ To produce it requires a variety of food ingredients, an oven, and various types of the human factor. Consider the flour ingredient. This can be called a good of the second order, or a second-order good. To produce flour, one must have grain. Grain can be called a third-order good. To produce grain, one must have the plants, for example wheat plants, from which the grain is separated. The grain can be called a fourth-order good. To express this arrangement of goods in order in a simple way, one might speak of the *supply chain* of a factor of production beginning perhaps with the seed that is planted and expected to mature into a wheat plant. The supply chain for the wheat seed passes through several *links* including the growing of the wheat plant, the grinding of the wheat grain into flour, and the combination of the flour with other ingredients and human factors until the good of lowest order – bread – is produced.

A particular factor of production may be used to help produce more than one good. For example, wheat grain is also used to help produce pancakes and spaghetti pasta.

The name that Mises and Menger employed for all of the material goods of higher order is *capital goods*. Thus, in order to satisfy her wants for material consumer goods, the isolated actor employs her existing capital goods and her human factors of particular types, namely, her various kinds of work and knowledge.¹²

It is conceivable that an actor would use her capital goods to produce only consumer goods for the nearest possible future time. If so, she would be a very unusual person. The economist as praxeologist

Orders of goods: an arrangement of goods that depends on whether they are nearer or farther away in terms of other goods from the good of the first order – the consumer good.

Supply chain for a factor of production: a chain that links the good of highest order (usually some raw material) required to produce a particular good of the first order (consumer good) via goods of the second, third, etc. orders.

Capital good: a good of higher order than the first.

Saving: a decision by the isolated actor to employ factors of production to produce capital goods instead of consumer goods for consumption in the nearest future times.

Period of Production: the time required to produce a material consumer good from start to finish.

¹⁰The rationale for this classification is presented in my essay on [functions and roles in economics](#).

¹¹HA: 93; Menger, 1971.

¹²Mises cautions against using the term “capital” to refer to the isolated actor’s higher-order goods on the grounds of the etiology of the word. In the history of economics, this term was introduced in conjunction with descriptions of market interaction under capitalism. Traditionally, therefore, it implies the existence of money, prices and economic calculation. To apply it to the isolated actor is, in his view, a metaphor that draws attention away from the concepts that are crucial for building theorems about the effects of deliberate changes in the money supply by a government on market interaction (HA: 260-4). The crucial point, to which this book will pay full attention, is that when this term is used in an economic theorem, it will always imply the presence of economic calculation and its prerequisites.

can safely assume that except in the most extreme and dire circumstances, the images of market interaction that he aims to build entail the production of material consumer goods for both the near and more distant future. So he assumes that an isolated actor faces an analogous choice situation. She would allocate some of her capital goods to producing nearer future consumer goods and some to producing more distant future consumer goods.

A more detailed vocabulary is required to deal with the effects of time-related change. In this essay, I confine my interest to theorem building by means of what Mises called the “static method” (HA: 247-8). For this purpose it is sufficient to use the term *saving* to refer to a decision by an isolated actor to employ factors of production to produce capital goods instead of consumer goods. An individual can save, Mises writes, in one of the following ways:

1. The accumulation of larger stocks of consumers’ goods destined for later consumption.
2. The production of goods which are more durable.
3. The production of goods requiring a longer period of production.
4. The choice of methods of production consuming more time for the production of goods which could also be produced within a shorter period of production (HA: 481).

In this statement, the *period of production* refers to the time required to produce a material consumer good from start to finish.

2. THE LOGICAL STRUCTURE OF THE HUMAN MIND AND APRIORISTIC REASONING

Every normal human being develops a mind with a logical structure. Each mind, one might say, “contains” the mental tools needed to employ a priori reasoning and to develop the fundamental concepts of the natural sciences and economics. The purpose of this part is to show the connections that Mises tried to establish between aprioristic reasoning and its use (1) in pure praxeology and (2) in the natural sciences. In doing this, I further justify my use of the term pure praxeology and explain Mises’s concept of methodological dualism.

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

In HA, Mises writes about this logical structure:

The human mind is not a tabula rasa on which the external events write their own history. It is equipped with a set of tools for grasping reality. Man acquired these tools, i.e., the logical structure of his mind, in the course of his evolution from an amoeba to his present state. But these tools are logically prior to any experience¹³...[The prerequisites and necessary characteristics of action are] logically antecedent to any concrete act...[M]an 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).

¹³It is worth noting that he uses the term “logically prior” as opposed to “chronologically prior.” Thus he is writing that a normal human being today cannot comprehend the world without the tools. Yet, the tools themselves are part of her evolutionary heritage.

In this quote, Mises uses the term “causality” to mean the concept of cause studied by the natural scientists. This is evident from his use of the synonym “mechanistic causality.” I prefer the term “physical causality” because it evokes the image of physics, which provides the foundation for all of the other physical sciences. Teleology refers to the concept of cause studied by the scientists of human action.¹⁴ It means “purposeful behavior” (HA: 11, 25).¹⁵

In the quoted passages, Mises writes of mental tools required to grasp reality which are “logically prior to experience.” This does not imply that he is making a chronological hypothesis about the evolution of the human species. He is not hypothesizing that the mental tools existed before humans had experiences. His claim is that through what a student of evolution might call experience in the world, some representatives of *homo sapiens* developed the tools, survived and had offspring who possessed these tools; while other representatives did not.

Aprioristic Reasoning and its Use in Pure Praxeology

The logical structure of the human mind enables the pure praxeologist to use aprioristic reasoning. Mises writes that the “significant task of aprioristic reasoning”

is on the one hand to *bring into relief* all that is implied in the categories, concepts, and premises and, on the other hand, to show what they do not imply. It is its vocation to render manifest and obvious what was hidden and unknown before (HA: 38, italics added).

The term “bring into relief” means that one can identify the prerequisites and necessary characteristics of action by employing aprioristic reasoning and counterfactual imaginary constructions. He had already used this procedure in his chapter 1, as I showed in Part One of this essay.¹⁶

Praxeology and Economics

Mises writes specifically about aprioristic reasoning in economics in his chapter 2 section entitled “The Procedure of Economics.” After extracting and deducing the concepts of pure praxeology, he writes, one goes on to define “the less general conditions required for special modes of acting...[T]he

¹⁴Mises tells the reason for the term “science of human action” at UF: 62. This term is defined more fully in Appendix One of Chapter Six. In HA, he used the terms “science of human action” and “sciences of human action” more or less interchangeably. He distinguishes clearly between the natural sciences and the sciences of human action on the basis of causality and teleology in his 1957 book (TH: 240).

¹⁵The 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 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.

¹⁶Unfortunately, he does not state that he uses imaginary constructions until much later in HA.

end of science is to know reality...Therefore praxeology restricts its inquiries to the study of acting under those conditions and presuppositions which are given in reality” (HA: 64-65).¹⁷

His example of a condition that is given in reality is the disutility of labor (*ibid.*). That a person experiences the disutility of labor cannot be deduced from the category, concept, or premises of action alone. A second example is the “[theory of indirect exchange](#).” In this theory, individuals acquire material consumer goods by first acquiring money and then exchanging the money for the goods. That people exchange using money under capitalism is obvious (HA: 65-6). Yet this proposition cannot be deduced with aprioristic reasoning.

These examples are meant to show that the economist not only employs aprioristic reasoning in his theorem building, he also employs assumptions about reality that are designed to help comprehend it. In deriving the prerequisites and necessary characteristics of action, the pure praxeologist does not make such assumptions. To build economic theorems, the economist does.

Ratiocination in Pure Praxeology and Economics

Mises used the term ratiocination to refer to the procedures used in both pure praxeology and economics. He writes that “praxeology and economics proceed step by step by means of discursive reasoning. Precisely defining assumptions and conditions, they construct a system of concepts and draw all the inferences implied by logically unassailable ratiocination” (HA: 67, italics added).

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

Later, in conjunction with the quotation above, he distinguished between the procedures followed in pure praxeology and those followed in its economics branch. He wrote that economics

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

This suggests that ratiocination in pure praxeology is the mental process used to identify the prerequisites and necessary characteristics of action. It enables the pure praxeologist to build a vocabulary. In economics,

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

¹⁷This statement is similar to that made in his 1933 book. It would be possible, he writes there, to

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

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

Strictly speaking, the economist cannot build theorems for either all of the real patterns of market interaction or all of the imaginable patterns. He confines his work to theorems that are relevant to building an image of capitalism and evaluating intervention arguments.

ratiocination refers to the mental process of building economic theorems. This requires both the vocabulary of action and subsidiary assumptions about the reality to which the theorems are expected to refer. A set of such theorems constitutes an image of capitalism. Thus, the reality that ratiocination helps economists comprehend is capitalism.

3. APRIORISTIC REASONING IN THE NATURAL SCIENCES

In their study of physical causality, natural scientists ordinarily pay little attention to aprioristic reasoning. Nevertheless, they use it. When they describe the results of their thinking, observation, and experiments; they implicitly assume that individuals possess the fundamental concepts of physical causality and teleology. The experiment, in particular, is a human intervention. They assume a priori that distinctly human actors are capable of performing and learning from it. Prior to conducting the experiment – i.e., during the planning period, the natural scientist builds theorems about the effects of a change that she expects to introduce, *ceteris paribus*. She conceives of herself causing a physical event.

In addition, natural scientists typically use logic and the language of mathematics in order to communicate more efficiently. Logic and mathematics are aprioristic sciences (HA: 48). In the absence of a logical structure, actors would not regard them as useful tools.

Methodological Dualism

Methodological dualism is the proposition that natural scientists and scientists of human action, respectively, find it useful to employ two very different methods of studying the phenomena in their fields. This proposition is merely common sense. It would be silly for natural scientists to assume that the behavior of, say, water molecules is partly the consequence of the choices made by the hydrogen and oxygen atoms of

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

which they are comprised. Matter and, indeed, non-actors do not make choices, by definition. It would be equally out of place for economists to assume that the behavior of actors is not the consequence of their choices. The economist specializes in building images and theorems in which the price of beans is the consequence of choices made by individuals who use money to calculate the most profitable action to take under the conditions of capitalism. The concept of cause that is relevant to the economist is teleology, not physical causality. The phrase “methodological dualism” conveniently captures the obvious difference between the phenomena studied by the two classes of scientists.¹⁸

¹⁸In HA Mises explains this term in the following way:

Reason and experience show us two separate realms: the external world of physical, chemical, and physiological phenomena and the internal world of thought, feeling, valuation, and purposeful action. No bridge connects – as far as we can see today – these two spheres. Identical external events result sometimes in different human responses, and different external events produce sometimes the same human response.

We may or may not believe that the natural sciences will succeed one day in explaining the production of definite ideas, judgments of value, and actions in the same way in which they explain the production of a chemical compound as the necessary and unavoidable

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outcome of a certain combination of elements. In the meantime we are bound to acquiesce in a *methodological dualism*.

Human action is one of the agencies bringing about change...Therefore it is a legitimate object of scientific investigation. As – at least under present conditions – it cannot be traced back to its causes, it must be considered as an ultimate given and must be studied as such (HA: 18, italics added).