On Praxeology and the Question of Aristotelian Apriorism

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> This apriori character does not mean anything dark or mystical, it is based on the simple facts which we just mentioned: every state of affairs which is in the sense explained general and necessary is in our terminology apriori.
>
> – Reinach (1983:5)

I. Introduction

To many the notion of the *a priori*, particularly *synthetic a priori*, is of something dark and mystical, intimately tied to Kantian metaphysics and epistemology. Moreover, the first reaction of many to the notion of Aristotelian apriorism would likely be that it is an anachronism to speak of such a thing, that apriorism is completely alien to Aristotle's thought. But Kant does not have a monopoly on the a priori. Indeed, the terms a priori and a posteriori were employed centuries before Kant, and by an Aristotelian no less! Thomas Aquinas, in *Summa Theologica* I.2, in his critique of Anselm's ontological argument, defines the a priori in very Aristotelian terms as what is prior absolutely. What I aim to show in this essay is that there is an altogether different brand of apriorism within the Aristotelian tradition broadly conceived. Within the tradition of Austrian philosophy, this Aristotelian apriorism can be traced at least from Franz Brentano and his students to the realist phenomenology of the early Edmund Husserl, Husserl's student Adolf Reinach, and Johannes Daubert. Among the Austrian economists, Carl Menger can be seen as developing economics as an Aristotelian a priori discipline. Ludwig von Mises developed this apriorism into the formal method of praxeology, and though he appears to

be a sort of Kantian realist in his theoretical self-interpretation, it has been argued that Mises was thoroughly Aristotelian in practice (Smith 1990:282). More recently, Murray Rothbard attempted to return Austrian economics and praxeology to an explicitly Aristotelian-Thomist foundation but he did not do so in any great detail. It will be with praxeology as an a priori discipline that this essay will primarily be concerned. I will argue that Rothbard did not go far enough in giving praxeology an Aristotelian foundation, an oversight that I will attempt to (at least begin to) remedy in this essay. To paraphrase Reinach, the a priori character of praxeology is nothing dark and mystical: a priori propositions refer to states of affairs that are general and necessary, to essential and intelligible structures in the world obtaining from the identities or natures of things and their relations.

In this paper I aim to bring together and synthesize the insights of a number of thinkers as well as provide some contributions of my own. In the second part, as a review or an overview, as the case may be, I briefly explicate the nature of the a priori discipline of praxeology as originally conceived by Ludwig von Mises. Then, in part three, I attempt to purge the remaining vestiges of Kantianism that remain in Mises's, and even in Rothbard's, conception of praxeology. I seek to elucidate the nature of Aristotelian apriorism by evaluating and rejecting a succession of false dichotomies – a priori/empirical, rationalism/empiricism, analytic/synthetic, impositionism/reflectionism, formalism/hermeneutics – that are endemic to modern philosophy of science and even the Austrian School as well as considering the nature of inductive, retroductive, and deductive reasoning in scientific methodology. Misesian/Kantian praxeology suffers from

at least two major deficiencies stemming from these dichotomies: 1) a gulf between reflective cognition and perceptual experience of empirical reality, and, consequently, 2) the lack of an adequate explanation of the process of discovering the conceptual building blocks of praxeology – the praxeological concepts and the action axiom - in other words, of classical induction (or concept-formation). Part four summarizes my conclusions.

II. Misesian Praxeology and Apriorism

It would be apposite to begin by explaining just what is praxeology. Praxeology, the *a priori* general science or theory of human action, is "the formal analysis of human action in all of its aspects" (Rothbard 2004:299).[1] It is the distinctive method of the Austrian School of Economics. "The concept of action [defined as purposeful behavior] involves the use of scarce means for satisfying the most urgent wants at some point in the future" (72). Praxeology deals with the "formal implications of the fact that men use means to attain various chosen ends" (74). Thus, praxeology is *not* concerned with the *specific concrete contents* of men's actions and so should not be confused with psychology (how and why men form values and pursue certain ends) or ethics (what ends men should pursue). Men act in order to exchange a less satisfactory state of affairs for a more satisfactory state of affairs. Action is a necessary feature of human existence, for, as living beings, men must continually act in order to maintain and further their lives. "Life is a process of self-sustaining and self-generated action" (Rand 1961, 121). Life is

[1] For a full explication and defense of praxeology and *a priori* ontological disciplines in general, see Rothbard (1951; 1997a, b, c, d; 2004), Mises (1985, 1999, 2002, 2003), Hoppe (1995), Yates (1996), Long (2003c; 2004a, b; 2005a, b), Smith (1884; 1990; 1996a, b), Grassl and Smith (1986), Hülsmann (2003), Selgin (1990), Mulligan and Smith (1986), Schuhmann and Smith (1985), Husserl (2001), Reinach (1981, 1983), Johnsson (2005), and Younkins (2005).

contingent. Continued life requires continued action. If man does not act in a contextually appropriate manner to sustain his life (by acquiring necessary food, water, shelter, security, etc.), then he will perish. Prolonged inactivity can lead to death (though *purposeful* inaction can be thought of as a special kind of action).

The Austrian economists argue in favor of a methodological dualism between the natural sciences and the sciences of human action. The methods of the natural sciences, they argue, are inappropriate for the study of human action for a number of compelling reasons, particularly the impossibility of performing genuine experiments with social phenomena and the prevalence of human volition and valuation in social phenomena. Also, unlike in the natural sciences, the student of social phenomena has access to the ultimate assumptions that form the basis of explanatory laws of human action.

Within the social sciences the Austrian economists recognize another methodological dualism. With Aristotelian philosopher Roderick Long, we may consider "the distinction between the methods of natural science and the methods of social science…*first-order methodological dualism*." The second distinction "*within* the social sciences" is that "between history, which follows what Mises calls the *thymological* method of understanding [or hermeneutical psychology] *(Verstehen*)," and praxeology, of which the heretofore most developed branch is economics,

> which follows what Mises calls the *praxeological* method of conceiving *(Begreifen*). This latter distinction we may call *second-order methodological dualism*. While thymology is *a posteriori*, praxeology is *a priori*, and indeed represents the *a priori* conditions of thymology's intelligibility; it is the timeless logical features of purposeful action that *constitute* "the sphere of history," though they do not determine its specific content. (Mises 1990, 47) Hence human action is law-governed, just as the positivists claimed, but the laws in question are conceptual, not

> empirical, and are essentially concerned with the *meaning* that actions have for their agents. They are the laws of *Verstehen*, but not the product of *Verstehen*.[2]

In both history and praxeology, the Austrians recognize that the ultimate given in the study of man is the individual; or, more precisely, "characteristics of individual men, their ideas and [agent-relative or subjective] judgments of value as well as the actions guided by those ideas and judgments," for these "cannot be traced back to something of which they would be the derivatives" (Mises 1985:183).

It might be helpful at this point to present some classic examples of praxeological-economic propositions. Here are a handful given by the eminent Austrian economist, Hans-Hermann Hoppe (1995:14-15):

> Whenever two people A and B engage in voluntary exchange, they must both expect to profit from it. And they must have reverse preference orders for the goods and services exchanged so that A values what he receives from B more highly than what he gives to him, and B must evaluate the same things the other way around.
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> [The Law of Marginal Utility:] Whenever the supply of a good increases by one additional unit, provided each unit is regarded as of equal serviceability by a person, the value attached to this unit must decrease. For this additional unit can only be employed as a means for the attainment of a goal that is considered less valuable than the least valued goal satisfied by a unit of such good if the supply were one unit shorter.
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> [The Ricardian Law of Association:] Of two producers, if A is more productive in the production of two types of goods than is B, they can still engage in a mutually beneficial division of labor. This is because overall physical productivity is higher if A specializes in producing one good which he can produce most efficiently, rather than both A and B producing both goods separately and autonomously.
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> Whenever minimum wage laws are enforced that require wages to be higher than existing market wages, involuntary unemployment will result.

[2] Long (2003), pp. 3-4. Italics in original. Long's contrast between conceptual and empirical here is somewhat misleading; see below for clarification.

> Whenever the quantity of money is increased while the demand for money to be held as cash reserve on hand is unchanged, the purchasing power of money will fall.

Such propositions are not testable and, even if they were, it would not be necessary or desirable to test them in order to ascertain their validity. Rather, they are logically deducible from the apodictically true axiom (or a priori category) of action. Such propositions do not fall neatly into either of the two categories that positivists attempt to artificially impose on reality: empirical-contingent and analytic-necessary, the latter of which they consider to be merely tautologies and therefore empirically meaningless. The same can be said of the following examples from formal ontology: nothing can be both red and green all over (at the same time); if something is red then it is not green; or the law of the transitivity of the part-whole relation: If A is a part of B, and B is a part of C, then A is also a part of C. Such propositions have been called, using Kantian terminology, *synthetic a priori* propositions.

Mises himself evinced a certain amount of impatience and indifference to the question of whether praxeology is an analytic or synthetic a priori discipline as well as to whether its procedure is "merely" tautological. For him, such issues were of "verbal interest only" (Mises 2002:45). His followers have for the most part settled on 'synthetic a priori' as the most appropriate label, using Kantian terminology. Praxeological propositions are synthetic because they *are* empirical, in the broader and older sense of that term, i.e., experiential or existential – of and relating to existence and experience; but not in the modern and narrower, empiricist sense of being derived from experience (observation or experiment) rather than theory, of being verifiable or provable or

falsifiable by observation or experiment. Praxeological propositions are existentially meaningful, because they tell us something nontrivial about human action in the world. Praxeological propositions are a priori for Mises, because "[e]xperience concerning human action *presupposes* the category of human action and all that derives from it" (43). For Mises, a priori categories are not innate ideas but rather the "mental equipment by dint of which man is able to think and to experience and thus to acquire knowledge. Their truth or validity cannot be proved or refuted[3] as can those of a posteriori propositions, because they are precisely the instrument that enables us to distinguish what is true or valid from what is not." The a priori is "implied in all our thinking and acting." The "characteristic feature of a priori knowledge is that we cannot think of the truth of its negation or of something that would be at variance with it" (18).

Barry Smith (1990a) draws a distinction between "two broad families of apriorist views" (275): impositionist and reflectionist. The impositionist view is that "a priori knowledge is possible as a result of the fact that the content of such knowledge reflects merely certain forms or structures that have been imposed or inscribed upon the world by the knowing subject. Knowledge...is never directly of reality itself[,]" but rather "reflects the 'logical structures of the mind' and penetrates to reality only as formed, shaped, or modeled by a mind or theory." The reflectionist view, on the other hand, holds "that we can have a priori knowledge of what exists, independently of all impositions or inscriptions of the mind, as a result of the fact that certain structures in the world enjoy some degree of intelligibility in their own right." The reflectionist view, Smith argues, is held by Aristotelian apriorists like Menger and Rothbard; I will have more to say on this

[3] Except, in a sense, through negative demonstration; see below.

in the next section. It is plain to all those familiar with Kant that he falls within the impositionist view; and, as the foregoing has already suggested, Mises does as well.

As David Gordon (1996), the eminent intellectual historian of the Mises Institute, points out:

> Like Immanuel Kant...Mises thought that the human mind grasped the world only through its own categories. But this similarity hardly suffices to make Mises a strict Kantian.[4] Unlike his great predecessor, Mises did not claim that a particular set of categories is a necessary presupposition of experience. To Mises, the categories are ones that human beings now in fact use. He essays no transcendental argument in the style of the *Critique of Pure Reason* to derive them. (96-97)

Rather, Mises instead merely speculates that biological and social evolutionary processes may have selected for human beings whose minds were able to grasp categories that better enabled them to survive (Mises 2002:14-17). However, as an economist Mises was not really concerned with the why, but rather, since it was irrefutable that the human mind is able to grasp these categories, with the implications for human action of this fact.

In any event, what concerns us here are the Kantian and impositionist elements in Misesian apriorism. For Mises, praxeological categories are categories determined by the logical structure of thought. All of the concepts, and the entire corpus, of praxeology and economics are already implied in the category of action, which is the fundamental axiom of praxeology. Deducing the theorems of economics is a matter of unpacking the implications of the action axiom (Mises 2002:42, 45). With such a line of reasoning praxeological propositions do indeed seem to be merely *analytic a priori* propositions,

[4] Gordon (1993:106) rightly warns against classifying Mises under any one philosophical school of thought. Strictly speaking Mises was not a Kantian, although one may reasonably characterize his methodological self-interpretation as resembling that of a Kantian realist (but not a realist Kantian). Similarly, despite the similarity of praxeology to phenomenology and Mises's familiarity with the latter, Mises was not a phenomenologist. For more on the differences between Misesian and Kantian apriorism, see Gordon 1993.

mere tautologies, despite the fact that they are plainly existentially meaningful (and thus synthetic). Gordon (1993) argues that Mises "neither asserts nor denies, e.g., that the predicate of the action axiom is 'contained' in the subject" and "offers no formal account of synthetic propositions" (102). But this is not entirely true, for Mises does say praxeological propositions are tautologies but also argues that the mere fact of being tautologous does not rule them out as being scientific and meaningful (Mises 1999:38, 2002:17). "Aprioristic reasoning is purely conceptual and deductive. It cannot produce anything else but tautologies and analytic judgments.[5] All its implications are logically derived from the premises and were already contained in them" (Mises 1999:38).

Even if Gordon (1993) is correct in his evaluation that Mises's arguments for his brand of praxeology are an adequate defense against the positivist specters of tautology and analytic statements, Misesian apriorism still seems vulnerable on other metaphysical and epistemological grounds. For instance, Smith argues that praxeology involves a "veritable plenitude of non-logical concepts" such as

> causation, relative satisfactoriness, reason, uneasiness, valuation, anticipation, means, ends, utilization, time, scarcity, opportunity, choice, uncertainty and expectation. The idea that one could simultaneously and without circularity reduce every one of these concepts to the single concept of action, that they all be defined by purely logical means in terms

[5] In his later work (see Mises 2002), Mises does indeed soften this language, leaving it an open question whether praxeological propositions are analytic or synthetic, and in this work he does not explicitly say that they are tautologies but he still argues that the propositions are all implied in the action axiom. Gordon (1993:101) argues on behalf of Mises: "Even if all the theorems of geometry are restatements of the axioms used in their proofs, it does not follow that we can at once grasp the theorems when we learn the axioms. The distinction Mises draws here resembles Aquinas's separation of propositions 'self-evident in themselves' from those 'self-evident to us'." And, in footnote 26 on the same page: "Aquinas uses this distinction in his criticism of St. Anselm's argument for the existence of God." But Aquinas himself got this from Aristotle and while one may be able to apply an Aristotelian framework to better understand what Mises means in this regard, it does nothing to make Mises an Arisotelian or a Thomist – the balance of his methodological self-interpretation remains primarily (neo-)Kantian – or to help explain how the conceptual building blocks of praxeology are discovered in a Kantian or Misesian framework; Mises simply does not tell us and I doubt any Kantian could.

> of this single concept, is decisively to be rejected. Indeed Austrian economics seems to be like other *a priori* disciplines in that it involves a multiplicity of concepts connected together not hierarchically but rather in a dense holistic network of mutual connections whose order is not capable of being antecedently established. (Smith 1996:316)

Praxeology reformulated in light of the insights of the Austrian philosophers will, according to Smith, consist of a multitude of non-logical concepts and *synthetic a priori* propositions. It does seem problematic for Mises that these praxeological concepts appear to spring forth fully formed and fully armed from the action axiom, like Athena from the brow of Zeus, as its implications are unfolded. It is not clear, however, that Smith realizes that due to the nature of the discipline the concept of action would still have to be the central axiom around which the discipline is woven.[6] This is because the subject matter of praxeology is the myriad manifestations of human action. While it may be the case that not all the concepts employed in praxeological theory are (directly) reducible to the single action axiom *without remainder*, it seems unavoidable that they all involve a significant element of human action. Moreover, it does not obviously follow that these concepts are not ultimately connected to the action axiom in a hierarchical framework even if they are not originally formed by a given individual by way of pure deduction from the action axiom (see section III.2 below).

Hans-Hermann Hoppe has attempted to salvage Mises's account of praxeology by showing how (he thinks) it transcends the idealist/realist dichotomy, or at least come

[6] Smith also argues, contra the Austrian economists, that the action axiom is not irrefutable. He points out that an alien could deny that human beings act. This is true *if* the action axiom is defined as the fact that *human beings* act. But even so, any attempt by a human being to refute the action axiom would still be self-defeating. In any case, the Austrian economists and I would argue that the action axiom is universalizable to all volitional beings, in which case a denial by an alien that human beings act would hinge upon a separate claim, viz. the denial that human beings are volitional beings. The truth of the action axiom is thus not in question, and it remains irrefutable.

down on the side of realism, while remaining a form of extreme rationalism. Moreover, although Hoppe does not use Smith's terminology, his argument would seem to be an attempt to bridge the impositionist/reflectionist dichotomy as well. Hoppe writes:

> We must recognize that such necessary truths are not simply categories of our mind, but that our mind is one of acting persons. Our mental categories have to be understood as ultimately grounded in categories of action. As soon as this is recognized, all idealistic suggestions immediately disappear. Instead, an epistemology claiming the existence of true synthetic a priori propositions becomes a realistic epistemology. Since it is understood as ultimately grounded in categories of action, the gulf between the mental and the real, outside, physical world is bridged. **As categories of action, they must be mental things as much as they are characteristics of reality. For it is through actions that the mind and reality make contact.** (20; bolded for emphasis)

> Recognizing knowledge as being structurally constrained by its role in the framework of action categories provides the solution to such a complaint. For as soon as this is realized, all idealistic suggestions of rationalist philosophy disappear, and an epistemology claiming that a priori true propositions exist becomes a realist epistemology. Understood as constrained by action categories, the seemingly unbridgeable gulf between the mental on the one hand and the real, outside physical world on the other is bridged. **So constrained, a priori knowledge must be as much a mental thing as a reflection of the structures of reality, since it is only through actions that the mind comes into contact with reality, so to speak.** Acting is a cognitively guided adjustment of a physical body in physical reality. And thus there can be no doubt that a priori knowledge, conceived as an insight into the structural constraints on knowledge qua knowledge of actors, must indeed correspond to the nature of things. (69-70; bolded for emphasis)

As will be seen below, this talk of knowledge and the mental being constrained is problematic and indicative of the reflectionist view. Furthermore, it has already been argued that Mises was a Kantian realist and this position should be relatively uncontroversial, at least among Austrian economists.

Ultimately, however, Hoppe fails to salvage Mises's account of praxeology. As

the following quotations show, we are still left wondering just how praxeological concepts, propositions, and theories are formed and derived from the action axiom; moreover and relatedly, there still seems to be an untenable and unbridged gulf between praxeological reasoning and empirical reality. Hoppe writes: The action axiom "is not derived from observation – there are only bodily movements to be observed but no such things as actions – but stems from reflective understanding" (61). And more clearly still: "As in the case of the action axiom, this knowledge is not derived from observation: there is only verbal behavior to be observed and prior reflective cognition is required in order to interpret such behavior as meaningful argumentation" (65). There is still an unbridged gulf between reflective cognition and observed behavior in both Hoppe's and Mises's thought. Moreover, in these passages Hoppe sounds more like an idealist-impositionist; it is our mental categories, which are not derived from experience of empirical reality but somehow discovered through *prior* isolated introspection, that make sense of the otherwise perceptually mechanistic and incomprehensible reality within which we act. While Hoppe's attempt to show how Mises bridged the idealist/realist and impositionist/reflectionist dichotomies is admirable, I think it was ultimately doomed by the remnants of Kantianism in their thought and in Hoppe's insistence upon abiding by the modern rationalist/empiricist dichotomy.[7]

III. Praxeology, and Aristotelian vs. Kantian Apriorism

1. Rothbard and Aristotelian Apriorism

As mentioned, Rothbard had a more Aristotelian-Thomist view of praxeology and

[7] c.f. Long (2004a), p. 365.

apriorism. He wrote: “Now the crucial question arises: how have we obtained the truth of this axiom? Is our knowledge *a priori* or empirical, 'synthetic' or 'analytic'? In a sense, such questions are a waste of time, because the all-important fact is that the axiom is self-evidently true[.]”

> Whether we consider the Action Axiom “a priori” or “empirical” depends on our ultimate philosophical position. Professor Mises, in the neo-Kantian tradition, considers this axiom a *law of thought* and therefore a categorical truth *a priori* to all experience. My own epistemological position rests on Aristotle and St. Thomas rather than Kant, and hence I would interpret the proposition differently. I would consider the axiom a *law of reality* rather than a law of thought, and hence “empirical” rather than “apriori.” But it should be obvious that this type of “empiricism” is so out of step with modern empiricism that I may just as well continue to call it *a priori* for present purposes. For (1) it is a law of reality that is not conceivably falsifiable, and yet is empirically meaningful and true; (2) it rests on universal *inner* experience, and not simply on external experience, that is, its evidence is *reflective* rather than physical; and (3) it is clearly *a priori* to complex historical events. (Rothbard 1997a: 5-6 of the online version. Italics in original.)

But surely, contra Rothbard, it *is* important to have an epistemological theory that explains how we arrived at the truth of the action axiom, and surely it *is* important what philosophical position one takes in this regard. If this is not already clear, exactly why it is important will become so soon in what follows.

It is unfortunate that Rothbard possessed the same sort of impatience and indifference as Mises in developing a full-bodied epistemological theory to support praxeology. This paper is an attempt to sketch the outlines of such a theory. It might be conjectured that Rothbard never developed such a theory because we can simply look to Aristotle and St. Thomas for the answers, but it seems obvious that switching philosophical foundations from the Kantian to the Aristotelian tradition will have

important implications for the status of praxeological concepts, propositions, and theories (in terms of their justification, how they are discovered, and so forth) and yet in his methodological writings Rothbard behaves as if there is no appreciable difference. For Rothbard, as for Mises, the concepts of praxeology and economics appear to spring forth fully formed and fully armed from the action axiom, like Athena from the brow of Zeus, as its implications are unfolded.[8] But this is not how concepts are formed and scientific propositions deduced in the Aristotelian-Thomist tradition.

2. Smith, Menger, Mises, and Aristotle

In examining the work of the Austrian philosophers and economists, Barry Smith finds them to have the following ten theses in common with each other and with Aristotle, at least implicitly; the last three deal specifically with the social sciences. Ten theses of Austrian Aristotelianism (Smith 1996a:320-329, 1990a:265-275):

1. The world exists, independently of our thinking and reasoning activities.
2. There are in the world certain simple 'essences' or 'natures' or 'elements', as well as laws, structures, or connections governing these, all of which are strictly universal.
3. Our experience of this world involves in every case both an individual and a general or universal aspect.
4. The general aspect of experience need be in no sense infallible (it reflects no special source of special knowledge), and may be subject to just the same sorts of errors as is our knowledge of what is individual.
5. We can know, albeit under the conditions set in [4], what the world is like, at least in its broad outlines, both via common sense and via scientific method.
6. We can know what this world is like, at least in principle, from the detached perspective of an ideal scientific observer.
7. The simple essences or natures pertaining to the various different segments or levels of reality constitute an alphabet of structural parts.
8. The theory of value is to be built up on 'subjective' [or agent-relative] foundations, which is to say exclusively on the basis of the corresponding mental acts and

[8] See, e.g., Rothbard (1997d), p. 11-13 of the online version.

states of human subjects.
9. [Ontological individualism:] There are no 'social wholes' or 'social organisms'.
10. There are no (graspable) laws of historical development.

I cannot reproduce Smith's elaboration and defense of these theses here, but the theses themselves should suffice to suggest a great deal of the affinity between the Austrians and Aristotle.

Smith returns to the founder of the Austrian school of economics, Carl Menger, as the clearest embodiment of this Aristotelian apriorism. For some reason Smith does not have much to say about Rothbard, perhaps this neglect is due to the problems with Rothbard's thought highlighted in the previous section. In any event, although praxeology was not explicitly developed as a formal discipline (by Mises) until after Menger's time, Menger can still be classed as an Aristotelian apriorist. For Menger, theoretical economics is an exact science, the goal of which is "the determination of the general essence and the general connection of economic *phenomena*"; "the determination of strict laws of phenomena, of regularities in the succession of phenomena which not only present themselves as exceptionless, but which, when we take account of the ways in which we come to know them, in fact bear within themselves the guarantee of their own exceptionlessness" (Quoted in Smith 1990:267, 266).

[Menger on goods?]

For Menger, the individual material and mental phenomena that exist in the world – such as value, rent, profit, goods, capital, etc. – are "intrinsically intelligible natural

kinds, types or (to use an Aristotelian term) species; and…necessary laws concerning these species, and specifically concerning their interrelations, can be grasped as evident by anyone who makes it his business to understand the structure of the underlying phenomena (the *instances* of the given species)" (Smith, "Austrian Economics and Austrian Philosophy," in Grassl and Smith 1986:3). One can recognize and elucidate such necessary propositions without empirical investigation or testing in the modern sense. Yet they are not conjured out of nothing; *they presuppose a familiarity with the workings of the phenomena in question*, i.e., through experience via extrospection and introspection, and require painstaking theoretical research to uncover. They reflect corresponding structures or relations *in the world*: a matter of how simple elements are bound together in intelligible ways into larger wholes.

The key thesis in this context is Thesis #3: "Our experience of this world involves in every case both an individual and a general or universal aspect." For Aristotle, we do not discover and deduce the general or universal prior to experience in order to be able to recognize it later in experience. Rather, our experience involves both the particular and the universal (*Posterior Analytics* II.19). As Long (2004a) points out: "our conceptual understanding plays a *constitutive* role in our perceptual experience" (365).

Smith often speaks of the process of discovering a priori propositions as non-inductive and the resulting propositions as pre-empirical and pre-scientific, but he appears to be using the modern conception of these terms that Aristotelians such as myself reject. What Smith, Mises, and others, after the modern fashion, call induction, I prefer to call retroduction (or hypothetico-deduction), for the term more accurately

represents the process of making hypothetical generalizations in modern enumerative 'induction'. I accept the classical conception of induction defined as "the process of observing the facts of reality and of integrating them into concepts" (Rand 1990:36). This definition of induction compares favorably with Aristotle's account of induction and deduction in *Nicomachean Ethics* 1139b25-31:

> And all teaching starts from what is already known, as we maintain in the *Analytics*[9] also; for it proceeds sometimes through induction and sometimes by deduction. Now induction is of first principles and of the universal and deduction proceeds *from* universals. There are therefore principles from which deduction proceeds, which are not reached by deduction; it is therefore by induction that they are acquired.[10]

Properly formed concepts involve an understanding of the essences (identities or natures) of the phenomena these concepts represent (induction); and therefore also the ability to identify the intelligible structures resulting from the logically necessary interrelationships of said phenomena and the ability to apply these concepts in practice, to recognize instances of the concepts in experience and to subsume new instances under them (deduction).[11] Knowledge, for Aristotle derives from experience but is also constitutive of it; and yet, such knowledge is not a matter of making hypothetical generalizations from atomistic phenomena and then repeatedly testing them but of grasping the universal when we perceive the particular. That man is a rational animal is a conceptual truth arrived at via induction; the question of whether a particular perceived two-legged animal is a fully-functioning human being is an empirical (or thymological) matter, but this is still not the same as retroduction which might look something like this: I've seen two dozen two-

[9] *Posterior Analytics* I.1.
[10] See also *Posterior Analytics* II.19.
[11] c.f. Rand (1990), p. 28.

legged animals (humans) and all were rational and capable of speech, therefore all two-legged animals are rational and capable of speech (or, alternatively, therefore all humans are rational and capable of speech). Classical induction depends upon Aristotelian essentialism; modern induction (unless recognized for what it really is: retroduction) assumes an atomistic and mechanistic reality.

Scientific understanding may require much more reflective theoretical work than the everyday commonsensical knowledge of the layman, and the layman's knowledge will tend to be less precise and more prone to error, but the principle is the same. It requires no special effort for the layman to recognize the bodily movements of fellow human beings as actions of various kinds without prior reflection on the nature of action. On the other hand, attaining to a scientific understanding of the workings of the market, a dynamic and spontaneous product of the myriad actions of large numbers of autonomous individuals, requires much difficult theoretical reflection but also familiarity with the phenomena in question.

Praxeology is indeed an axiomatic-deductive discipline, but how are its axioms, subsidiary empirical postulates, and other concepts discovered? By induction. Yet if not only the action axiom but also the subsidiary empirical postulates and other concepts are arrived at via induction, it follows that mistakes can be made not only in the deductive-theorizing process itself but also in the formation of the concepts employed in that process.

This brings us to another problematic consequence of the Kantian and impositionist elements in Misesian praxeology, which is that the premises and

conclusions of Austrian economic theories have been argued to be apodictically true. Now, if the premises are true, then certainly the conclusions will be true. The action axiom is apodictically true and irrefutable; hence, praxeological theory is to be taken as apodictically true unless a flaw in the theorist's logical reasoning can be demonstrated. Here the particular philosophical (metaphysical and epistemological) foundation of praxeology becomes crucial; the extant Misesian and Rothbardian accounts of praxeology are less than clear in this regard. However, as the foregoing has shown, since we integrate the facts of reality into concepts through the process of induction, and since praxeology is comprised of myriad concepts besides the action axiom, our knowledge of a priori propositions is fallible and not merely in the sense that we can botch our deductions. "The given intelligible structural traits of reality can be overlooked or misinterpreted. The recognition that there are a priori structural traits in the world yields, to repeat, no easy sort of indubitable evidence in relation to the corresponding propositions" (Smith 1996b:191). Smith argues that in isolated instances empirical investigations, while not able to falsify (strictly speaking) these propositions, may be able to exert some degree of *ex post* control by bringing to our attention conceptual errors. However, no "single *a priori* proposition…may be falsified by empirical means: even the possibility of direct logical contradiction is here ruled out, in virtue of the fact that it is on the basis of an acceptance of our pre-theoretical ('commonsensical') view of reality that empirical research itself is carried out" (Smith 1996a:331).[12]

[12] These passages of Smith's, which, along with others mentioned above in this section and cited in part 2, seem to suggest that Smith rejects the Aristotelian conception of science as involving exactness, explanation, and deduction from first principles in favor of modern empiricist notions of science. These passages seem to suggest that Smith sees praxeology as being not a science in the Aristotelian sense but merely an a priori discipline consisting of a network of the pre-scientific/pre-theoretical conceptual products of induction that form the a priori foundation of modern empiricist science. If this is indeed

It remains to describe exactly how praxeology is an exact science in the Aristotelian sense. As Aristotle made clear for all time in *Posterior Analytics* I.3, there can be no scientific demonstration except from true first principles. In this regard, on the issue of scientific explanation or understanding, Aristotle can be classified as a foundationalist. On the other hand, the case has been made by Roderick Long (2000) that Aristotle was a negative coherentist with regard to knowledge and justification. Negative coherentism holds that our beliefs count as knowledge and are epistemically justified so long as they do not conflict with one another. For Aristotle, our reputable beliefs (*endoxa*) count as knowledge so long as they can withstand dialectical scrutiny, i.e., so long as they cohere in the manner just described, but the justificatory process ultimately proceeds through dialectical ascent up from phainomena (observed facts or "appearances") and endoxa to first principles.[13] Without first principles, then, both the inductive and deductive processes would become mired in infinite regress or vicious circularity. The action axiom is the primary first principle of praxeology and it *can* be proven by demonstration, albeit not demonstration of the normal scientific kind but by negative demonstration in a manner similar to the way Aristotle proves the Principle of Non-Contradiction in *Metaphysics* IV.3,[14] namely, by showing that the truth of the concept must necessarily be assumed in any attempt to refute it. Even the concept of human action, however, must be inductively formed from actual instances of action in empirical reality, from introspection and extrospection of ourselves and others. The other concepts employed in praxeology must also be inductively formed before they can be

Smith's view, then it should be plain by the end of the following paragraph that it is false.

[13] See also the passage from *Nicomachean Ethics* 1139b25-31, cited above.

[14] For more on this, see Rasmussen (1980) and the sources cited therein.

used in the deductive process of scientific demonstration. They are formed by successive inductive and deductive moments[15] in which their essences are abstracted out from particular phenomena in the world and, when and where appropriate, deductively subsumed under the action axiom *qua* species to genus. Indeed, it is unlikely that the action axiom will be arrived at first by a given individual but rather it is more likely that concepts of more specific species of action will be formed before the overarching concept of action is arrived at.[16] Thus linked to the action axiom and formulated in praxeological propositions, they can then be employed in the deduction of economic theory. As noted above, mistakes can be made at a number of points in this overall process, but this is just to say in greater clarity and detail that praxeological theories are only false if the reasoning they embody is logically flawed and can only be shown to be false by the demonstration of a flaw in said reasoning. But it is not merely in the deductive reasoning processes in which errors can be made but also the inductive reasoning processes.

3. Transcending False Dichotomies

The considerations in the foregoing sections have shed considerable doubt on the validity of the a priori/empirical and rationalist/empiricist dichotomies, although there is one sense in which the distinction is valid: praxeological propositions are a priori and constitutive of complex historical events, or, in Aristotle's terms, they are *logically* 'prior to' or prior by nature. It is necessary to be clear that, on the account I am giving here, a priori is not meant as prior in time or prior to experience or even prior to complex

[15] c.f. Rand (1990), p. 28.

[16] As Aristotle repeatedly argues, we must begin with 'what is self-evident to us' and move from there to 'what is self-evident simplicitor'. See also Aquinas, *Summa Theologica* I.2.

historical events. A priori praxeological laws are certainly prior to any *scientific understanding* of complex historical events, but apart from scientific knowledge the laws themselves are *constitutive* of experience and complex historical events *whether or not we have scientific knowledge of them*.

The considerations in the foregoing have also shed considerable doubt on the analytic/synthetic dichotomy. Analytic propositions are commonly thought to be mere tautologies and therefore tell us nothing new or meaningful about the world. Even on the Kantian-Misesian-impositionist view of apriorism, however, whether praxeological propositions are classed as analytic or synthetic they seem to have the character of tautologies and yet plainly tell us something meaningful about the world in a way that belies the 'common wisdom' about so-called analytic tautologies.

Long (2004) draws on Wittgenstein in a way that is congenial to Aristotle in order to resolve the analytic-synthetic dichotomy:

> Using a concept involves applying it to the real world. Since possessing a concept involves being able to use it, it follows that the possession of a concept commits us to applying that concept in various ways, and that these applications must be *generally* reliable and accurate in order for us to possess the concept at all. And from this it follows that one must assent to certain *factual* propositions employing the concept in order to count as possessing it in the first place, so that no "analytic" use of a concept is intelligible unless it is embedded in a network of "synthetic" uses of that same concept. Hence "propositions of the form of empirical propositions, and not only propositions of logic, form the foundation of all operating with thoughts (with language)." But in this case it no longer makes sense to ask whether conceptual truths are "analytic" or "synthetic." The analytic/synthetic distinction itself presupposes a separability of concept from application that cannot be sustained.
>
> Our conceptual truths are *usable* only on the assumption that various empirical statements hold. These empirical statements are not themselves conceptual truths, but if they were not to hold, we would not be able to

> employ our concepts. It is not as though a falsity of the empirical statements would *falsify* our conceptual truths; that would make the conceptual truths themselves into empirical statements, which they precisely are not. The *denial* of a conceptual truth employs the constituent concepts of that truth just as much as its assertion does; a situation in which our concepts are *disabled* is one in which the associated conceptual truths can be neither asserted nor denied. (363)

Similarly, Long resolves the impositionist/reflectionist dichotomy:

> Closely related to the question of whether *a priori* statements are analytic or synthetic is the question of whether their necessity depends in some way on the perceiver. [...] Mises favors an impositionist view in the tradition of Immanuel Kant. But the drawback of this approach is that it silently opens the back door to psychologism and polylogism just as it is loudly slamming the front. If impositionism is true, then we cannot *help* seeing the world in terms of the categories that we impose on it, and so there is no danger of our ever encountering an experience that falsifies these categories. Hence the truths embodied in those categories are freed from any dependence on empirical generalizations and contingent psychological tendencies. On the other hand, by granting that such categories apply to the world only because we impose them on it, it leaves open the possibility that creatures of another sort might impose different categories – as Mises himself admits. Mises's student Murray Rothbard instead adopts the reflectionist position, echoing Frege's view that logical principles are laws of reality rather than laws of thought. But this solution too seems vulnerable to polylogism. If the principles of psychology are normative for rather than constitutive of thought, then thought can depart from them; and once illogical thought is permitted, so is irrational action, and the fabric of praxeology is rent asunder.
>
> Where does Wittgenstein fall in this category? As I read him, he rejects the reflectionist/impositionist dichotomy just as he does the analytic/synthetic dichotomy. On this view, impositionism is rejected because it pictures logic as a constraint imposed by us on the world, while reflectionism is rejected because it pictures logic as a constraint imposed by the world on us. To think of logic as *constraining* something is to imagine, or to try to imagine, how things would be without the constraint. Since neither talk of an illogical world nor talk of illogical thought can be made sense of, the whole question cannot be meaningfully asked and so may be dismissed in good conscience: "in order to be able to draw a limit to thought, we should have to find both sides of the limit thinkable....We cannot think what we cannot think; so what we cannot think we cannot *say* either. (365-366)

Conceptual truth, then, is neither imposed on the world nor found in the world or read off of it but rather is "the lens through which we view reality" and it is a lens "we cannot peek *around*...at reality-in-itself to see that it deviates from what our lens shows us about it. What we know about reality just *is* what our lens shows us" (366). Hence, just as, in the spirit of Wittgenstein, "whatever counts as *thought* must embody *logical* principles[,]" so too "whatever counts as *action* must embody *economic* [or praxeological] principles" (367).

I do not think the analytic/synthetic dichotomy is applicable to Aristotle. Such a distinction was alien to him; as we have seen, for Aristotle knowledge, experience, and praxis were analytically distinct but inseparable.[17] Similarly, contra Smith, the impositionist/reflectionist dichotomy is also not applicable to Aristotle and is foreign to his thought. Smith (1990a) argues that Aristotle was a reflectionist, but I think this is a mistake. Smith's statement that the "knowing subject and the objects of knowledge are for the reflectionist in some sense and to some degree *pre-tuned* to each other" may seem to lend credence to Smith's claim, for it *is* the nature of the passive intellect in Aristotle's thought that it is capable of receiving the forms or essences of thinkable objects. This ignores other important aspects of Aristotle's thought, however. As Smith tells it, on the impositionist view the mind imposes its forms on the world in order to make it intelligible, while on the reflectionist view it is rather the world that imposes its forms on the mind as if the mind could have thought otherwise about it.[18] But the reality of the

[17] e.g., *Posterior Analytics* II.19, 99b35-100a9..

[18] It is possible that Smith might argue that Long and I misinterpret what he means by the reflectionist view, that he means by it something more like the Wittgensteinian transcendence of the dichotomy (because of the "pre-tuned" phrase above), but if this is the case then the reflectionist view is misnamed, is described by Smith with some problematic language, is not the polar opposite of the impositionist

matter is rather that for Aristotle there is an isomorphism between mind and reality. It is a mistake to oppose the laws of thought and the laws of reality as if they were separate and even opposed, or the one real and the other not. Logic is at once ontological and epistemological. Moreover, there is not only a passive aspect of the intellect for Aristotle but also an active aspect, which he discusses in *De Anima* III.5. In *De Anima* III.4, Aristotle analogizes the passive intellect to a tabula rasa, a blank writing tablet. Thought is potentially identical to what is thinkable, to objects of thought, but is not actually so until it is thinking them and it thinks them by taking on the form of the object of thought. Similarly, in sense-perception, the senses take on the form of the sensible object sans the matter. Although the passive intellect is a tabula rasa, it is not as though the laws of logic, such as the Law of Non-Contradiction, are merely laws of reality and therefore merely normative for man; rather, they are laws of thought as well, for that which does not follow them is incoherent and even unthinkable in the strict sense. Moreover, it is arguably the active intellect that abstracts the universals or essences from the data provided by the senses, thus actualizing their potential to be objects of thought and allowing the passive intellect to take on their forms. The nature of the thinker and of that which he thinks are both working in tandem here. To paraphrase Wittgenstein, it seems that Aristotle would agree that the thinker cannot think what he cannot think, and nothing else but what he can think (while he's thinking it) counts as thought. Thought is the means by which rational beings understand the world and it depends upon the natures of both, active and passive.

There is yet another false dichotomy stirring controversy within the Austrian

view as Smith's juxtaposition of these two views would suggest.

School – the debate between the so-called formalists and the hermeneuticians – and once again Long has employed Wittgenstein to resolve it. It will soon become apparent, however, from our considerations in the previous section, that this formalist/hermeneutic dichotomy is yet another that is foreign to an Aristotelian framework. First, a little background information will prove helpful. The formalist vs. hermeneutical debate hinges upon the relative importance given to praxeology at the expense of thymology by the former and that given to thymology at the expense of praxeology by the latter. Recall that praxeology involves a priori, formal theory; thymology involves the application of praxeological theories to specific cases through hermeneutical understanding. Thymology is necessary in order to determine how to apply praxeological theories to specific cases, but praxeology is equally necessary in order for thymology to make sense of our experiences by defining the criteria by which it can be understood. As Long (2004a) pithily points out – "Praxeology without thymology is empty; thymology without praxeology is blind" (364). It would be easy to misinterpret this statement without further clarification, however:

> It's not as though praxeology can exist without thymology, but in an "empty" condition, or that thymology can exist without praxeology, but in a "blind" condition. The thymological ability to apply praxeological concepts is *constitutive* of the possession of such concepts. Praxeology and thymology are distinguishable, but inseparable, aspects of an integrated unity. On Wittgenstein's view, "[t]he human body is the best picture of the human soul" (Wittgenstein 1958:178)—and of course vice versa. Likewise thymology is the best picture of praxeology and vice versa. It is through the application, the *use*, of our concepts that we are best able to understand them.
>
> The mistaken insistence on viewing praxeology and thymology as separable ingredients, rather than inseparable aspects, of our understanding is what motivates those critics of Austrian methodology

> (e.g., Gutierrez 1971) who object that praxeology is vacuous. They are quite right to insist that praxeological knowledge cannot exist without the ability to apply praxeological concepts to empirical reality. *Praxeology without thymology is empty.* Their mistake lies in confusing this claim with the entirely different claim that the content of praxeological knowledge must be *drawn from* empirical reality, as though we acquired thymological experience *first* and then came up with praxeological principles by generalizing *from* that experience. On the contrary: *Thymology without praxeology is blind.* "History speaks only to those people who know how to interpret it on the ground of correct theories" (Mises 1996:863). Praxeological truths, with all their logical interconnections, are implicit in thymological experience from the start. To *verstehen* an action just *is* to locate it in praxeological space. Neither praxeology nor thymology is prior to the other; we do not acquire one first and then use it to get to the other. "Light dawns gradually over the whole" (Wittgenstein 1972:21). (Long 2004a:364)

As Long illustrates: "Praxeology defines the criteria of money, cost, preference, and the like; but we have to use our intuitive understanding to recognize these criteria when they actually show up, since the criteria fall under teleological or thymological kinds, not physical ones" (358).

Long places Hoppe within the formalist camp, while others such as Lavoie fall into the hermeneutical camp. It is not difficult to make the connection between Hoppe's formalism and the Kantian elements in his thought. For Hoppe it seems we must engage in prior reflective cognition before we can interpret the bodily movements of other human beings as various kinds of actions, while Lavoie tends to interpret praxeology in historicist fashion so as to undermine the universal and necessary validity of its laws. Aristotle, on the other hand, as we saw above, does not make the mistake of so divorcing theory and praxis.

[IV. Ayn Rand, Objectivism, and Praxeology

It is fairly well-known among Objectivists and Austrians that Ayn Rand rejected Mises's method of praxeology. In this section, to be added later, I will seek to show that praxeology is not incompatible with the philosophy of Ayn Rand. I've already promised Chris Sciabarra that I would submit this paper to JARS when it's finished.]

IV. Conclusions

In this essay, I have attempted to show how praxeology, despite being an aprioristic discipline, can be given an explicitly Aristotelian foundation. Indeed, not only is this possible, but it provides praxeology a firmer philosophical and scientific ground upon which to stand while avoiding familiar pitfalls of modern philosophy of science: the untenable mechanism, atomism, and false dichotomies such as a priori/empirical, rationalist/empiricist, analytic/synthetic, impositionist/reflectionist, and formalist/herneneutic. Such a praxeology is an exact science of necessary and eternal laws of human action, but it is also fallibalistic owing to the multiple inductive and deductive processes it involves. To once again paraphrase Reinach, the a priori character of praxeology is nothing dark and mystical: a priori propositions refer to states of affairs that are general and necessary, to essential and intelligible structures in the world obtaining from the identities or natures of things and their relations.

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