

Semantics of Knowledge ‘a positio’

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ABSTRACT

This paper challenges the standard *a priori/a posteriori* distinction by looking at statements in which comprehension requires more than merely passive awareness of objects and their properties. A proposal is made to add to (not to supplant) the traditional categories of knowledge, the “*a positio*,” characterized by active, intentional, and collective involvement of language users in the existence and nature of objects of reference needed for the truth of statements about various kinds of artifacts, broadly construed. The conditions of understanding statements about institutions, institutional activity and standards of measurement are considered in some detail.

1. Introduction

In their attempts to understand how knowledge is gained and organized, philosophers have routinely distinguished the *a priori* from the *a posteriori*. This distinction is, of course, fundamental to the divide between empiricists and rationalists, the former insisting that experience is our only source of knowledge and the latter allowing that, in addition to experience, some genuine knowledge is purely conceptual. By ‘experience,’ empiricists usually have meant what can be learned directly from sensation via the five senses (and perhaps by memory and introspection). Thus, ‘the sky is now blue’ is *a posteriori* since neither the sky nor its current color can be known except by sensory inspection. In general, the subject matter of experiential learning *par excellence* is material nature since, as is often said, it is only the “external” realm that is capable of interacting with the senses causally. So, empirical knowledge grounds out in material reference.

By ‘conceptual’ rationalists have usually meant to draw attention to some sort of direct intellectual insight that is not mediated by or grounded in sensory experience. Thus, ‘the sky is not blue and red all over’ is *a priori*. The subject matter most commonly thought to be clearly subject to purely intellectual or conceptual insights has been logic and mathematics. Thus the Pythagorean Theorem can be said to be *a priori* due to its proof, of which there are numerous variations, depending only on formally definable, conceptually grounded geometric and/or algebraic relations. The color

example just given falls under this general description although its subject matter is of a different type and some famous attempts have been made to demonstrate external existence and moral truths *a priori*.¹

Hence, the more or less standard chart of the *a priori* / *a posteriori* distinction (treating the analytic/synthetic as a parallel, historically important, criterion) runs something like this:

¹ Perhaps the most successful of these are due to Kant and can be found in the first *Critique* refutation of idealism and the *Foundations* argument for the categorical imperative.

A brief historical sketch maybe of some use here. Plato, who was the first to systematically make something like the *a priori/a posteriori* distinction, drew the distinction along two dimensions: the kinds of objects one knows or refers to on the one hand and the kinds of evidence they provide together with the associated mental attitudes one takes towards those objects on the other. It is clear enough that he also thought that knowledge *a priori* (conceptual knowledge of relations among forms) is stable, i.e., necessary rather than varying situationally like knowledge derived from sense perception. (See the divided line analysis in *Republic*, Bk. 6.) Beginning with Leibniz (*New Essays Concerning Human Understanding*), efforts were directed to making the distinction more rigorous. The question, which persisted through the middle of the last century, was whether a reliable, purely linguistic criterion could be devised to mark the distinction. Famously, Kant rejected this linguistic strategy (though he adopted it for the analytic/synthetic distinction). His main contribution is his insistence that *a priori* knowledge is indispensable if we are to have any knowledge at all and that *a priori* propositions may be necessarily true in a way that *a posteriori* propositions cannot, though it is worth remarking that his conception of the *a priori* crosses Plato's line between kinds of objects, since both mathematical truths and fundamental knowledge of nature as it show up in the categories of the understanding are *a priori* for Kant. Moreover, he argued that some of these necessary truths are informative in a way that is similar to non-necessary empirical truths. The synthetic *a priori* that forms the core of his system does not comprise the "miserable tautologies" of Leibniz or Hume. (He makes his case in the first *Critique*, "Transcendental Analytic.") But Frege and his followers rejected the synthetic *a priori*, collapsing the *a priori* into the analytic, which they thought could be given a purely linguistic criterion, either in terms of meaning or provability. (See Frege, *Foundations*, esp. sec. 12-17.) Gödel demonstrated the inadequacy of the provability criterion ("On Formally Undecidable Sentences..." in van Heijenoort) and the linguistic reduction withered further under Quine's skepticism over whether meaning could serve to distinguish the analytic from the synthetic. Quine left the basic distinction between the *a priori* and the *a posteriori* unimpugned directly, though, by his lights, in the questionable company of the analytic/synthetic. (See W. V. O. Quine, *From a Logical Point of View*.) This spark of innocence left hope that some non-trivial knowledge may yet turn out to be necessary, at least in a metaphysically internalist way, and Hilary Putnam and Saul Kripke have risen to this possibility, offering claims about chemical composition, origins of substances, and standards of measurement as examples. (See Kripke, *Naming and Necessity*, and Putnam, *Mind, Language, and Reality*.) Recent work by Lawrence Bonjour (*In Defense of Pure Reason*), Albert Casullo, (*A Priori Justification*), Robert Audi (*The Architecture of Reason*) and others has once again affirmed the position that *a priori* knowledge depends on intellectual insight or self-evidence rather than experience.

	Analytic	Synthetic
<i>a priori</i>	√	?
<i>a posteriori</i>	?	√

One controversy is over what goes where and whether there are any synthetic *a priori* or analytic *a posteriori* propositions. Everyone seems to want to allow a very broad range of empirical knowledge subsisting unperturbed alongside whatever *a priori* knowledge there is or might be. But, whichever boxes one thinks have instances, the *apriori/a posteriori* distinction itself seems and is usually intended in some sense to be exhaustive. What I show here is that this assumption must give way in the face of more careful attention to the features of a different set of examples. The reason, which I hope to make clear, is that both *a priori* and *a posteriori* knowledge as so far conceived are essentially *passive* modes of cognitive uptake. I believe this passivity prevents the traditional distinction from accounting for an important range of evidence and that the *a priori* and *a posteriori* do not exhaust the kinds of knowledge we can have because they do not exhaust the kinds of reference we can make to objects of knowledge. There are many cases of genuine knowledge that rest on a kind of active semantic construction that is responsive to contextual pragmatics.² Here I want to draw attention to belief and knowledge that is clearly and usually knowingly due to the *activity* of the knower and therefore does not fit into the simple, tidy scheme of the traditional *a priori/a posteriori* distinction. For reasons that should become clear, I will call the kinds of belief and knowledge that completes (or extends) the traditional scheme, the ‘*a positio*.’

2. *Counterexamples*

A rich example will, I hope, help to suggest and clarify the kind of evidence that enables successful reference to a range of objects that I believe are left unaccountable by the traditional distinction. Recently it was reported that NASA’s Opportunity Rover sent back pictures from the surface of Mars of so-called “blueberries,” which result from mineral (hematite) deposition from water, a phenomenon known to occur on the earth as well. To begin where there is least controversy, one aspect of the example clearly presents a fact that is knowable only empirically and contingently. That is the fact that the blueberries were observed, if indirectly. But now, if we

² I do not wish to beg any questions against Kant at this point. There is, of course, a sense in which Kantian *a priori* knowledge is not passive. But the activity that produces it is, as it were, unknowable to the knower or language user.

follow Kant and perhaps Kripke, it is by necessity that such blueberries form by mineral deposition from water. Like oxygen and hydrogen bonding in the usual way to form water, it is, as it were, in the nature of such substance to do so. Propositions about the fundamental chemical process resulting in blueberries would be, from a Kantian perspective, at least a candidate for the synthetic *a priori* while for Kripke they might serve as an examples of the analytic *a posteriori*. For present purposes, however, this is a distinction that make no difference.

Instead of pursuing that issue, let us attend to another aspect of the case that is not yet captured by the traditional distinction. That is the fact that the rover was (and quite remarkably still is!) on a mission from NASA. The reason, I suggest, that this feature is omitted from the resources of the standard analyses is that NASA is neither an object of empirical observation, nor is it an object of strictly intellectual intuition. If this is correct, and I hope to show that it is, the assumption of the passivity of knowledge common to the *a priori* and the *a posteriori* necessarily obscures a proper account of this and similar examples. However we divide or mingle these two epistemic dimensions, the references to NASA, to NASA's rovers and to the beliefs and knowledge they produce will escape our semantic net. We need a third dimension, one that is more sensitive to our own constructive contributions to the relevant form of receptivity, in which to situate such reference.

There are countless such examples. 'I gave an exam in philosophy class yesterday.' 'If today is Tuesday, it's not Thursday.' 'The Dow rose last year.' Etc. Paradigm examples of *a posteriori* knowledge are those resulting directly from sense experience: this apple is red. Paradigms of *a priori* knowledge are purely conceptual: $5+7=12$. These are all examples of passive knowledge. But I cannot know what a philosophy class is or what the Dow is or even what Tuesday is passively. Our example of the expression of our knowledge of NASA's probing of Mars is also quite different. First, there is no natural or necessary entity one could be passive towards that answers to the name or description of NASA. NASA is a human construct, an artifact. Moreover, it is a social artifact, i.e., one that is created by collaboration among the members of a group, and it is a social artifact of a kind that is especially alien to nature, an institution. One cannot know of such things purely passively any more than one can know about exams, days of the week or the Dow. The key point is that these are mind dependent objects. They do not exist apart from our actively constructing them. Like Peter Pan, they subsist via the Tinker Bell effect: they exist only so long as we believe they exist. And, like the cosmos according to some ancient theologies (and, we might add, Berkeley's idealism) they exist only so long as they are actively sustained in their existence by mind. By contrast, the *a priori/a posteriori* distinction is really only suited to knowledge of mind independent objects. It

is no accident that it historically shows up prominently in the philosophical literature just when there is a scientific and mathematical enlightenment under way, as in ancient Greece and in modern Europe. Nor is it an accident that notions of social construction of meaning, the family of epistemic concepts to which the *a positio* belongs, flourish when the social sciences are on the ascendancy.

The fundamental semantic principle underlying the *a positio* is well stated by Robert Audi. He says, "...one cannot believe a proposition without having all of the concepts that figure essentially in it. Whereof one cannot understand, thereof one cannot believe."³ Moreover, as Plato says, our epistemic attitude towards objects has to be attuned to those objects to be epistemic at all, i.e., we need the appropriate kinds of evidence about them in order to make meaningful reference to them and to make meaningful assertions about them. If social artifacts are ontologically different from natural and purely conceptual objects, we need to assume a different epistemic attitude towards them and recognize a different kind of evidence to support meaningful propositions about them than we do towards natural or conceptual objects. The knower has to participate in the artifactuality of objects knowable only *a positio*, at least to the extent of understanding that these are social constructs dependent for their being on our constructive activity. This means that his or her attitude is active not passive. Objects knowable *a positio* are, like empirical objects, subject to change but, like conceptual objects, they are not empirical. To understand socially constructed objects like institutions, games, artworks, etc., it is necessary for experience and concepts to meet half way. These objects need support from both sides but are reducible to neither.

Artworks are good examples. The audience cannot be merely passive in understanding "Stardust" or "The Potato Eaters" or these don't exist *as art* at all. It's not that we don't empirically or even conceptually observe institutional activity. Rather, it's that we can't understand it for what it is except by consulting our own interpretive concepts, ones that we ourselves recognize are not the products of observation but of invention and imposition. The U.S Democratic Party, aside, as Mark Twain says, from being disorganized, is not natural, not a part of nature, and not something the concept of which can be derived from observation of natural entities alone. And what goes for other institutions goes for language. Unless both speaker and listener, writer and reader, collaborate, language dissolves into mere noise and scribbles. Indeed, it is arguable that language is the fundamental institution, since it plays such a fundamental role in the constitution of all

³ Robert Audi, *op. cit.*, p. 27.

other institutions as well as the sustaining of institutional practices. If that is right, the term ‘language’ is itself an example of the *a positio*.

I introduce the term ‘*a positio*’ to qualify the kind of reference, proposition, knowledge, belief, etc., that involves such non-empirical and non-necessary entities that cannot be known or referred to passively. What is characteristic of the *a positio* is that we ourselves collectively *posit* what it is about. Therefore, we cannot look to experience or even to intellectual intuition of necessary natures to substantiate such knowledge. A different kind of evidence is needed. Nothing that I can observe about NASA without it being posited as an institution engaged in space research could substantiate the claim that it sent the Opportunity Rover to Mars to snap pictures. By observation of the related activity as if it were a natural course of events, all I could learn would be that such and such a sequence of events took place. This would leave out all of what is distinctive in NASA being a branch of the government with authority over various resources, personnel, etc. And, without knowing that, I cannot know that NASA took pictures of the Martian landscape and without knowing that, I cannot believe or know that NASA’s Opportunity photographed Martian blueberries. For not only would I have failed to have any accurate, descriptive knowledge of NASA, I would have failed even to know into what ontological or semantic category the object called ‘NASA’ falls. I would not even know whether the proposition commits a category mistake. Perhaps NASA is a force of nature or a supernatural intervention in human history or a monkey in a zoo with a video game. Of course, there are many things I can straight forwardly observe or that involve conceptual truths about NASA and its mission to Mars. But the point remains that no matter how many such sensory observations I make, they will not support believing or knowing that NASA—the institution—carried out this mission, that *it* took snapshots of the blueberries on Mars.

Simply asking *where* NASA is should signal an ambiguous response and alert us to the problem. On one hand, it seems it is in Houston, Cape Canaveral, etc., physical locations with physical parts: roads, buildings, populations, etc. On the other hand, those locations and all their physical parts and inhabitants could exist before or after NASA. So NASA is not that physical stuff. Therefore, it is to that extent not an empirical object and cannot be an object of reference *a posteriori*. Nor, because it is to be associated with particular persons, for it survives them too. This is characteristic of institutions. For such reasons we should count NASA and, I think, institutions generally, as constructed *abstract* objects. That is the basic reason why they are not subject to empirical observation and the meanings of propositions in which they figure are not merely *a posteriori*. Their features, bureaucratic structures and the like, simply outrun the empirical evidence.

But, just as not all aspects of the example can be comprehended experientially, there are, to be sure, aspects of our NASA example that are knowable *a priori*. Anyone who comprehends the meaning of 'Mars' will know that Mars is a planet, just as knowing the meaning of 'horse' entails knowing that a horse is an animal. But comprehending the term in this way tells us nothing specific about the planet Mars, in particular it does not answer NASA's motivating question whether liquid water flowed on its surface. Nor will any rational insight suffice. Indeed, NASA has to go to all the trouble, risk, and expense to send probes like the Opportunity Rover there to photograph the place precisely because no one can know *a priori* the answers to our questions about its geology and possible incubation of life. Similarly for NASA. Anyone who comprehends the term 'NASA' or 'National Aeronautics and Space Administration' will know *a priori* that it is an institution. But, aside from the trivial descriptive information the title suggests, that will be about all. NASA can only be known through its history, its mission (as understood by its creators and members), the historical efforts of those holding various offices to realize its mission, the reactions of the society in which it is embedded economic, political, cultural, etc., features and relations), its growth, influences and perhaps even its demise sometime in the future.

Much of this can be known neither *a priori* nor *a posteriori*. The basic reason is that NASA is an artifact, a transformation of an ordinary set of physical things according to mind dependent constructive principles and the constitutive, collaborative activity of individuals in many different kinds of relation to that artifact. The constitutive truths grounding institutions are, like *a priori* principles, contextually self-evident. But, like *a posteriori* information, they require experiential realization. I have called such truths '*a positio*' to respect the artifactuality of their referential constituents but also to emphasize that these are essentially mind dependent rather than exclusively mind independent entities that could be known passively.

3. Conclusion

It is worth pausing briefly to contrast in summary how one goes about confirming beliefs about these three different types of objects. *A priori* beliefs seem to require some sort of purely intellectual insight. Their objects or the relations among them seem to have to be in some sense self evident (intrinsically necessary), or they need to be logically derived from such insights by self evident or necessary steps. *A posteriori* beliefs would seem to require the mediation of the senses (or introspection) and appropriate causal links to the resulting beliefs. The objects of *a positio* beliefs are neither

strictly self-evident (why does the batter have to leave the box after three strikes?) nor are they caused entirely by external objects (what causes the belief that the batter must leave the box?). Instead, the meaning of *a positio* beliefs depends on and their truth is only confirmed only by the character of what is *posited*. It is not necessary that there be a speed limit on the freeway as there is in nature generally but, once the speed limit is set and implemented, its necessity, in the sense that all drivers are accountable for obeying it, is there for the world to see. If the batter were to get more than three strikes there would be a serious question whether the game was any longer baseball.

There is a certain irony in the fact that epistemologists making the *a priori/a posteriori* distinction have generally not taken seriously the need for a semantic and epistemic category for linguistic facts or other institutional facts that depend on them. But obviously language is institutional in character; it is a mind dependent artifact or system of artifacts. This leads me to suggest that some of the claims made by those hamstrung by the standard distinction should be revised.

For example, how does one know that the standard meter stick in Paris is one meter long? I suggest that the question is not about the physical length of anything. Nor is there anything antecedent to the use of the word to have any rational insight into. Clearly, being the standard meter is a social fact, not an empirical fact. There is no empirical property of being one meter long except by the grace of something being posited as the standard meter stick, any more than the earth, apart from the constructions of geographers, has an equator. But it is not strictly *a priori* either since the standard meter has to be an empirical object (then kept safe from corruption, etc.). Treated as *a positio*, the question is not what we observe with either the body's eyes or the mind's eye but what we have created or constructed and launched into the world on our terms. And that should be in principle a much easier question to answer: since we are the makers we should be in a position to know what we have made. To understand an institutional fact like NASA photographed blueberries on Mars or the standard meter stick is one meter long, one has to understand the background institution precisely as an institution. I would make similar remarks about the characters in a play. I see Hamlet on stage but he is not to be identified with the actor who merely counts as Hamlet in the context and no degree of rational insight can predict what the playwright or the director will have Hamlet do. Writing or directing a play is an insidious way of predicting the behavior of characters. The *a positio*, on the other hand, easily encompasses all three types of cases in so far as they involve institutional artifacts.

It may be objected to my characterization of the *a positio* that it confuses epistemic and metaphysical concepts.⁴ If that were correct, then it could not be a clear question of semantics or even of pragmatics. My claim is a relatively innocent one. It is that certain beliefs about the properties of physical objects, like the belief that the meter stick is a meter long, seem to be constitutive of the facts they are about since these facts are socially determined rather than “natural.” Presumably, in itself, nature does not count, not even to one. So it does not count to one meter. There is no such natural length. The claim that the meter stick is a meter long is not about some chunk of metal at all. It is really about a distance abstractly (perhaps arbitrarily) defined.⁵ It is typical of the central features of *a positio* propositions that, like the *a priori*, they are necessary but, like the *a posteriori*, they are changeable. And that is due to the nature of the object of a *a positio* belief. *What else could control the kind of evidence we can have besides the nature of the object—especially in cases where the object is socially constructed?* Nature provides no standard meter—or any other standards or norms—so we invent them and, *eo ipso*, what counts as evidence about them that can enter into relevant meaning and belief. This confusion is illustrated by the (failed) attempt of a late nineteenth century Indiana state politician to legislate the value of *p*.

Epistemology and its sub-fields, including semantics, is about our relations to and uptake of information about objects. Some we observe. Some we anticipate or remember. Some we enjoy or find repulsive. Some we create. As objects of reference, any of these may be a source of meaning, belief and knowledge. The question is what are the appropriate epistemic criteria or standards for understanding each of these kinds of object? And what are the conditions that have to be met in order to express our understanding? Can

⁴ Heimir Geirsson, e.g., has suggested that, “It is not the nature of the object of knowledge that determines whether knowledge is *a priori* or *a posteriori*—instead it’s the nature of the (possible evidence)...This is a distinction that does not depend on the nature of the objects they are about.” (Commentary on an early version of this paper at the 2006 meeting of the Central States Philosophical Association, for which I am grateful to Prof. Geirsson.) Presumably, *mutatis mutandis*, he wants to say the same of the *a positio*.

⁵ It has been approximated several times with increasing accuracy and stability, first with a geophysical measurement (one ten millionth of the distance from the equator to the north pole, then a prototype representing that measurement first with an iron bar and later with a platinum/iridium bar, then a certain number of wavelengths of light produced by krypton burned in a (near) vacuum (1,650,763.73 wavelengths of the orange-red emission line in the electromagnetic spectrum of the krypton-86 atom), and finally to the distance light travels in a (near) vacuum in 1/299,792,458 of a second. (Note that the meter originally depended on locating the equator and the pole, both of which are idealizations.) For practical laboratory purposes the meter is now set equivalent to 1,579,800.3 wavelengths of helium-neon laser light in a (near) vacuum.

they be reduced to just one or two? Empiricists are epistemic monists in this respect: all that can be known requires grounding in sense experience. Rationalists are epistemic dualists since they would add that some knowledge requires no experience. I have been suggesting that the *a priori* and the *a posteriori* are not sufficient since they preclude full knowledge of institutional and other social facts for which no sense experience can be fully adequate but which cannot be known without sense experience. For that I think we need the *a positio*. I have not tried to impugn the knowability of objects of *a priori* or *a posteriori* knowledge. Nor have I tried to deny that the *a priori* and the *a posteriori* are legitimate categories of propositions or sources of meaning, linguistic or otherwise. The original distinction was predicated on intuitions of two different kinds of objects (though Plato had in mind four!). My aim here has been merely to take into epistemic and semantic account another type of object: social artifacts, especially institutions, and the understanding of the social facts that depend on them.

One might respond that the *a priori* and the *a posteriori* combined are enough even for knowledge of institutions and other artifacts. After all, in some sense, most artifacts are or are deeply tied to external physical objects subject to observation. But to understand something external as an artifact and certainly as an artifact of *a certain kind*, like an institution, and to express that perception in meaningful discourse, one has to collaborate in the constitution of the object as a social fact in a way that is not necessary and indeed may be positively misleading in the case of non-artifacts. I have elsewhere⁶ suggested that socially produced objects like these requiring collaboration among language users are dependent on what I call “social intentions.” So let me suggest here that what is most characteristic of *a positio* knowledge is that its genuine object is the social intention rather than the physical objects with which it may be associated. And social intentions are neither empirical nor knowable *a priori*.

I end with a relatively liberal revised table of examples:

	Analytic	Synthetic
<i>A priori</i>	what is blue is not red	$C = \square d$
<i>A posteriori</i>	water is H ₂ O	the sky is now red

⁶ See my paper “Social Intentions.” This essay gives a brief but general account of social intentions and their crucial role in social obligations and collective responsibilities. My subsequent article, “Normativity,” develops and broadens the social grounding of the kind of intentions and obligations at stake.

<i>A positio</i>	3 strikes and you’re out	NASA photographed Martian blueberries
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Perhaps even three is not enough epistemic categories to account for the basic sources of our beliefs and their linguistic meanings and others are needed as well. We should guard against being excessively Pythagorean.

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