

WHAT DOES KRIPKE MEAN BY “A PRIORI?”

– Pierre Baumann –

In *Naming and Necessity* (1980), Kripke stressed the importance of distinguishing three different pairs of notions: the epistemological notions of apriority and aposteriority, the metaphysical notions of necessity and contingency, and the semantic notions of analyticity and syntheticity. According to him [*ibidem*, p. 34], the tendency in philosophy had been to use the terms “a priori,” “necessary,” and “analytic” interchangeably, as being coextensive (similarly for the corresponding terms “a posteriori,” “contingent,” and “synthetic”). Kripke sought to demonstrate the autonomy of the three pairs by drawing our attention to the fact that they refer to quite distinct domains and by devising examples in which the different categories crosscut each other, thereby showing that the terms are not coextensive.¹ In particular, he argued that there are contingently true propositions that are knowable a priori, and conversely, that there are necessarily true propositions that are knowable a posteriori.²

This paper is concerned with Kripke’s claim that there are contingently true propositions that are knowable a priori. I argue that Kripke’s claim is problematic, since Kripke seems to be using “a priori” in an unorthodox manner. The main task of the paper is thus the interpretive one of figuring out what Kripke means by “a priori” and suggesting that his meaning is indeed unorthodox. After briefly reviewing Kripke’s argument for the existence of contingent a priori truths in §1, I turn to Kripke’s seemingly unconventional understanding of “a priori” in §2.

¹ Kripke does not single out any particular philosopher as holding the stronger thesis that the above terms are *synonymous*, though his arguments would undermine such a thesis as well. On page 38 Kripke specifies that his discussion will show that these terms are not “interchangeable” or “even coextensive,” as they had been taken to be, according to him, by earlier philosophers. One philosopher who quite clearly uses “necessary” and “a priori” interchangeably is Ayer in [1946, Ch. 4]. Kripke, however, does not mention Ayer by name.

² He states [p. 39, 56, fn. 21] that in the lectures he will not be concerned with analyticity and simply stipulates that “analytic” will mean “truths that are both necessary and known a priori.”

1. Contingent A Priori Truths

Kripke supports his claim that there are contingent a priori truths by means of three examples. The first describes an imaginary situation in which the length of a meter is determined [1980, pp. 54-7], the second has to do with the discovery of Neptune by Leverrier [*ibidem*, p. 79, fn. 33], and the third, concerning the word "heat," occurs in the context of his discussion on natural kind terms [*ibidem*, pp. 135-6]. In this section I consider only the meter stick example, which is the better developed of the three. The example is motivated by Wittgenstein's remark that

[t]here is one thing of which one can say neither that it is one meter long nor that it is not one meter long, and that is the standard meter in Paris...this is, of course, not to ascribe any extraordinary property to it, but only to mark its peculiar role in the language game of measuring with a meter rule. [1953, §50]

Kripke believed that Wittgenstein was wrong in thinking that the standard meter stick cannot be said to be one meter long, and to prove it, he came up with an example showing how the expression "one meter" could have come to refer to the length of the standard meter. The surprising lesson thrown up by Kripke's example is that it would also show how certain contingent truths may be known a priori.

The example goes as follows. Suppose that someone, A, chooses a stick of a certain length, S, at a particular time, t_0 , and stipulates that the expression "one meter" will refer to the length of S at t_0 . According to Kripke, A has thus "fixed" the metric system by means of S; the stick's length at t_0 will henceforth serve as the standard by which all other meter sticks are to be measured. In this situation, he argues, an utterance of "Stick S is one meter long at t_0 " would express a contingently true proposition which would be knowable a priori to A. He explains:

What then, is the *epistemological* status of the statement 'Stick S is one meter long at t_0 ,' for someone who has fixed the metric system by reference to stick S? It would seem that he knows it a priori. For if he had used stick S to fix the reference of the term 'one meter', then as a result of this kind of 'definition' (which is not an abbreviative or synonymous definition), he knows automatically, without further investigation, that S is one meter long. On the other hand, even if S is used as the standard of a meter, the *metaphysical* status of 'S is one meter long' will be that of a contingent statement, provided that 'one meter' is regarded as a rigid designator: under appropriate stresses and strains, heatings or coolings, S would have had a length other than one meter even at t_0 . So in this sense, there are contingent a priori truths. [1980, p. 56, emphasis in the original]

In arguing that "Stick S is one meter long at t_0 " expresses a contingent a priori truth in the imagined situation, Kripke employs his notion of rigid designation and the distinction he makes between using a definite description to "give the meaning" of an expression and using it to "fix the reference" of an expression. According to him, "one meter" is a rigid designator, a term that refers to the same length in every possible world (i.e. the length exemplified by stick S at time t_0), but the definite description "the length of stick S at time t_0 " is not, since S might have been shorter or longer than one meter long had circumstances been different. Consequently, "the length of stick S at time t_0 " cannot be viewed as giving the meaning, or as being synonymous with, "one meter." But this definite description can be used quite legitimately to determine the reference of "one meter," as the example aims to show. The thesis that there are contingent a priori truths may therefore be viewed as falling out of Kripke's notion of rigidity and his distinction between definitions that give the meaning and those "definitions" that only fix the reference of an expression.

To sum up Kripke's argument, the reasons the sentence "Stick S is one meter long at t_0 ," uttered in the situation described by Kripke, is held by him to express a contingent a priori truth are two: 1) the truth is *contingent*, since (had the world been different) S might have been shorter or longer at time t_0 than it actually was at that time; and 2) the proposition would be knowable *a priori* to A, simply in virtue of the fact that she made the stipulation that S is one meter long.

2. Kripke's Use of "A Priori"

Before explaining how it is that Kripke's use of "a priori" in this example differs from the traditional interpretation of this term, a brief word should be said about this traditional interpretation. My aim here is not to give a razor-sharp definition of "a priori," but only to characterize the traditional interpretation well enough to show that this does not seem to be Kripke's own interpretation.

According to the tradition that goes back at least to Kant [1781/2003], "a priori" is taken to mean "known independently of sense experience."³ This negative definition is somewhat vague; in my view, Hale's [1987] criterion for a priori knowledge is sharper and more useful for our purposes, while at the same time adequately capturing the basic Kantian insight. Hale proposes [1987, p. 138] that a proposition may be a candidate for a priori knowledge just in case it does not presuppose or imply a proposition that is knowable a posteriori. Thus, the

³ Kant writes: "we shall understand by *a priori* knowledge, not knowledge of this or that experience, but knowledge absolutely independent of all experience." [1781/2003, p. 43]

epistemological status of the proposition expressed by “ $2 + 2 = 4$ ” is a priori because it doesn’t presuppose or imply any propositions that are knowable a posteriori. Hale’s criterion reflects the traditional view that “a priori” refers to a kind of justification. When a proposition is said to be knowable a priori, what is usually meant is that the evidence for it does not derive from the five senses; it comes from some other source: pure reason, linguistic convention, a reliable process of a priori cognition—different authors offer different accounts. We can accept Hale’s criterion as giving the traditional view on the a priori real teeth without taking a stand on any of these accounts on the source(s) of a priori knowledge.

Indeed, Hale’s criterion may be viewed as a sort of “test” for a priori knowledge. Viewed as such, we see that all of Kripke’s examples—the meter stick, Neptune, and heat—fail it. For instance, “Stick S is one meter long at time t_0 ” implies “There exists a stick.” But the epistemological status of this implication is a posteriori.⁴ We must use our senses to determine whether there is in fact a stick. Therefore, Kripke’s “Stick S is one meter long at time t_0 ” could not be taken to express an a priori truth on Hale’s view.

However, the main evidence for thinking that Kripke’s understanding of “a priori” is unorthodox, and does not jibe with the standard evidentiary interpretation of the term, comes from the text of [1980]. Consider once again the argument Kripke gives for concluding that “Stick S is one meter long at t_0 ” expresses a contingent truth knowable a priori to A in the situation he described. (Let us call this proposition “M.”) The reason A is supposed to know M a priori is because A has stipulated that “one meter” will refer to the length of S at t_0 .⁵ Specifically, A is

⁴ By “implication” I mean here the conclusion of an inference, by existential generalization, from “Stick S is one meter long at time t_0 ” to “There exists a stick.” The inference, in logical notation, goes as follows:

1. S_s & M_s (where $S =$ “is a stick,” $M =$ “is one meter long,” and $s = S$, i.e. the stick named “S”)
2. S_s from 1, &-Elimination
3. $\exists x(Sx)$ from 2, Existential Generalization

Deduction preserves truth, not epistemic status, so here we would have an odd case where a main assumption—(1)—is supposedly a priori, but the conclusion—(3)—is a posteriori. (3)—and arguably (1) and (2) as well—is a substantive truth about the world; the fact that it appears in a logical proof does not alter how we know it, which presumably is empirically.

⁵ An anonymous reviewer for this journal remarks that “stipulations are uncontroversially knowable a priori.” Certainly our purpose in this paper is not to dispute that *most* stipulative definitions may have a priori status, or to argue that *in general* stipulations are not knowable a priori. We are concerned here with a special type of stipulative definition, Kripke’s definitions via reference-fixing. Such definitions (of terms such as “one meter,” for instance) require reference to things, such as sticks, which may only be known a posteriori. Kripke’s definitions are problematic for the reasons mentioned above, and they have certainly been found controversial in the forty years since the publication of the *Naming and Necessity* lectures. (Mention is made of a criticism by Salmon

said to be entitled to know M a priori because he knows it "automatically, without further investigation." [1980, p. 56, quoted above] In other words, Kripke appears to be interpreting "a priori" as connoting immediateness; "a priori" in this passage seems to mean something like "instant knowledge."

This understanding is also apparent in his discussion on Goldbach's Conjecture, on pp. 36-7. Goldbach's Conjecture, which says that every even number greater than two is the sum of two prime numbers, is presently undecided; no one has yet shown whether it's true or false. Kripke contends (reasonably so) that whatever truth value the Conjecture has, it has by necessity. The Conjecture is either true necessarily or false necessarily. However, he argues that it is not guaranteed that this truth or falsehood will be knowable a priori, since "right now, as far as we know, the question can come out either way...none of us has any a priori knowledge about this question in either direction...right now we certainly don't know anything a priori about it." [*ibidem*, p. 37] Kripke may be right that necessity does not entail apriority, but to know a proposition at once, "right now," has nothing to do with whether the proposition is knowable a priori.

"A priori," traditionally understood, does not really incorporate the sense of immediateness or instantaneousness exhibited by Kripke's use of the term. Consider once again the case of mathematical knowledge, the classic case of a priori knowledge. Mathematical truths are generally taken to be justified a priori, but they may not be known immediately to the working mathematician: the most interesting mathematical truths (such as Goldbach's Conjecture would be) are known only after quite a bit of "further investigation." And conversely, one may know something a posteriori and also immediately: right now I know (setting aside skeptical worries), that there is a computer in front of me, for example.

Perhaps by "automatically, without further investigation" Kripke means for us to understand "non-inferentially." Perhaps he holds the view that A knows M a priori because A knows it without deriving it from the other beliefs she has. M in this case would have the status of a "basic belief" for A. So, if we substitute "automatically, without further investigation" with "non-inferentially" in the passage cited in §1, his argument would then be that the stipulator knows M a priori because she knows it non-inferentially, as a basic belief.

I'm not sure that the text bears out this interpretation, or that Kripke would say that M has the status of a basic belief for A, but let us set this aside. Nor is it

[1988] below, but many others have voiced skepticism about Kripke's examples of contingent a priori truths; see, for example, [Hughes 2004, pp. 99-104] for an overview of some of the main worries.) I'm grateful to this reviewer, whose comments aided in several improvements to the paper.

reasonable to attribute to Kripke the assumption that all a priori knowledge is non-inferential. To be clear, what we are considering now is the possibility that he takes knowing something non-inferentially to be a *good reason* for thinking that this knowledge is a priori.

An initial difficulty with this supposition would be that M (i.e. the proposition that *stick S is one meter long at time t₀*) seems a great deal less "basic" than the usual examples of non-inferential basic beliefs (e.g. *This appears reddish to me* or *I am in pain*), since it involves the notion of measurement, which would appear not to be given in the same unmediated or non-inferential way that perceptual and bodily states are. (Arguably, too, it would appear to be derivable from whatever notion of measurement A may possess, together with the more basic belief that *There is a stick-shaped object in front of me now*, for example.) Be that as it may, the fundamental problem with this construal is this: to know something non-inferentially is *not* a good enough reason for concluding that such knowledge is a priori, as the examples mentioned above of the computer and mathematics demonstrate. A priori knowledge might be both inferentially and non-inferentially acquired, similarly in the case of a posteriori knowledge.

This brings us to the following observation. Kripke's meter stick example, which constitutes the fullest discussion in [1980] of his claim that there are contingent a priori truths, could give the impression that he is conflating two very different things: 1) the *type of justification* (i.e. the evidence) one has for saying that something is knowable a priori; and 2) the *subjective circumstances* that would allow one to know something speedily, without reasoning step-by-step or relying on careful observation. That is to say, he would be conflating the justification of a bit of knowledge with the acquisition of it by a subject. (Just to be clear, I am not asserting categorically that Kripke is in fact conflating these two things; but only that his use of "a priori" in the contexts of the meter stick example and his discussion of Goldbach's Conjecture seems unconventional and may give rise to such an impression.) Yet the quickness with which a knower acquires some knowledge does not determine whether what she knows is justified a priori or a posteriori.

It should be noted that there are independent reasons to doubt Kripke's claim about contingent a priori truths. First, some philosophers, such as Devitt [2005], reject the very idea of a priori knowledge; for them all knowledge is grounded empirically. If these philosophers are right, there are no a priori truths, contingent or otherwise. (I am not myself endorsing this view; I'm just noting that it's available and that it would have the aforementioned consequence.) Second, it seems that these contingent a priori truths (or the utterances that express them) are the result of assuming that natural languages such as English contain rigid designa-

tors (at least, Kripke's explanation of contingent a priori truths depends on the notion of rigidity, as we saw above), but this assumption is dubious, as I have argued elsewhere (author, article). A third reason, which seems decisive to me, was put forth by Salmon [1988]. Salmon points out [*ibidem*, p. 208] that Kripke's meter stick example requires the existence of an object, namely the stick, which can be an object of knowledge only through experience. The only way of knowing the length of stick S is by *looking* at it (or by being told that it is of such a length, etc.). We must enter into a causal relation with the object. Thus it would seem that any true proposition concerning the stick must be knowable a posteriori, and not a priori. Indeed, knowledge of sticks and planets (as in the Neptune case) would seem to be paradigm cases of a posteriori knowledge. Salmon is surely right that "[d]espite its 'peculiar role in the language game,' [stick S] is still a stick, still a physical object subject to the same natural laws and knowable in the same way as any other." [*ibidem*, p. 209] (As can be seen, Salmon's criticism hangs well with our earlier remark that the meter stick example fails Hale's "test" for a priori knowledge.)

The foregoing critical points may be summed up as a dilemma. In arguing that there are contingent a priori truths Kripke is either using "a priori" according to its customary meaning ("known independently of sense experience" – however this meaning is to be spelled out by one's preferred account of a priori knowledge) or not. If he is, then the claim is to be doubted, for the reasons mentioned in the previous paragraph. On the other hand, if he isn't, and is instead interpreting "a priori" as possessing the unorthodox meaning considered in this section ("known automatically, without further investigation"), then Kripke's claim is problematic as well, simply because that is not our understanding of "a priori" at all.

References

- Ayer [1946] – A.J. Ayer, *Language, Truth, and Logic*, Dover, New York 1946.
Devitt [2005] – M. Devitt, *There is no a priori*, [in:] *Contemporary Debates in Epistemology*, E. Sosa and M. Steup (eds.), Blackwell, Cambridge, MA 2005: 105-115.
Hale [1987] – B. Hale, *Abstract Objects*, Blackwell, Oxford 1987.
Hughes [2004] – C. Hughes, *Kripke*, Oxford University Press, Oxford 2004.
Kant [1781/2003] – I. Kant, *Critique of Pure Reason*, trans. by N. Kemp Smith, Palgrave Macmillan, Houndsmills 1781/2003.
Kripke [1980] – S. Kripke, *Naming and Necessity*, Blackwell, Oxford 1980.
Salmon [1988] – N. Salmon, *How to measure the standard metre*, "Proceedings of the Aristotelian Society" (88) 1988: 193-217.
Wittgenstein [1953] – L. Wittgenstein, *Philosophical Investigations*, Blackwell, Oxford 1953.