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posteriori and vice versa. My reason is that, to me, the substantial essence of this thesis is that our knowledge of the pure objective contingent truths about the natural world must be a posteriori (i.e., could not be justified unless through recoursing to experience) and it is clear that, explained in this way, the thesis could not be contradicted by Kripke's standard metre example.

Conclusion

The final conclusion could be summarized as follows: Given a proper definition of a priori proposition as one which could be justified without appealing to experience, none of the objections considered in this article can argue against the standard metre example. This example, however, doesn't have much philosophical significance since it cannot violate the spirit of the traditional equivalency thesis which asserts that we can not possess any a priori knowledge of the pure objective truths of the natural world.

Endnotes

1 . As David W. Benefield has indicated, there is a long list of notions which are usually said to be capable of being *a priori*; one can, to give some examples, talk of *a priori* 'knowledge', 'proposition', 'judgment', 'truth', 'evidence', 'source or way of knowing', 'intuition', 'fact', etc. Even the notion of 'necessity' itself may be used as the subject of '*a priori*' (1974, p.152). I argued elsewhere that among the aforementioned notions, the more important and central ones are two: '*a priori* knowledge' and '*a priori* proposition' and one may simply define the latter according to the former in the following way:
'A proposition *p* is *a priori* if and only if it can be known *a priori*' (Saeedimehr, 2001, p.23). In this article whenever I use the term '*a priori* proposition' I have this definition in mind.

2. Donnellan puts this distinction as follows: 'A speaker who uses a definite description attributively in an assertion states something about whoever or whatever is the so-and-so. A speaker who uses a definite description referentially in an assertion, on the other hand, uses the description to enable his audience to pick out whom or what he is talking about and states something about that person or thing (Donnellan, 1966, p.285).

3 For example he writes: 'It is a necessary truth that stick *S* is one metre long at time $t0$' (Kripke, 1980, p.54) and '... the metaphysical state of 'S is one metre long' will be that of a contingent statement ...' (p.56).

Nevertheless, he thinks that there is a significant differentiation between these two examples. The latter involves knowledge of how things are in the world, while the former merely concerns the manner someone is appeared to, and hence 'does not disagree with the leading idea behind the traditional account; namely, that we cannot know without experience features of the physical world' (p.205).

As I argued before, Casullo's objection can be rejected and, if my argument is reasonable, it will count as a reply to Geirson too. Thus, I can conclude that no one of the objections considered so far can disapprove of Kripke's standard metre example. Nevertheless, I believe that there remains an important consideration which can threaten the philosophical status and significance of the standard metre example.

The philosophical status of the standard metre example

As we see in the standard metre example, someone who is about to define 'one metre' refers to the actual length of a certain stick S and says: 'The length of S is one metre'. Since his knowledge of the proposition expressed by this sentence is justified merely on the ground of his own convention, by him it will be knowable a priori. On the other hand, since S could have been shorter or longer than it actually is, the proposition is contingent.

The significant point here is that, given the Kripke's success in providing an example of contingent a priori proposition, it fails to enjoy a high degree of philosophical significance; for the sentence in question by no means could express a pure objective (i.e., independent of any sort of linguistic convention) truth which is independent of its speaker's linguistic conventions and stipulations. Instead, this truth is, to a certain extent, a product of a particular conventional definition which is obviously based on the definer's will to introduce a new term which is to be used for some practical or theoretical aims. There is no doubt that you and I and everyone else (including Kripke) can refer to several actual properties of S (and of any other object, as well), like its colour, its particular weight, size, etc., and name each one of them by a new term (as a rigid designator) and then immediately (and 'automatically', to use Kripke's own terminology) we would be able to know a priori several contingent truths expressed by sentences like (2).

Therefore, we may claim that the standard metre example, even as a contingent a priori proposition, can not contradict the traditional equivalency thesis which says that all contingent propositions are a

that someone is looking at a stick (i.e. stick S) which seems to have a certain length and the existence of which he is sure of, and asserts:

(6)   The length S appears to have at t0 is one metre.

He thereby fixes the reference of 'one metre' while the definite description is used referentially. So he refers to the particular length S appears to have. Since S could have appeared to have a different length at t0 than it does, (6) expresses a contingent proposition (Geirson, 1991, pp.201-202).

But what about its epistemic status; is (6) known a priori or a posteriori? In order to answer this question, Geirson distinguishes between what he calls 'objective' and 'subjective' readings of (6). The former describes a subjective state of the perceiver; namely, the particular manner in which he is appeared to, while the latter describes an objective relation between the objects and the perceivers of a certain sort under specific conditions. He tries to clarify this distinction through presenting an example involving the colours: The way one is appeared to when he looks at the colours might be different from both the way they (really) are and the way they (normally) appear to be. For instance, I, because of a retinal malfunction, might see a blue line that appears to be green as red (pp.203-204). As far as I understand Geirson, he wishes to say that in this case my assertion: 'The colour this line appears to have is red' is true solely in the case of a subjective reading.

Given this distinction, Geirson goes further to argue that, according to the objective reading of (6), it expresses a contingent a posteriori truth. The reason is that in this case we are concerned with the objective apparent length of S at t0 and, in order to determine the length which S in fact appears to have (at t0), some further empirical investigation is necessary. According to the subjective reading of (6), however, it states a contingent a priori truth since

The speaker is appeared in a certain way and he introduces a name to refer to the manner in which he is appeared to rather than some objective feature different from the length he is appeared to. Consequently, he does not conduct any further empirical investigation in order to find out whether the stick appears to have the length he named 'one metre'. Because of the 'definition' used to introduce the name, he knows automatically and without further investigation that the manner in which he is appeared to is one metre. We have therefore an example of a priori knowledge (p.203).

Geirson concludes that, contrary to Kripke's standard metre example, (6) (in its subjective reading), is an example of a priori knowledge.

length' refers to the length to which the speaker was calling attention. This proposition is also knowable a priori (Casullo, 1977, p.157).

As we consider, Casullo provides no clear grounds for necessity of what (4) expresses (in the referential reading of the definite description), except its being equal to the identity proposition 'This length = one metre' which is (in Casullo's view) necessary. If I am right in this interpretation, then Casullo's claim could be refuted.

Kripke's explanation for the contingency of 'The length S at t0 is one metre' is that 'one metre' is a rigid designation, but 'The length of S at t0', as a definite description is non-rigid. Thus, 'one metre' (as a rigid designator) refers to the same length in all possible worlds, the length which, in our world, happens to be identical with the length of S at t0. But the reference to 'the length of S at t0' (as a non-rigid designator) can differ from one possible world to another. So we can imagine some possible worlds in which its reference is longer or shorter than one metre. In this possible worlds, (5) expresses a false proposition and thus, this proposition is contingent. It is worth noting that (5) is contingent even if we have a referential interpretation of the definite description 'the length of S at t0', since in this case it is still a non-rigid designator which in some possible worlds refers to a length which is not identical to one metre, i.e. the length which is the referent of 'one metre' in those worlds.

This analysis, which is consistent with Kripke's views, shows that Casullo's claim that (5) is equivalent to the identity proposition 'this length is one metre' is wrong, because the former is contingent and the latter is necessary. So we can conclude that even we agree with Casullo's distinction between (4) and (5) and his reduction of (4) to an a posteriori conjunction, his claim that (5) expresses that 'This length is one metre' could reasonably be rejected, and therefore, Kripke is still right in his claim that (5) states a contingent proposition which is knowable (at least by the definer of standard metre) a priori.

Geirson and the objective-subjective distinction

In his article 'The Contingent A priori: Kripke's Two Types of Examples' Heimer Geirson agrees with Casullo that according to a referential reading of the definite description 'the length of S at t0', our knowledge that stick S is one metre long at t0 is a posteriori, because it implies our experience of the actual length of S. Nevertheless, he thinks that we can reach to a contingent a priori proposition through moving from the actual length of S to the length S appears to have. We assume

Reply to Casullo

Now I'll try to reply to Casullo's objection from a Kripkean standpoint. First, it seems to me that what Kripke had in mind at the time he proposed standard meter example is the second interpretation of the definite description 'the length of S at t0', i.e. the referential interpretation. My reason is that Kripke himself explicitly states that 'one metre' is not an abbreviation for the phrase 'the length of S at t0' and, as Casullo himself is ready to acknowledge, this implies that this definite description is used referentially (Kripke, 1980, p.56; Casullo, 1977, p.156).

Given the referential use of the definite description 'the length of S at t0', what would then be the real difference between (4) and (5)? It seems that the main difference is that, asserting the former, we are concerned with two facts: I) S's having a certain length and II) the identity of this certain length and one metre. In (5), however, we are concerned merely with the second fact. And this could be the reason that Casullo paraphrases (4) as a compound sentence. However, I believe that Kripke did not consider the above distinction, since he sometimes discussed the truth that 'stick S is one metre long at time t0' [3] which corresponds (4), while in some other cases he mentioned the difference between 'one metre' and 'the length of S at t0', which apparently relates his discussion to the sentence 'the length of S at t0 is one metre' (which is the same as (5)) (Kripke, 1980, p.56).

To be sure, we may conclude from Kripke's whole discussion of standard metre example that, according to him, one who is to define one metre by the length of the standard stick expresses his definition by the sentence (4), i.e. 'S is one metre long (at t0)', and Kripke's main claim is that the proposition stated by means of the above sentence is a contingent a priori one. My claim, however, is that he didn't pay attention to the distinction Casullo made between (4) and (5).

Now, suppose that Casullo's distinction between (4) and (5) is sufficiently intelligible. Given this distinction, I argue that his objection to Kripke could be replied to. As we saw, Casullo thinks that, (given the referential use of the definite description 'the length of S at t0'), sentence (5) states a necessary a priori proposition. He puts his claim as follows:

Returning to our original example introducing 'one metre' as the name of a particular length to which one calls attention the definite description 'the length of S at t0' also yields a necessary proposition, which can be best expressed by the sentence 'This length is one metre', where 'this

description 'the length of S at t0' can be used either attributively or referentially.[2]

Having this distinction in mind, we can say that someone who uses (5) to introduce the term 'one metre' might be in either of the two following situations:

(a)   he wishes to introduce 'one metre' as the name of the length of S at t0, whatever that length might be;

(b)   he has a particular length in mind which he can identify independent of the truth of the proposition that it is the length of S at t0, and it is this length which he wishes to call 'one metre'.

If one uses the definite description attributively in introducing 'one metre' by means of sentence (5), then the proposition expressed by (5) is a necessary one, true solely in virtue of the terms used for expressing it and hence, it is also knowable a priori. In this case, the proposition expressed by (4) is also necessary since 'one metre' is an abbreviation for 'the length of S at t0' and so this proposition would be identical to that which is expressed by 'S has at t0 whatever length it does have at t0', which is trivially true. It is obviously known a priori. Therefore, given that the definite description is used attributively, both (4) and (5) express a priori necessary propositions. If the definite description is used referentially, the speaker of (5) will be just introducing the term 'one metre' as the name of a particular length to which he tries to call attention by using the definite description in question. Therefore, the term 'one metre' is not being used as a synonym for 'the length of S at t0' but as the name of a particular length, whether it is truly the length of S at t0 or not. Casullo believes that in this case, (5) shows a necessary a priori proposition, which can be best expressed by the sentence 'this length is one metre'. This is not, however, true of (4). Casullo claims that in this occasion, what is asserted by (4) can be more accurately expressed by the compound sentence 'S has this length (rather than another) and this length is one metre'. Although the second conjunct of the compound sentence states both necessary and a priori proposition, the first one expresses a proposition, which can be known solely a posteriori (and is contingent as well). Therefore, (4) states a contingent a posteriori proposition' (Casullo, 1977, pp.155-157).

This conclusion is implicitly based on the principle that a compound proposition, which has an a posteriori proposition as its conjunct, is itself a posteriori. The final conclusion of Casullo's discussion is that the standard metre example fails to provide a convincing example of a contingent a priori proposition.

Therefore, (3*) is either contingent a posteriori or necessary a priori and, after all, the standard metre example fails to present a contingent a priori proposition.

After proposing and examining some other modifications of (3), Odegard finally concludes:

For these reasons, I think that even if variants on (I) [which is the same as (3) in my notation] avoid existential commitments, they still can not be both a priori and contingent (p.203).

Reply to Odegard

In order to answer Odegard's objection, we may choose the first possibility, i.e. "the definer of 'metre' identifies the certain length of S as its accidental property" (And I believe that Kripke should do the same.). Therefore, Odegard's claim would be that (3) is contingent but a posteriori, since it implies our empirical prior knowledge that S is the certain length. His reason is that being a certain length is an accidental property of S and there is no doubt that we cannot know the accidental properties of an object unless through experience.

Being interpreted in this way, this objection seems to be similar to Carter's objection in that both are based on a similar picture of a aposteriority according to which our knowledge of P is a posteriori if based somehow on our empirical knowledge of another proposition Q. Thus, my first response to Carter could also count as a response to Odegard: If we define a priori knowledge as knowledge which could be justified without appealing to any kind of sense experience, then (3) will be a priori at least for the definer of standard metre; even if his knowledge of it implies his empirical knowledge that S is a certain length; and the reason for it is that he is able to justify his knowledge of (3) merely on the basis on his initial convention.

Casullo and the attributive – referential distinction

Albert Casullo examines Kripke's argument from another dimension. He maintains that in order to evaluate this argument one must first distinguish the following two sentences:

(4)   S is one metre long at t0.
(5)   The length of S at t0 is one metre.

A further distinction must also be made between two possible readings of (5). Here Casullo follows Keith Donnellan by noting that the definite

and replacing it with another one.

One other point is that if we agree with Carter's conception of a posteriori knowledge we may modify (2) in such a manner that it could be known a priori (without implying any further a posteriori knowledge) and this is what Douglas Odegard proposed in his discussion of Carter's objection.

Odegard and the existential commitment

After citing Carter's objection in his paper 'On A priori Contingency', D. Odegard asserts that the objection is irrelevant to some variants on (2) which do not imply our knowledge of the existence of S. His example for these variants is:

(1) Provided S exists, S is one metre long.

It seems obvious that our knowledge of (3) does not imply our prior knowledge of the existence of S; therefore, it is immune to Carter's objection (Odegard, 1976, p.201).

Is (3) then, in Odegard's view, an example of contingent a priori proposition? His answer is negative. In what follows, I shall summarise his argument:

In standard metre example, the reference of 'metre' is the certain length of S (at t0), which, either accidentally or essentially, is identified as the length of S (at t0). If this certain length is identified accidentally, (3) will be contingent, for S might have a different length and thus not be one metre long. In this case, however, our knowledge of (3) would not be a priori. The reason for this claim is that when one defines 'metre' as the length that S happens to be, one's knowledge that S is the given length is not a consequence of his definition; but rather a precondition. Thus, the fact that after defining 'metre' in the given way, we automatically know that S is one metre long does not yield that the knowledge is a priori. The result is automatic merely because the knowledge that S is one metre long is non-linguistically identical with the knowledge that S is the given length, an empirical knowledge we must already have.

Alternatively, if we identify the given length essentially as the length of S, our knowledge that S is one metre is a priori, since in this case (3) is equivalent to

(3*) Provided S exists, S is whatever length it is.

But (3) is obviously necessary, for we cannot say that S might have been a different length, because any purportedly different length of S now counts as 'the length which S is' and hence is not different.

apriority of (2). His argument can be summarised as following:

If an object has a property in a possible world, then there exists such an object in that world. Given this, it follows that **S** has the property of being one metre long if there exists such an object as S. Thus, before we can know that it is true that **S** is one metre long, we must know that there is such an object as S. Our knowledge of such an object's existence, however, is obviously not a priori (i. e. is not independent of sense experiences) and this is true even of someone who defines 'metre' in the Kripkean manner. Therefore, his knowledge of the truth that **S** has the property of being one metre long couldn't be a priori (Carter, 1976, p.105).

Carter's 'simple' objection is obviously based on a certain picture of a priori knowledge, though he never illustrated it clearly. In this picture any item of propositional knowledge that is dependent on an empirical (a posteriori) knowledge is itself a posteriori. Therefore, our knowledge of any proposition that predicates a certain property to a physical object must be a posteriori, since it implies our knowledge of the existence of that object which is empirical and a posteriori. This would generally result in the fact that our knowledge of a physical object (like S) having a certain property (like being one metre long) is a posteriori.

Reply to Carter

As we considered above, Carter's objection is based on a certain notion of aposteriority, which one may not feel obliged to accept. For example, we may say that our knowledge of a certain proposition p is a posteriori just on this ground that our justification for believing p is based on sense experience; therefore, we cannot justify our belief unless through a kind of sense experience. Given this notion of aposteriority, it seems sufficiently clear that one cannot reasonably claim that our knowledge of (2) is a posteriori merely because of its dependence of our prior a posteriori knowledge of another proposition. Instead, (2) can be known a priori at least by the person who defines 'metre' by referring to the actual length of S, because he can justify his belief of (2) just through his own stipulation without referring to any sense experience. The gist of my argument would be that Carter's objection presupposes a special interpretation of aposteriority, which can easily be challenged and refuted by some opponents of his, including Kripke. Though Kripke never presented a clear notion of aposteriority, it seems that we can defend his claim by rejecting Carter's implicit conception of aposteriority

1. The length of S is one metre.

Since it is true that the length of S changes with time, it would be more accurate to speak of a certain time **t0**. Kripke supposes that someone who fixes the metric system by referring to the stick S at **t0**, defines 'one metre' as

2. The length of S at t0 is one metre.

He then argues that (2) is contingent even if one accepts that by definition the standard metre is one metre long at **t0**;the 'definition', if properly interpreted, does not say that the phrase 'one metre' ought to be synonymous (even when talking about counterfactual situations) with the phrase 'the length of S at **t0**'. Instead, we have determined the reference of the phrase 'one metre' by stipulating that 'one metre' is to be the rigid designator of the length which, in fact, is the length of S at **t0**. So this does not necessarily make it true that S is one metre long at **t0** (p.55).

The definer of 'one metre' can also know (2) a priori:

> For if he used stick S as a fixed reference for the term 'one metre', then, as a result of such 'definition' (which is not an abbreviate or synonymous definition), he knows automatically, without further investigation, that S is one metre long. (*Ibid*)

Thus, (2) is both contingent and a priori. We should remember, as Kripke insists on reminding us, that the definite description, 'the length of S at **t0**', does not provide us with the meaning of 'one metre'; instead, it merely offers a fixed reference to this term, which is the certain length of S at **t0**. Kripke writes:

> There is a certain length which he wants to mark out. He marks it out by an accidental property, namely that there is a stick of that length. (*Ibid*)

After this brief representation of Kripke's view, we can start our examination of his critics' views.

Carter's Simple Objection

In his paper 'On A priori Contingent Truths' W. R. Carter tried to present a 'simple, though telling objection' to Kripke's counterexamples, including the standard metre example. As we considered, Kripke maintains that (2) is a contingent a priori proposition. Carter refutes the

any knowledge that professes to hold a priori lays claim to be regarded as absolutely necessary. (1965, p.19)

Leibniz adopted the same view when he claimed in **The Monadology** that:

> there are also two kinds of truths, those of reasoning and those of fact. Truths of reasoning are necessary and their opposite is impossible, and those of fact are contingent and their opposite is impossible. When a truth is necessary its reason can be found by analysis, resolving it into more simple ideas and truths until we reach those which are primitive. (1951, p.539)

Saul Kripke, however, has refuted this thesis through providing some counterexamples. In his paper 'Identity and Necessity' Kripke introduces several necessary a posteriori propositions, while apart from that, he argues in **Naming and Necessity** that there are contingent a priori propositions as well. The latter claim is justified by presenting two examples for contingent a priori propositions: The standard metre example and Neptune example.

In this paper I shall focus on the first example, examining the argumentations for and against it.

Standard Metre Example

In **Naming and Necessity** Kripke suggests an example for contingent a priori proposition, which relates to the standard metre in Paris museum. His discussion begins with a reflection on Wittgenstein's comments about the standard metre. Wittgenstein believed that:

> There is one thing of which one can neither say that it is one metre long, nor that it is not one metre long, and this is the standard metre in Paris. (1968, p.25)

Kripke, however, disagrees with Wittgenstein:

> If the stick is a stick, for example, 39.37 inches long (I assume we have different standards for inches), why isn't it one metre long? (Kripke, 1980, p.54)

Thus, calling that specific stick **S**, the following proposition is, in Kripke's opinion, a true one:

The Standard Metre: Has It Anything to Do With The Contingent A Priori

Mohammad Saeedimehr[*]

Abstract

Kripke has proposed a number of counterexamples to the classic thesis, which says that the class of necessary propositions coincides with the class of a priori ones. These counterexamples involve some necessary a posteriori truths as well as contingent a priori ones. One of his examples for the latter is the standard metre example. In this paper, after presenting a brief sketch of Kripke's proposal, I'll examine the main objections to it and argue that all of them could be replied to. At the end, however, I'll argue that the standard metre example enjoys much less philosophical significance than it appears to, and, considering the spirit of the classic thesis, it fails to refute this thesis.

Keywords: *A priori, Contingency, Standard metre, Kripke.*

Introduction

It is traditionally believed that there is a close relationship between a priori propositions[1] and necessary propositions. A prominent thesis about the nature of this relationship is that all necessary propositions are knowable a priori and vice versa. Kant, a well-known example, acknowledges in **Critique of Pure Reason** that:

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