

# What Austrian Scholars Should Know About Logic (and Why) v.2.0

Steven Yates  
Adjunct Scholar, Ludwig von Mises Institute

## 1.

Why is logic important to Austrian scholars, most of whom are economists and not philosophers? In this paper I will sketch a number of reasons and draw some consequences. It is worth observing, first, that David Gordon's *An Introduction to Economic Reasoning*, possibly the only economics text written from an Austrian-school point of view, begins with a brief discussion of deductive logic as the primary tool of economics. What is it about deductive logic that makes it such a good tool? Gordon writes:

Given a true statement, we can, by using deduction, obtain other true statements from it. These new statements not only are true—their truth is guaranteed! If the statements we started with are true, then our conclusions are also true.... An argument in which the conclusion is correctly deduced from the premises is called a valid argument. If we can (somehow) arrive at true premises, then we are guaranteed true conclusions.<sup>1</sup>

This raises two issues: (1) What relationship(s) between premise(s) and conclusion guarantee that if the former are true the latter must be true? (2) How can premises be known to be true? If we can answer (1) we can do “formal” or “minor” logic. If we can answer both (1) and (2), we can add “material” or “major” logic.<sup>2</sup>

First, though, what is logic? Different modern and contemporary texts provide a narrow range of answers. Morris Cohen and Ernest Nagel wrote in their classic *An Introduction to Logic and Scientific Method*: “Logic may be said to be concerned with the question of adequacy or probative value of different kinds of evidence.”<sup>3</sup> From one of the most widely used contemporary texts, that of Irving Copi: “Logic is the study of the methods and principles used to distinguish good (correct) from bad (incorrect) reasoning.”<sup>4</sup> These remarks enable us to pin down central aspects of the subject—it is, at the very least, the study of the rules governing correct reasoning, violations of which are called *fallacies*. Logic is more, however: it is one of a set of disciplines that includes mathematics, geometry and praxeology which have in common that their fundamental propositions are grasped intellectually and known *a priori*. In another sense, however,

logic is broad enough to subsume these by virtue of its capacity to study what it means to say that propositions are grasped intellectually and known *a priori*. The French Thomistic philosopher and theologian Jacques Maritain defined logic as follows:

Logic studies the reason itself as an instrument of knowledge, or a means of acquiring and possessing the true. It may be defined as: *the art which directs the very act of reason, that which enables us to advance with order, ease and correctness in the act of reason itself.*<sup>5</sup>

Maritain goes on to discuss how logic not only

proceeds in conformity with reason ... but bears upon the act of reason itself ... The *reason* is not another faculty than the *intellect* (the *understanding*): but from the point of view of the functioning of this faculty, it is called more especially the *intellect* when it sees, grasps or “apprehends,” and more especially the *reason* when it proceeds through discourse from the apprehension of one thing known to another.<sup>6</sup>

Logic is thus a foundational discipline (the contemporary attacks on “foundationalism” notwithstanding<sup>7</sup>). It can reflect on its own methods and indicate how those methods apply to other disciplines and domains. It thus provides not just groundwork for the science of economics as understood by Austrian school thinkers but offers common ground with other disciplines, including philosophy and two of its key branches: metaphysics and epistemology.

Reasoning often manifests itself as *arguments*—sets of statements in which some (called premises) are used as evidence to support another statement (called the conclusion). Logic assesses the adequacy of the results, as Cohen and Nagel observe. Deductive arguments, discussed by Gordon, aim for logical closure. A deductively valid argument is structured so that true premises guarantee a true conclusion: (1) above. Inductive arguments only support their conclusions to some degree of probability. According to Ludwig von Mises, praxeology is a deductive science; its propositions are inferred deductively from the action principle, known *a priori*: (2) above.

It follows, at the very start, that Austrian scholars should know something of deductive logic: what it is, how a deductive argument is structured, and how to apply deduction. These are the *first* and most obvious things Austrian scholars should know about logic. I would argue that the study of logic in light of the many achievements of the Austrian school of economics provides much deeper insights. For my remarks so far cover just (1) above. (1) implies the canons to which Gordon referred that identify the rules governing deductive validity—assuring that true premises guarantee a true conclusion. These rules are typically designated with names like *modus ponens*, *modus tollens*, hypothetical syllogism, categorical syllogism, universal instantiation, and so on. Austrian scholars should know something of these as part of their general background knowledge.

What of (2)? (2), I will argue, implies something more fundamental and therefore more central to the Austrian school. How can we be assured that our first premises are both true and known to be true (as opposed to mere belief)? Without addressing this, the Austrian school cannot claim to have moved beyond opinion. It doesn't help to say that the truths of logic, mathematics or praxeology are self-evident. *Self-evidence* is a dangerously psychologistic notion (*psychologism* being the doctrine that the principles of logic are reducible to the principles of psychology). What is self-evident to *A* may not be at all self-evident to *B* and may seem downright absurd to *C*. Likewise with *certain*. Certainty, I believe to be another psychological rather than logical operator; it indicates not knowledge but very strong belief. I may be certain that it will rain next Tuesday; it does not follow that it will indeed rain next Tuesday. One can be certain and wrong. We need to be sure to remain within logic's range of investigation and vocabulary. Therefore we should speak not of certainty but *necessity*—a relationship between propositions that follow from antecedent propositions with the closure of strict deduction. We need to ask: are there self-validating propositions: propositions that one apprehends intellectually (in the sense of Maritain above) as universal truths as a component of correct understanding? Such issues and questions belong at the *foundations* of logic.

## 2.

I would assert, therefore, that the *second* thing Austrian scholars should know about logic has to do with the foundations of logic—especially as the results offer prospects both for revolutionizing the scientific study of the acting person. Such a change of perspective holds out hope of reversing the self-destructive course both philosophy and economics (among other disciplines) as practiced in universities have been on for perhaps the past 150 years.

Let us see how issues related to the foundations of logic arise in Mises's work.

Mises does not provide us with an explicit definition of logic or unpack its basic nature. But much of what he has to say in the crucial first 100 or so pages of *Human Action* clearly implies such a conception; other writings such as *Epistemological Problems of Economics* and *The Ultimate Foundation of Economic Science* also call forth a philosophy of logic that can be elucidated as an essential component of a broader Austrian paradigm of scientific and philosophical scholarship that includes Austrian school economics as a special case.<sup>8</sup> The historiographic task of drawing the historical antecedents of the Austrian school is well underway.<sup>9</sup> The task of charting its philosophical antecedents and consequences has only begun.<sup>10</sup> So let us consider first those aspects of Mises's work that point toward a specific philosophy of logic.

*Human Action* takes the acting person in whatever surroundings he finds himself as its starting point; logic and its foundations enter the picture immediately, implied in or deducible from this starting point. Mises writes in one of his most relevant passages:

[T]he problem of the *a priori* ... refers to the essential and necessary character of the logical structure of the human mind. The fundamental logical relations are not subject to proof or disproof. Every attempt to prove them must presuppose their validity. It is impossible to explain them to a being who would not possess them on his own account. Efforts to define them according to the rules of definition must fail. They are primary propositions antecedent to any nominal or real definition. They are ultimate unanalyzable categories. The human mind is utterly incapable of imagining logical categories at variance with them. No matter how they may appear to superhuman beings, they are for man inescapable and absolutely necessary. They are the indispensable prerequisite of perception, apperception, and experience....

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.... The fact that 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 enjoins upon us what may be called *methodological apriorism*.<sup>11</sup>

Mises has penned here not a system of logic but pointed (incompletely) toward the foundations of logic—in a way that also implies an epistemology and the outlines of a metaphysics or theory of reality that can go on developing. These results, I would argue, tie the Austrian school inseparably to the larger Aristotelian-Thomistic tradition.

At its foundations stand the principles of identity and contradiction—Aristotle’s “laws of thought” which if construed realistically must be seen not just as laws of correct thought but of reality, of the world—the final court of appeal over what is correct in the realm of reasoning. It may be argued that to understand the principles of identity and contradiction is to apprehend that they are universally true, and absolute; their denials are unintelligible, as Aristotle originally showed.<sup>12</sup> Mises continues: “The idea that *A* could at the same time be *non-A* or that to prefer *A* to *B* could at the same time be to prefer *B* to *A* is simply inconceivable and absurd to a human mind.”<sup>13</sup> Does this imply—for Mises as well as for Aristotle (and Aquinas)—that the principles are universally valid for reality as well as for human thought? Here a possible ambiguity creeps in. On the one hand, many scholars (e.g., Hans Hoppe) have noted a Kantian dimension in Mises thought. Undoubtedly Mises studied Kant. Mises’s use of the term *category* suggests Kant. We have the implication above that the categories at the foundation of logic (and all their implications as well as the action principle itself) might be apprehended differently by a “superhuman being”—such as God. As Mises puts this:

It is idle to ask whether things-in-themselves are different from what they appear to us, and whether there are worlds which we cannot divine and ideas which we cannot comprehend. These are problems beyond the scope of human cognition. Human knowledge is conditioned by the structure of the human mind. If it chooses human action as the subject

matter of its inquiries, it cannot mean anything else than the categories of action which are proper to the human mind and are its projection into the external world of becoming and change. All the theorems of praxeology refer only to these categories of action and are valid only in the orbit of their operation. They do not pretend to convey any information about never dreamed of and unimaginable worlds and relations.<sup>14</sup>

Elsewhere, however, Mises appears to grasp for something more ambitious. A few years back he had written:

The first point to be established ... is that none of the sources of historical information accessible to us contains anything that could shake the assumption of the immutability of reason. Never has even an attempt been made to state concretely in what respects the logical structure of reason could have changed in the course of the ages. The champions of historicism would be greatly embarrassed if one were to require of them that they illustrate their thesis by pointing out an example.... [I]n what way [is] the logic of primitive peoples ... structurally different from our logic[?]<sup>15</sup>

Even more revealing:

The categories of human thought and action are neither arbitrary products of the human mind nor conventions. They are not outside of the universe and of the course of cosmic events. They are biological facts and have a definite function in life and reality. They are instruments in man's struggle for existence and in his endeavors to adjust himself as much as possible to the real state of the universe and to remove uneasiness as much as it is in his power to do so. They are therefore appropriate to the structure of the external world and reflect properties of the world and of reality. They work, and are in this sense true and valid.

It is consequently incorrect to assert that aprioristic insight and pure reasoning do not convey any information about reality and the structure of the universe. The fundamental logical relations and the categories of thought and action are the ultimate source of all human knowledge. They are adequate to the structure of reality, they reveal this structure to the human mind and, in this sense, they are for man basic ontological facts.<sup>16</sup>

These insights transfer to praxeology. Praxeology, the general science of human action, refers to categories of action. The results suggest a bridge from praxeology through logic to an epistemology and metaphysics. In the context of explaining why the general science of human action must differ from the physical or natural sciences, Mises erects the scaffolding of this bridge:

The real thing which is the subject matter of praxeology, human action, stems from the same source as human reasoning. Action and reason are congeneric and homogeneous; they may even be called two different aspects of the same thing. That reason has the power to make clear through pure ratiocination the essential features of action is a consequence of the fact that action is an offshoot of reason. The theorems attained by correct praxeological reasoning are not only perfectly certain and incontestable, like the correct mathematical theorems. They refer, moreover, with the full rigidity of their apodictic certainty and incontestability to the reality of action as it appears in life and history. *Praxeology conveys exact and precise knowledge of real things.*<sup>17</sup>

With this last especially, suggestions of a Kantian transcendental idealism seem to dissolve. Unfortunately, the passage continues:

We do not know what a superhuman intellect may think and comprehend. For man every cognition is conditioned by the logical structure of his mind and implied in this structure. It is precisely the satisfactory results of the empirical sciences and their practical application that evidence this truth. Within the orbit in which human action is able to attain ends aimed at there is no room left for agnosticism.<sup>18</sup>

The emphasis is on *acting man*. The result—as well as the observation above that these categories “work” as central to their justification—suggest a kind of post-Kantian pragmatism, perhaps on the order of that defended by Clarence Irving Lewis (with Lewis’s collectivism subtracted, of course).<sup>19</sup> Is there any room for agnosticism regarding the applicability of the categories of logic either to beings other than men or to the world generally, considered independently of our thought about it and experience of it?

Action is the conscious employment of at least one means to achieve at least one prior-imagined end. The means employed, as well as the end achieved, considered as states of affairs, are independent of the conscious actor, with the former selected from the options present in the actor’s surroundings. The same is true of the principles ensuring the means selected are appropriate to achieving the ends desired. *Action*, that is, is necessarily action *in the world*—in a set of surroundings containing objects and processes behaving in specific ways conforming to specific patterns and registering on our sensory apparatus in specific ways. Once we realize this, all suggestions of transcendental idealism and pragmatism ought to disappear.<sup>20</sup> What can only be described as an extreme realism—and (in contrast to what is probably the dominant school of thought in academic philosophy today) an extreme foundationalism—arises to take its place.<sup>21</sup> It is the apriorist element that points at this foundationalism by asserting that some knowledge of general or universal truths can be had *a priori* by what Maritain called apprehension. Or as Hans Herman Hoppe, having worked through the Kantian argument, expressed this insight:

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. And as soon as this is recognized, all idealistic suggestions immediately disappear. Instead, an epistemology claiming the existence of true synthetic *a priori* propositions [that of Kant's system] 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 characteristic of reality. For it is through actions that the mind and reality make contact.<sup>22</sup>

### 3.

This suggests a *third* point that Austrian scholars should know about logic—that its categories apply to the world in ways apprehendable to us as causes and effects; i.e., the general category causality applies to the world. In other words, Kant's wrong turn was in having answered Humean skepticism with *impositionism*: the fundamental categories (logical foundations, deductive relations, causality and so on) are not apprehended in reality in their various concrete instances but are imposed by the human mind on a *Ding-an-Sich*.<sup>23</sup> Impositionism would imply a “praxeology” the fundamental categories of which are deducible from or reducible to only our “laws of thought” and could be different for a nonhuman intelligence. Mises offers insights out of accord with this interpretation. Consider his observations on the relationship between human action and causality:

Man is in a position to act because he has the ability to discover causal relations which determine change and becoming in the universe. Acting requires and presupposes the category of causality. Only a man who sees the world in the light of causality is fitted to act. In this sense we may say that causality is a category of action. The category means and ends presupposes the category cause and effect. In a world without causality and regularity of phenomena there would be no field for human reasoning and human action. Such a world would be a chaos in which man would be at a loss to find any orientation and guidance. Man is not even capable of imagining the conditions of such a chaotic universe.

Where man does not see any causal relation, he cannot act. This statement is not reversible. Even when he knows the causal relation involved, man cannot act if he is not in a position to influence the cause.<sup>24</sup>

This does far more to answer Hume's skepticism. It unpacks the action principle in another way, such a way as to infer the category of causality *a priori*: known independently of experience in the sense that successful action in the world presupposes it. This is why, of any event, we almost automatically look for its cause or causes—

assuming without seriously questioning that such a relation exists to be found. To say of some event, “This was caused by nothing at all; it just sprang into existence complete happenstance,” makes no sense and will not even be entertained in practice. So although we must discover particular causes (or networks of causes) by empirical means, the category of causality itself is never in question and it would make no sense to question it.

Carl Menger, of course, emphasized causality to the point of making it the subject of the very first paragraph of his *Principles of Economics*, writing:

All things are subject to the law of cause and effect. This great principle knows no exception, and we would search in vain in the realm of experience for an example to the contrary. Human progress has no tendency to cast it into doubt, but rather the effect of confirming it and of always further widening knowledge of the scope of its validity. Its continued and growing recognition is therefore closely linked to human progress.<sup>25</sup>

Menger proceeds to situate human needs and the conditions for their satisfaction into this world governed by a causality known *a priori*. The *a priori* nature of the category, of course, does not inform us about the specific conditions of the events that make up our everyday experience. These, it is true, can only be discovered empirically. Our perception that a given event has a given cause (or, more usually, a set of necessary and sufficient conditions) has been a philosophical problem since the time of Hume, one the elucidation of which goes beyond the scope of what can be attempted here. Suffice it to say, sometimes this perception is astoundingly simple. For example, it does not take many experiences of touching active burners for a small child to realize that active burners on stoves *burn*. The child quickly learns not to touch them long before he is old enough to understand anything as abstract as *cause and effect*. On the other hand, it is often not realized by purveyors of statistics as a source of deep insights that a statistical correlation does not lead logically to a causal claim (although the correlation may be strong enough and free of counterinstances so that it might be unreasonable to withhold our judgment that a causal network exists between the events correlated). This suggests that an aprioristic argument regarding causality as a product of intellectual insight might be stronger than it appears at first glance. This grants that Hume may well have been right in his judgment that we never experience causality in the sense of a power by which one event produces another. Hume’s starting point, however, was his impressionism: his conviction that all our knowledge begins with units of experience he called impressions, and that any idea we might have, such as causality, must be traceable to an antecedent impression. If there is no such impression to be associated with causality, then in the Humean view we have no clear idea of it. Such was empiricism in the hands of Hume.

#### 4.

The villain, in this case, is empiricism as a theory of knowledge. And this indicates the *fourth* thing Austrian scholars should know about logic: that the particular philosophy of

logic embodied in methodological apriorism and this account of causality invites both a devastating critique of empiricism and promises a viable alternative. Empiricism has long been proving itself progressively less and less satisfactory with very little help from Austrian scholars. The positivism of Auguste Comte 150 years ago gave us a militant empiricism that elevated empiricist methodology to the status of theology and identified this theology with science. Since then, however, the methodology has been disintegrating, little by little. In Comte's writings, philosophy as traditionally conceived is to be supplanted entirely by natural science conceived as a unity whose ideal form was physics. The story of the slow dissolution of modern thought under this body of assumptions is too long to be told here, and I tell it elsewhere in any event.<sup>26</sup> I will sketch it here, without maintaining that this is the only possible approach.<sup>27</sup> In the philosophy of logic, and of mathematics as well, positivism as a method and empiricism as an epistemology led to *conventionalism*. This is the doctrine, alluded to by Mises above, that the laws of logic (and mathematics) are combinations of signs devised by us, for our purposes, and have no relation to reality. They are analytic propositions, truths by definition, designation or stipulation. This view was given its clearest expression by logical positivist philosophy A.J. Ayer who wrote famously that

[t]he principles of logic and mathematics are true universally simply because we never allow them to be anything else. And the reason for this is that we cannot abandon them without contradicting ourselves, without sinning against the rules which govern the use of language, and so making our utterances self-stultifying.<sup>28</sup>

If principles of logic and mathematics are true “because we never allow them to be anything else” (implying that we make the choice) then why is it impossible to abandon them; why is it impossible to find alternatives to them that do not “sin” against the rules of language? To such a question, positivism never had an effective answer. Of course, the enormous applicability of instances of both logical and mathematical reason to a variety of real world problems is made mysterious by conventionalism. These range from ancient man's inferences from changing seasons to specific conditions for planting crops to modern civilization's application of increasingly sophisticated forms of mathematics to the construction of buildings, bridges, rocket ships and other engineering marvels. Elsewhere I offer an account of tortured attempts to reconcile such commonplaces with conventionalist dogma.<sup>29</sup> Empiricism in the hands of the logical empiricists triggered countless technical problems (e.g., Nelson Goodman's aberrant predicates “grue” and “bleen”<sup>30</sup> as well as paradoxes such as that of the raven<sup>31</sup>). It grew increasingly remote from the sciences positivist and logical empiricist philosophers had set out to elucidate.<sup>32</sup> The historicist rebellion, one might call it (I have in mind here writers such as Norwood Russell Hanson,<sup>33</sup> Thomas S. Kuhn<sup>34</sup> and Paul Feyerabend<sup>35</sup>) dislodged logical empiricism but did not overthrow empiricism itself; they provided extensive arguments against the idea that experience alone (observation sentences rooted in “sense data,” etc.) provides a kind of bedrock against which theoretical statements can be tested—but it never occurred to them to reinvestigate the possibility of propositions capable of apprehension *a priori*. Not even the British philosopher of science Nicholas Maxwell, whose work comes the closest to breaking out of the empiricist box, really

broke with the larger empiricist tradition. Maxwell noticed that science makes substantial *a priori* presuppositions about the world; but Maxwell infers from this not apriorism but what he calls aim-oriented empiricism, according to which we cannot really know that our *a priori* presuppositions are true.<sup>36</sup>

Hence—to make a long story far too short—the discipline has devolved into a mixture of evolutionary naturalism (W.V. Quine<sup>37</sup>, Kuhn<sup>38</sup>), epistemological behaviorism and eliminative materialism (Rorty,<sup>39</sup> the Churchlands<sup>40</sup>), and out-and-out relativism or “epistemological anarchism” (Feyerabend<sup>41</sup>). Austrian scholars, as I’ve said above, should know the logical foundations out of which Austrian school economics emerges via deductive reasoning; they should also know how the philosophical alternative has simply disintegrated over the past 50 – 70 years. Mises, in fact, anticipated the criticism of the “historicist philosophers of science” (Hanson, Kuhn, Feyerabend, et. al.):

Nothing is more clearly an inversion of the truth than the thesis of empiricism that theoretical propositions are arrived at through induction on the basis of a presuppositionless observation of “facts.” It is only with the aid of a theory that we can determine what the facts are.... To apply language, with its words and concepts, to anything is at the same time to approach it with a theory. Even the empiricist, who allegedly works without presuppositions, makes use of theoretical tools. They are distinguished from those produced by a scientific theory only in being less perfect and therefore also less useful.<sup>42</sup>

The context here is the theory of action—grasped *a priori* rather than through experience. Indeed, as we shall see presently, it makes no sense to question the reality of human action. But for now, we may note that actions are not something anyone observes. What one observes are bodily motions, linguistic utterances—in a word, *behavior* (physical, verbal, etc.).<sup>43</sup>

These schools—of logical empiricism, historicism, behaviorism, and so on—are almost entirely played out. Most of contemporary philosophy is entirely self-contained. It may speak to larger issues, but in a fashion severed from all foundations. It grants only historical and cultural contingency; it urges that we strive not for objectivity but for solidarity, understood epistemically as a quest for consensus, not for metaphysical truth as correspondence with reality.<sup>44</sup> Such notions by their nature cannot move beyond opinion—opinions unlikely to interest policy-makers!—because they work from the premise that opinion is all there is! Some opinions are better for us to believe; some not. The question of why this is so is one the various postmodernists stalking the contemporary academic wilderness would have us set aside as meaningless. Contemporary psychology has proven of more interest, as in the absence of foundations that could ground a moral view of human life it lends itself to the interests of those who would manipulate others, working particularly through the institutions of public education.<sup>45</sup> This illustrates the cultural and educational dangers of abandoning truth.

## 5.

This points in the direction of the *fifth* thing Austrian scholars should know about logic: it would have been far simpler to demolish the original Comtean illusions by way of pointing out the performative contradictions they involve. A *performative contradiction* is a statement the content of which is falsified by the act (or performance) of uttering it. The denial that *man acts* is an example—for denials of anything are themselves *actions*, and it makes no sense to understand them in any other way. Several authors including Hans Hoppe and George Selgin have observed that the denial that man acts would itself be an action, concluding that the action principle is self-validating.<sup>46</sup>

Performative contradiction, however, is just one species of a broader strategy of logical reasoning that can be applied back to all forms of empiricism. Here is how it works. The central claim of empiricism, that all knowledge arises through or is reducible in some way to sense experience, cannot itself arise through or be reduced in some way to sense experience. It isn't that kind of claim. Thus the central claim of empiricism, if accepted as true, is in the embarrassing trap of being its own counterexample. To approach this from a slightly different direction: the validation of sense experience—the idea, that is, that the senses do provide us with reliable knowledge at least some of the time, as opposed to dreams and horoscopes—cannot itself be found in sense experience, because that would beg the question. Empiricism cannot, that is, “bootstrap” its way into validation of itself from within. The *fifth* thing Austrian scholars should know about logic and its applications, in this case: general theses involving human experience, human knowledge, human reasoning as well as human action, are invariably self-applying. The denials of some of these theses are *self-referentially inconsistent*, to use the term employed by Frederic B. Fitch, a mathematical logician who was unusually sensitive to the philosophical implications of his subject matter.<sup>47</sup> Performative contradiction is then a variant on self-referential inconsistency. It applies to the core of empiricist dogma itself: that we acquire knowledge only through observation, and never through pure reasoning independent of observation. As Hoppe notes, the empiricist does not actually observe people *acting*; what he *observes* are bodily motions, what Skinner calls verbal behavior (speech), and so on.<sup>48</sup> Indeed, behaviorism is the most logical approach to take to the scientific study of human beings if empiricism is your starting postulate—however paradoxical is the predicament of the “thinking behaviorist” as well as the acting behaviorist who is *defending* behaviorism to an audience of people who are in a position to *decide* whether the arguments in defense of behaviorism are rationally grounded.<sup>49</sup> Human action can only be understood—and validated—by *a priori* argumentation and methodology, and this calls forth an apriorist epistemology as well. The ultimate justification for these moves is (1) Aristotle's principle of contradiction and (2) the further principle that general theses about human beings and their activities, since formulated and defended by human beings, these theses necessarily apply to themselves, i.e., are self-referential in view of the performance involved in formulating, articulating and defending them with arguments.<sup>50</sup>

## 6.

There is a *sixth* thing Austrian scholars should know about logic, and it is this: given our results so far, there is one and only one correct logic—despite Mises’s own occasional suggestions of the possibility of beings possessing different sets of logical categories—subhuman or superhuman, or that reason is transitory.<sup>51</sup> It is now both possible and necessary to lay this ambiguity to rest—returning to the Mises who wrote the above paragraph about the “immutability” of reason. Can anyone seriously suppose that the principles of identity and contradiction are “true for us” but not “true for God” (for example)? Or that it is possible that for God there can both be and not be houses on Elm Street at the same time and place, or that God could add seven to five and obtain some number other than twelve?<sup>52</sup> Is it possible that the brains and nervous systems of some hypothetical intelligent extraterrestrial species are sufficiently different from ours as to embody different laws of logic and systems of mathematics? I submit that the person who hypothesizes such has not really apprehended these laws or understood Aristotle’s fundamental argument—surely one of the most important in the whole history of Western philosophy—that any attempt to cast doubt on the principle of contradiction or set it aside presupposes it and invalidates the skepticism. Now one can find scientists who suggest that the brain of each species constructs its own universe—that reality itself is a “construction” of the brain and nervous system of a species.<sup>53</sup> This raises all over again the issue of the status of the brain and nervous system undertaking the studies. Is it a “construction” of itself?<sup>54</sup> It may well be that the brain of a species “constructs” a perceptual *sensorium* that will differ from species to species relative to the capacities of its members’ senses to register sensory data, thus delivering a “cross section” of what is real that will in fact be exceedingly difficult for a member of another species even to imagine in terms of its appearance.<sup>55</sup> But necessarily (for species capable of functioning at the conceptual level, anyway) laws of logic, mathematics and praxeology are invariant. There is again at most one logic—even for superhumans, extraterrestrials and God Himself!

All forms of what Mises called *polylogism* are therefore false and impossible. Mises’s own remarks are directed against two forms of polylogism, classical Marxist polylogism and racialist polylogism.<sup>56</sup> The former held that bourgeois and proletariat experienced the world in different ways because they employ different “logics.” The latter held that different racial groups have different “logics.” Both positions still around. The latter is instantly recognizable in the “afrocentricity” and various forms of multiculturalism also stalking today’s academic wilderness; it often comes accompanied by what may be called feminist polylogism and still others.<sup>57</sup>

What refutes every form of polylogism is the realization that there can be at most one set of logical categories whose exact nature is implied in the Aristotelian principles of identity and contradiction, alongside their corollaries. To these there can be no intelligible, coherent alternatives, only different levels of mastery.<sup>58</sup> This realization creates the conditions for an Austrian scholarship that can set itself apart as radically (in the original and highest sense of that term) different from the modes of thought that have become dominant in the scholarship of much of the rest of higher education today. There are libertarians who have attempted to maintain what they no doubt consider a safe

distance from the Austrian school of economics—under the misconception that Misesian thought inculcates a *homo economicus* view of the human condition.<sup>59</sup> Mises, however, makes no such assumption.<sup>60</sup> He does assert, contrary to Objectivists who follow Ayn Rand, that human action is motivated by factors other than pure reason in her sense.<sup>61</sup> But this is just to say that human action is one of many phenomena taking place in the universe, even if it must be understood “from the inside,” *a priori*, instead of “from the outside,” empirically, because of the special relationship human beings hold to their own actions.

## 7.

With this we come to the final issue I wish to take up in this paper. Asked in the title is not just what Austrian scholars should know about logic but why Austrian scholars should know about logic? In large measure, the *what* should have answered the *why*. But a few additional remarks are in order. Austrian scholarship, like any other paradigm that often addresses technical issues, is ever in danger of becoming just one more approach not just specialized but specialist. That is, it would regard addressing technical problems as an end in itself.<sup>62</sup> An Austrian scholarship that advances in full light of its logical and epistemological as well as its methodological premises has the potential to address areas other than economics. Undoubtedly some of its results in philosophy, or in psychology (where it offers a potentially very precise and systematic alternative to the behaviorism that now prevails), will feed back into economics, perhaps shedding light on issues in economics in ways none of us can predict in advance but wouldn't want to find ourselves ruling out.

In the meantime, the approach I am suggesting here suggests that Austrian scholars be fully cognizant of the logical structure of such moves as the defense of the action principle and consequent defense of the *a priori* understanding of human action. This is so such moves can be wielded effectively in neighboring subject domains. This will enable us to see Austrian scholarship generally as a larger paradigm (in Kuhn's sense but stripped of Kuhn's evolutionary naturalism, itself haunted by a self-application problems) for scholarship.<sup>63</sup> Enhancing the possibilities here is the fact that the Austrian school's slow but steady gains in recognition among a new generation of scholars as having the only viable account of such real world problems such as why “booms” (e.g., the late 1990s) are invariably followed by “busts” (the 2000s so far). Kept free of the mindset of specialism, this paradigm addresses the issues of our time forthrightly and not evasively. It ultimately provides the intellectual foundation for whatever hypothetical free society, based on the free actions and interactions of human beings living in a real world, might be built up on top of the one the omnipotent state and the forces of positivism and other forms of irrationalism are slowly but surely destroying.<sup>64</sup>

19 Landmark Dr., #13A  
Columbia, South Carolina 29210  
March 2003  
syates2@earthlink.net

---

<sup>1</sup> David Gordon, *An Introduction to Economic Reasoning* (Auburn, Ala.: Ludwig von Mises Institute, 2000), pp. 1-2.

<sup>2</sup> These are Jacques Maritain's terms; cf. below.

<sup>3</sup> Morris Cohen and Ernest Nagel, *An Introduction to Logic and Scientific Method* (New York: Harcourt, Brace & World, 1934), p. 5.

<sup>4</sup> Irving Copi and Carl Cohen, *Introduction to Logic*, 9<sup>th</sup> Ed. (New York: Macmillan, 1994), p. 2.

<sup>5</sup> Jacques Maritain, *Formal Logic* (New York: Sheed & Ward, 1946), p. 1.

<sup>6</sup> *Ibid.*

<sup>7</sup> As exemplified in, e.g., Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton, N.J.: Princeton University Press, 1979).

<sup>8</sup> Ludwig von Mises, *Epistemological Problems of Economics* (New York: New York University Press, 1976); *The Ultimate Foundation of Economic Science: An Essay on Method* (Kansas City, Mo.: Sheed, Andrews & McMeel, 1962).

<sup>9</sup> See, e.g., Barry Smith, *Austrian Philosophy: The Legacy of Franz Brentano* (Chicago: Open Court, 1994), David Gordon, *The Philosophical Origins of Austrian Economics* (Auburn, Ala.: Ludwig von Mises Institute, 1996). Cf. also Murray N. Rothbard, "New Light on the Prehistory of the Austrian School," in Murray N. Rothbard, *The Logic of Action, Vol. 1* (Chetelham, U.K.: Edward Elgar, 1997), pp. 173-94.

<sup>10</sup> See again Barry Smith, especially his "Aristotle, Menger, Mises: An Essay in the Metaphysics of Economics," in B. Caldwell, ed., *Carl Menger and His Legacy in Economics* (Durham, NC: Duke University Press, 1990), pp. 263-88.

<sup>11</sup> Ludwig von Mises, *Human Action*, 3<sup>rd</sup> ed. Rev. (Chicago: Contemporary Books, 1966), pp. 34-35.

<sup>12</sup> Aristotle, *Metaphysics, Book G*, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), pp. 735-43.

<sup>13</sup> Mises, *Human Action*, p. 35.

<sup>14</sup> *Ibid.*, p. 36.

<sup>15</sup> Mises, *Epistemological Problems of Economics*, pp. 102-03.

<sup>16</sup> *Ibid.*, pp. 85-86. Mises cites Morris Cohen, *Reason and Nature* (New York: The Free Press, 1931) and Cohen, *A Preface to Logic* (New York: Henry Holt & Co., 1944). Cf. especially pp. 202-05 of the former and 41-44, 54-56 and 179-87 of the latter.

<sup>17</sup> Mises, *Human Action*, p. 39. Emphasis mine.

<sup>18</sup> *Ibid.*, p. 86.

<sup>19</sup> Cf. Clarence Irving Lewis, *Mind and the World Order* (New York: Dover Books, 1956) or his "The Pragmatic Conception of the *A Priori*," in *The American Pragmatists*, ed. M. Konvitz and G. Kennedy (New York: Meridian Books, 1960), pp. 305-15.

<sup>20</sup> Cf. J.J. Gibson, *The Senses Considered as Perceptual Systems* (Boston: Houghton Mifflin, 1966) for an ecological approach (Gibson's term) that, applied to the situations of interest to Austrian scholars, situates the acting person in an environment with determinate properties.

<sup>21</sup> The most prominent critic of "foundationalism" among professional philosophers has probably been Richard Rorty; cf. again his *Philosophy and the Mirror of Nature*, but he was pursuing tendencies already active in both the "analytic" and "continental" schools in contemporary philosophy and which have converged as postmodernism, which denies the existence of transcultural and transhistorical truths to be known in favor of the situatedness of all knowledge. By *foundationalism* Rorty didn't have in mind a single doctrine but several: Platonism, Cartesianism, Kantian transcendental idealism, logical empiricism, among others—all of which hold that there is an epistemic "bedrock" of first principles, logical or otherwise, or a permanent matrix of categories or a permanent set of eternal objects or other apprehendable entities of which it is the special task of philosophy to discover and elucidate. Suffice it to say—if the Austrian school is the correct one, then postmodernism is wrong through and through—and if postmodernism is true (whatever sense that makes) than all of us are delusional.

<sup>22</sup> Hans Herman Hoppe, *Economic Science and the Austrian Method* (Auburn, Ala.: Ludwig von Mises Institute, 1995), p. 20.

<sup>23</sup> Cf. Barry Smith, "The Question of Apriorism," *Austrian Economics Newsletter*, Fall, 1990.

<sup>24</sup> Mises, *Human Action*, p. 22.

- <sup>25</sup> Carl Menger, *Principles of Economics* (Grove City, Pa.: Libertarian Press
- <sup>26</sup> In my book *In Defense of Logic: Against Polylogism and Conventionalism*, under consideration for publication.
- <sup>27</sup> For a somewhat different and possibly more standard approach cf. Friedrich A. Hayek, *The Counterrevolution of Science: Studies in the Abuse of Reason* (Glencoe, Ill.: The Free Press, 1952).
- <sup>28</sup> A.J. Ayer, *Language, Truth and Logic*, 2<sup>nd</sup> ed. (New York: Dover Books, 1962), p. 77.
- <sup>29</sup> *In Defense of Logic*, ch. 5.
- <sup>30</sup> Nelson Goodman, "The New Riddle of Induction," in Nelson Goodman, *Fact, Fiction and Forecast* (Cambridge, Ma.: Harvard University Press, 1979), pp. 59-83. This essay was originally delivered as a lecture at the University of London in 1953.
- <sup>31</sup> See Goodman, *ibid.*, pp. 70-72. The idea here is that "All ravens are black" is formally equivalent (by the move known as transposition) to "all non-black things are non-ravens." According to positivism the only way to confirm the truth of "All ravens are black" is experience; but because of the logical equivalence, whatever confirms "All ravens are black" also confirms "all non-black things are non-ravens," resulting in the absurd result that the observation confirms virtually any universal statement whatsoever. Such paradoxes, the working out of which actually consumed a great deal of energy on the part of philosophers, actually illustrate the utter hopelessness of any account of science premised on the denial that science involves any *a priori* propositions about the world.
- <sup>32</sup> Cf. Alfred North Whitehead, *The Function of Reason* (Boston: Beacon Press, 1929), p. 18: "The evidence that a methodology is worn out comes when progress within it no longer deals with the main issues. There is a final epoch of endless wrangling over minor questions."
- <sup>33</sup> Norwood Russell Hanson, *Patterns of Discovery* (Cambridge, UK: Cambridge University Press, 1958).
- <sup>34</sup> Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 2<sup>nd</sup> ed. (Chicago: University of Chicago Press, 1970).
- <sup>35</sup> Paul Feyerabend, *Against Method: Outline of an Anarchistic Theory of Knowledge* (London: New Left Books, 1975).
- <sup>36</sup> Nicholas Maxwell, "The Rationality of Scientific Discovery," *Philosophy of Science* 41 (1974), pp. 123-53 and 247-95. Maxwell's work merits more attention than it has received. His latest book bears the provocative title *The Comprehensibility of the Universe: A New Conception of Science* (Oxford, UK: Clarendon Press, 1998).
- <sup>37</sup> See especially W.V. Quine, *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969), esp. "Epistemology Naturalized," pp. 69-90.
- <sup>38</sup> Kuhn, *The Structure of Scientific Revolutions*.
- <sup>39</sup> Rorty, *Philosophy and the Mirror of Nature*.
- <sup>40</sup> Paul Churchland, *Scientific Realism and the Plasticity of Mind* (Cambridge, UK: Cambridge University Press, 1979); Patricia Smith Churchland, *Neurophilosophy* (Cambridge, Ma.: The MIT Press, 1984).
- <sup>41</sup> Feyerabend, *Against Method*; cf. also Paul Feyerabend, *Farewell to Reason* (London: Verso, 1987).
- <sup>42</sup> Mises, *Epistemological Problems of Economics*, p. 28. Although there is not space to develop the point here, Mises might be said to have, in this passage, anticipated by 30 years important aspects of Thomas S. Kuhn's views—minus, of course, the defective epistemology that plagued *The Structure of Scientific Revolutions* and got Kuhn branded (falsely) as a relativist.
- <sup>43</sup> Cf. Hoppe, *Economic Science and the Austrian Method*, p. 57: "One cannot observe someone making an observation or measurement. Rather, one must first understand what observations and measurements are in order to be able to interpret certain observable phenomena as the making of an observation or the taking of a measurement."
- <sup>44</sup> Cf. Richard Rorty, *Contingency, Irony and Solidarity* (Cambridge, U.K.: Cambridge University Press, 1989); Barbara Herrnstein Smith, *Contingencies of Value: Alternative Perspectives for Critical Theory* (Cambridge, Mass.: Harvard University Press, 1988).
- <sup>45</sup> Cf. B.K. Fakman, *The Cloning of the American Mind* (Lafayette, La.: Huntington House, 1998).
- <sup>46</sup> Hoppe, *Economic Science and the Austrian Method*, p. 61; George A. Selgin, *Praxeology and Understanding* (Auburn, Ala.: Ludwig von Mises Institute, 1990), p. 15.
- <sup>47</sup> See Frederic B. Fitch, "Self Reference in Philosophy," *Mind* 55 (1946): 64-73; reprinted in his *Symbolic Logic: An Introduction* (New York: Ronald Press, 1952), Appendix C.
- <sup>48</sup> Hoppe, *Economic Science and the Austrian Method*, p. 61.

<sup>49</sup> Cf. Arthur O. Lovejoy, “The Paradox of the Thinking Behaviorist,” *Philosophical Review* 31 (1922): 135-47.

<sup>50</sup> For further articulation and defense of these points cf. *In Defense of Logic*, ch. 6.

<sup>51</sup> Cf., e.g., *Human Action*, pp. 33-34, where he suggests that “reason, intellect and logic are historical phenomena” that are “transitory” and present a “historical phase between prehuman logic on the one hand and superhuman logic on the other.” Such passages show that even the greatest thinkers have occasional lapses in judgment.

<sup>52</sup> Cf. Gordon H. Clark, *Logic* (Jefferson, Md.: The Trinity Foundation, 1985), esp. the essay “God and Logic,” pp. 117-31.

<sup>53</sup> See, e.g., Harry J. Jerison, “Paleoneurology and the Evolution of Mind,” *Scientific American* 234 (Jan. 1976): 92-101.

<sup>54</sup> Cf. Stuart Katz and Gordon Frost, “The Origins of Knowledge in Two Theories of Brain: The Cognitive Paradox Revealed,” *Behaviorism* 7 (1979): 35-44.

<sup>55</sup> See Thomas Nagel, “What Is It Like To Be a Bat?” *Philosophical Review* 83 (1974): 435-50. Cf. also J.Y. Lettvin et al., “What the Frog’s Eye Tells the Frog’s Brain,” *Proceedings of the Institute of Radio Engineers* 47: 4 (1959): 1940-51.

<sup>56</sup> Mises, *Human Action*, pp. 72-91.

<sup>57</sup> Cf. *In Defense of Logic*, ch. 1.

<sup>58</sup> See again *In Defense of Logic*, ch. 6. For a recent favorable analysis of Aristotle’s defense of the principle of contradiction cf. Douglas B. Rasmussen, “Aristotle and the Defense of the Principle of Contradiction,” *The Personalist* 54 (1973): 149-62.

<sup>59</sup> See e.g., Tibor R. Machan, *Capitalism and Individualism: Reframing the Argument for the Free Society* (New York: St. Martin’s Press, 1990), pp. 18-19. Although not discussing Mises or the Austrian school *per se* the arguments in Professor Machan’s *The Moral Case for the Free Market Economy* (Lewiston, N.Y.: The Edwin Mellon Press, 1988) are relevant to this issue. Cf. also his *Initiative: Human Agency and Society* (Stanford, Calif.: Hoover Institution Press, 2000). The free will / determinism dispute is a philosophical mare’s nest that goes well beyond the scope of what can be attempted here.

<sup>60</sup> See Mises, *Human Action*, p. 62.

<sup>61</sup> *Ibid.*, p. 46.

<sup>62</sup> Cf. Nicholas Maxwell, “Science, Reason, Knowledge and Wisdom: A Critique of Specialism,” *Inquiry* 23 (1980): 19-81.

<sup>63</sup> Cf. Murray N. Rothbard, “Ludwig von Mises and the Paradigm for Our Age,” in Murray N. Rothbard, *The Logic of Action, Vol. 1* (Cheltenham, U.K.: Edward Elgar, 1997), 195-210.

<sup>64</sup> The earlier version of this paper was presented at a Weekly Seminar in February at the Ludwig von Mises Institute. I have added and deleted words, lines and paragraphs here and there. This version has profited, hopefully, from a number of criticisms by J. Guide Hulsmann, although I remain responsible for any unclarities and errors it might yet contain.