NECESSITY, THE A PRIORI, AND THE STANDARD METER

ABSTRACT. This article critically examines Saul Kripke’s (1972) argument for the separability of necessary truths from truths known a priori, focusing on his criticism of the standard meter case presented by Wittgenstein (1968). It attempts to show that Kripke’s argument is unworkable on any of several readings. Wittgenstein’s own broadly conventionalist account of necessary truth is then considered in the light of the standard meter example.

Saul Kripke’s Naming and Necessity (1972) advances a series of theses in metaphysics and the philosophy of language which pose potentially serious problems for many conventionalist accounts of necessary truth. In particular, Kripke’s famous conclusion that necessary truths can sometimes be known a posteriori and that some contingent truths may be known a priori is incompatible with treating statements of necessary truth as disguised expressions of linguistic norms which, being products of stipulation, must be known a priori. I take the later Wittgenstein’s account of necessary truth to be conventionalist in at least this broad sense. As such, the arguments and illustrations used by Kripke to defend his separation of what is necessary from what is a priori would, if sound, undermine a key element of Wittgenstein’s account of necessary truth. I will here demonstrate why this is, and offer a defense of Wittgenstein’s position against Kripke.

1. THE STANDARD METER

Suppose that we stipulate that some object, say a particular bar of metal, is to be the standard for some linear measurement, such as one meter. Given that we have selected a bar, and stipulated that it is the standard for one meter, can we not say that it is necessarily the case that the standard bar is one meter long? Not according to either Kripke or Wittgenstein, albeit for very different reasons. For Kripke, the claim that the standard meter is one meter long is not necessarily true, even if the bar is defined to be the standard for something’s being one meter long. For Wittgenstein, it simply cannot be meaningfully claimed that the standard meter bar is or is not one meter long. The supporting arguments that each philosopher provides
begin from apparently obvious observations. The ultimate conclusions that
they reach about necessary truth are fundamentally different.

In section 50 of the *Philosophical Investigations* (1968), Wittgenstein
famously denies that the standard meter can be said to be one meter long:

> There 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. – But 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.

Philosophers are frequently divided on this passage; to some it seems to be
clearly correct, to others plainly silly. I think that Wittgenstein’s claim that
the standard meter neither is nor is not one meter long is correct, although
certain implicit assumptions must be brought out and defended, as I will
do below. Kripke obviously thinks that this claim of Wittgenstein’s is false
(1972, 54). I will first briefly consider what I think is at issue here for
Wittgenstein. I will then turn to Kripke’s arguments against Wittgenstein,
and show that they do not succeed.

> Reflection on the standard meter easily generates a philosophical
> puzzle, since it may seem at once to be both beyond ascriptions of (metric)
> length and necessarily one meter long. For suppose we say, as I think Witt-
> genstein would, that an object is said to be one meter in length only if it
> matches the standard meter bar according to some method of comparison,
> viz., the coincidence of its endpoints with those of the standard meter bar
> when the two are placed side-by-side. Then if this match is said to be the
> basis for the correct application of the expression “one meter”, we have no
> way of saying that the standard meter bar itself is one meter in length, for
> we have no way of comparing it with itself, since we cannot place it side-
> by-side with itself. So it seems that we cannot say of the standard meter
> that it is, or is not, one meter in length. Yet at the same time, it seems as if
> the standard meter must be exactly one meter in length. For suppose that
> it were not. Then there would be no standard for the correct application
> of the expression “one meter” since the standard meter would not possess
> the property for which it is the standard. Hence nothing would count as
> the correct application of “one meter”, in which case the statement, “The
> standard meter is not one meter long” would be not false but meaningless.
> In which case it seems that the standard meter must be one meter long.

In the last paragraph of section 50 of his (1968), Wittgenstein draws
a distinction between something that is represented and something that
is a *means* of representation. The *standard* meter is, he clearly thinks, a
means of representation. Like a standard color-patch it is an “instrument
of the language”, part of our “method of representation”. The standard
meter is a canonical sample which, when used with a particular technique
of comparison with objects, allows us to apply the expression “one meter” correctly. For Wittgenstein, the technique of comparison is an essential part of our being able to use the standard meter as a measure of linear length.² It is because we know a particular technique for properly rotating a piece of wood, for example, and comparing its endpoints to the standard meter bar that we can use the bar as a standard. We have no analogous method for comparing the standard meter with itself. Since something is said to be one meter in length only if it matches the standard meter bar according to some method of comparison, the expression “The standard meter in Paris is one meter in length” cannot be functioning as a description of the standard meter. This is not, however, to deny that this expression can have no function for Wittgenstein, as I will show below.

2. Kripke’s Argument

Thus I understand Wittgenstein’s basic argument. Kripke’s argument against Wittgenstein begins with an observation that exploits an apparent implausibility in Wittgenstein’s claim that one cannot say that the standard meter either is or is not one meter long. The standard meter bar surely has a length, and given that it has a length, its length can be measured, for instance, in imperial units. In which case, Kripke says, “If the stick [i.e., the bar serving as the standard meter] is a stick, for example, 39.37 inches long (I assume we have some different standard for inches), why isn’t it one meter long?” (1972, 54). This reasoning seems straightforward and intuitive: Anything 39.37 inches long is also one meter long, and the standard meter bar is 39.37 inches long. And so, contra Wittgenstein, it is one meter long.

The apparent decisiveness of Kripke’s opening argument is, however, undercut if we ask ourselves; Is the standard meter bar one meter long because it is 39.37 inches, or do we rather say that the conversion formula 39.37 inches = one meter holds because the standard meter bar is found to be 39.37 inches long when measured by an imperial measure? Now if it is the standard meter, and not an imperial measure conversion formula, which is to serve as the standard for “one meter”, then the fact that the standard meter bar is 39.37 inches long is not a reason for saying that it is one meter long. Rather, it is a reason for saying that the formula ‘39.37 inches = one meter’ is the correct formula for converting imperial linear measurements into metric ones. So when we say that anything 39.37 inches long is one meter long, we are not reporting a fact that we happen to have found to hold in every case (including, luckily, the case of standard meter itself). Rather
we might say that this formula expresses the result obtained by comparing two independently-established standards for linear measurement.³

Kripke’s principal argument is not, however, rebutted so easily. For his primary concern is not so much to demonstrate that the standard meter bar has a metric length as it is to demonstrate that it has the length of one meter only contingently. At this point the disagreement with Wittgenstein is indirect but still present; if the standard meter bar can be truly said to be contingently one meter long, then it is surely meaningful to say either that it is or is not one meter long.

Kripke’s argument here helps to set the stage for the positive account of proper names and kind terms developed in the later lectures of Naming and Necessity. It is important to his account that a truth’s being a priori does not entail its being necessary (and vice-versa), since Kripke argues that expressions such as proper names and kind-terms may have their reference “fixed” by means of a description, and hence be known a priori, without the description’s being necessarily true of the thing referred to by the name or kind-term (cf. 1972, 55–63). He thus draws a distinction between fixing the reference and giving the meaning of an expression, which relies upon there being contingent a priori truths.

The distinction between fixing the reference and giving the meaning of an expression thus presupposes that a statement such as “The standard meter is one meter long” can be meaningful and known a priori without being necessarily true. Nonetheless, Kripke thinks that there is at least an “intuitive difference between the phrase ‘one meter’ and the phrase ‘the length of [standard meter stick] S at t₀’” (p. 55). This latter expression refers to a particular stick, namely the one we have selected as the standard meter, at a particular time; the time reference being necessary to account for the fact that the length of a stick, such as a particular platinum-iridium bar, may fluctuate slightly over time. The expression “one meter” refers to a certain length.⁴ Now if someone uses stick S at t₀ as the definition of “one meter”, is it a necessary truth that stick S is one meter long at t₀?⁵ Kripke thinks not, for the person giving the definition is “using this definition not to give the meaning of what he called the ‘meter’, but to fix the reference” (ibid.). That is, the person who uses stick S at t₀ as the reference for “one meter” is trying to give the reference of this term without necessarily stating anything true about the thing being referred to. Thus,

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. Someone else might mark out the same reference by another accidental property. But in any case, even though he uses this to fix the reference of his standard of length, a meter, he can still say, “if heat had been applied to this stick S at t₀, then at t₀ stick S would not have been one meter long” (ibid.)
How is this argument intended to work? Kripke obviously takes it to be a contingent fact that the bar we have selected to be the standard meter, namely stick $S$ at $t_0$, is one meter long. But it is not a contingent fact that the referent of the expression "one meter", whatever that may be, is one meter long, for to deny this would be to deny that one meter is identical to one meter. So “one meter” is meant to be a rigid designator, that is, it designates a certain particular length in all possible worlds. But the expression “the length of stick $S$ at $t_0” is not a rigid designator; we can imagine a world in which the length of stick $S$ at $t_0$ is different, as for instance if it had been heated and so expanded at that time. This seems to introduce some kind of conflict; stick $S$ at $t_0$ could have been a different length. But stick $S$ at $t_0$ is the standard meter, and how could the standard meter fail to be one meter long? This conflict however, is only apparent, for as Kripke tells it, the definition of “one meter” as “the length of stick $S$ at $t_0” does not say that the phrase “one meter” is to be synonymous (even when talking about counterfactual situations) with the phrase “the length of stick $S$ at $t_0”, but rather that we have determined the reference of the phrase “one meter” by stipulating that “one meter” is to be a rigid designator of the length that is in fact the length of $S$ at $t_0$. So this does not make it a necessary truth that $S$ is one meter long at $t_0$ (1972, 56).

The expression “one meter” thus rigidly (i.e., necessarily, or in all possible worlds) designates the length one meter. It contingently designates the length of stick $S$ at $t_0$, which happens to be one meter long, and which is therefore a suitable candidate for fixing the reference of the expression “one meter” in the context of linear measurement. At this point it can be seen how it is that Kripke thinks that truths known a priori may, in some cases, nonetheless fail to be necessary. For although Kripke grants that someone might “fix” the metric system by reference to stick $S$, thereby having a priori knowledge that stick $S$ is one meter long, it would nonetheless not be necessary that stick $S$ is one meter long.

It is evident from his introductory comments that Kripke intended his meter bar example to support a certain intuition:

I imagined a hypothetical language in which a rigid designator “a” is introduced with the ceremony, ‘Let “a” (rigidly) denote the unique object that actually has the property $F$, when talking about any situation, actual or counterfactual’. It seemed clear that if a speaker did introduce a designator into a language that way, then in virtue of his very linguistic act, he would be in a position to say ‘I know that $Fa$’, but nevertheless ‘$Fa$’ would express a contingent truth (provided that $F$ is not an essential property of the unique object that possesses it) (1972, 14).

In the meter bar case, we let $F$ be the “certain length” that one wants to pick out (i.e., one meter), and $a$ be the bar (stick $S$ at $t_0$) that happens to be an instance of that length. Now it seems clear that $a$ can change in length
but $F$ cannot – one meter is always one meter in length. Kripke’s account seems to accord with this intuition. One might add in support of Kripke that his account seems to accord with certain facts of our linguistic usage as well; there doesn’t seem to have been any change within the last, say, one hundred years in what people mean by the expression “one meter” – we don’t after all mean to pick out a different length today than people did in 1900. But the standard for the expression “one meter” has in fact changed; it is no longer a particular bar which serves as the standard, but rather a certain number of wavelengths of radiation emitted by a krypton isotope. This point, which has close parallels with Kripke’s subsequent discussion of natural kinds, seems readily explained by his account. Since “one meter” rigidly designates one meter in length, it is unsurprising that we mean the same thing by this expression as did people in 1900. But since it is a contingent matter which particular standard we use to fix the reference of this expression, our standard for applying the expression “one meter” can change, and has.

3. OBJECTIONS TO KRIPKE’S ARGUMENT

Kripke’s argument thus seems to show the assimilation of necessary truths with truths known a priori to be unjustified. But I don’t think that it actually goes through.

On an initial reading, Kripke’s argument seems to equivocate as to just what is functioning as the standard meter. Kripke seems to argue that stick $S$ at $t_0$ is only accidentally one meter in length in virtue of its having the “accidental property” of possessing the “certain length” (presumably the length of one meter) which someone wants to mark out. But what exactly is the standard for one meter in this case? There appear to be two possibilities:

(i) The standard for one meter just is stick $S$ at $t_0$, whatever its length may be, or;

(ii) The standard for one meter is the “certain length”, call it $L$, that stick $S$ at $t_0$ happens, accidentally, to possess.

Case (i) can be understood as saying that stick $S$ at $t_0$ is the standard whatever its length at $t_0$ may be. Something else is one meter long, on this reading, just in case it matches stick $S$ at $t_0$ in the appropriate way. Case (ii) can be understood as saying that the “certain length” $L$ that someone want to pick out is the real standard; $S$ at $t_0$ can be taken as the “standard meter” just because it happens to possess $L$. Now if we are to avoid equivocation, it might be argued, we ought to consistently maintain that either stick $S$ at
$t_0$ or $L$ is to serve as the standard. But then we seem to lose any reason for supposing that the fact that the standard is one meter long could be a contingent a priori truth.

To see why this is so, consider each case in turn. Consider first case (i); i.e., we take stick $S$ at $t_0$, and not its length, to be the standard. Then it cannot possibly be false that the stick is one meter long. For in that case there is no independent metric determination of the length of the stick that could serve as the basis for the claim that the stick was not one meter long, and so no possible basis for making such a claim (whether it would therefore make sense to say that it is a meter long is something I’ll consider further below). That is, something is then one meter just in case it matches the stick, and not some otherwise-identifiable length of the stick.

Now consider case (ii), the case in which we somehow identify a certain length $L$ (and not stick $S$ at $t_0$) as the (only) standard. Stick $S$ at $t_0$ is simply an instance of $L$. But in this case, although we might indeed say that stick $S$ at $t_0$ might not be one meter long, this is only because it is not functioning as the standard for one meter—rather $L$ is. And now there seems to be no reason for saying of $L$ that it could fail to be one meter. Indeed, it’s not clear that there could even possibly be one, for $L$ would then determine what counts as being one meter long.

I think that the best way to read Kripke’s argument such that it avoids this equivocation is to consistently appeal to option (ii), above, and treat the real standard for one meter as a property had or instantiated by a particular individual. On this reading the standard meter is seen as a kind of complex consisting of an individual (stick $S$ at $t_0$) and a property $L$ (the length of one meter). Now Kripke points out that while we may initially identify a property by means of an individual, the property is separable from the individual. So there is nothing necessary about the standard meter stick’s being one meter long. The fact that it is one meter long is contingent, on this reading, in the same way that the fact that my copy of Naming and Necessity is purple is contingent; both the stick and the book instantiate a property that they could fail to have. The only difference in these two cases concerns how it is that the reference of the property-expression is fixed; “one meter” is stipulated to be (has its reference fixed by) the length instantiated by stick $S$ at $t_0$, and so is known a priori. “Purple” is not stipulated to be the color instantiated by my copy of Naming and Necessity. This, presumably, explains why stick $S$ at $t_0$ is functioning as a standard, while my copy of Naming and Necessity is not.

Even if we read Kripke’s argument in this way, however, it still doesn’t work. The primary reason is that for something to function as the standard for a property or property-expression, it is not sufficient that that thing
simply have or instantiate the property, even if it is part of a definition such that it “fix the reference” for a property-expression.

Suppose for the sake of argument that “one meter” designates a property that is identifiable independently of the particular thing that we select as the standard (it doesn’t matter here what kind of thing such a property is). It is easy to see that something’s having or instantiating this property is not a sufficient condition for its being a standard for “one meter”. Many things are correctly said to be “one meter” without thereby being the standard meter. Kripke notes that we also define a particular thing to be the standard meter. But what does this amount to? Obviously defining something to be a standard does more than simply report a fact about an object. But what?

I think that I can provide a plausible and straightforward answer to this question. Unfortunately for Kripke, it is not an answer that he can consistently accept, as I will demonstrate.

I claim that something, such as stick $S$ at $t_0$, is the standard for one meter if and only if: (a) if some individual $x$ is one meter long, that logically entails that it matches the length of stick $S$ at $t_0$, and; (b) if $x$ matches the length of stick $S$ at $t_0$, that logically entails that $x$ is one meter long. This definition of the standard meter is an instance of the following general definition of some particular thing’s being the standard for a property $P$:

\[(DS) \quad s \text{ is the standard for property } P \text{ if and only if } (x)(x \text{ matches } s \iff Px).\]

Here ‘$\iff$’ is to be understood as mutual logical entailment.

I think that (DS) is a plausible and intuitive condition on something’s being a standard for a property. I think it can only be understood as a kind of definition of when something is said to be $P$.$^6$ It does so largely by showing how a standard licenses certain entailments in the use of property terms. (DS) states in part that something’s being a standard for a property logically entails that anything that matches it in the appropriate way can be said to have the property that the standard is a standard for. That this is a logical entailment is important, for something’s matching the standard for the application of a property-term is not simply inductive evidence that it can be said to have that property. A match with the standard defines when it is correct to apply a predicate, not when it is only probably correct, or prima facie justified. Similarly, (DS) states in part that a predicate expression’s being truly predicated of an object entails that the object matches the standard for that expression. Suppose that this were not true, that is, that there were no logical entailment here. Then there could be some individual $x$, such as a color-patch, which had property $P$, such as the property of
being sepia, but which didn’t match the standard for that very property. This is absurd.

It is thus important to see that (DS) cannot be replaced with the following:

\[(DS^*) \quad s \text{ is the standard for property } P \text{ if and only if } (x)(x \text{ matches } s \equiv Px)\]

The second biconditional here is too weak. We do not wish to say that everything which is \(P\) is the standard for having \(P\). As I noted, it is hard to see how Kripke’s account of stick \(S\) at \(t_0\) does not amount to the inadequate (DS*).

I said that Kripke could not accept this account of something’s being a standard for a property, for to do so would lead him to the denial of a self-identity, given other presuppositions that he accepts.

To see why, consider the following three suppositions:

(i) The length of stick \(S\) at \(t_0\) is stipulatively defined to be the standard for “one meter”. This Kripke grants that we may do (1972, 54–5).

(ii) When speaking of counterfactual situations,\(^7\) we describe these situations based upon our actual situation. So for instance, in speaking of certain counterfactual situations involving a particular stick which we have in our hands, say, we stipulate that we will describe these situations as situations in which \(this\) stick (in our hands) were different than it is. That is, our description of counterfactual situations is made with essential reference to the actual situation, using terms as they are defined in the actual situation. This assumption too is clearly in accord with Kripke’s discussion of counterfactual situations and possible worlds (cf. ibid., 16–20, 47–54).

(iii) Stick \(S\) at \(t_0\) is the standard for “one meter” if and only if: (a) if something is one meter long, that logically entails that it matches the length of \(S\) at \(t_0\), and, (b) if something matches the length of stick \(S\) at \(t_0\), that logically entails that it is one meter long. This supposition Kripke would reject.

I will show that there is no way of taking the statement “Stick \(S\) at \(t_0\) is one meter long” to be contingently true on suppositions (i)–(iii). Since supposition (iii) seems to be a correct account of how stick \(S\) at \(t_0\) is functioning as the standard for one meter, it ought to be accepted. But accepting it will undermine Kripke’s claim that the statement “Stick \(S\) at \(t_0\) is one meter long” has the status of a contingent truth, given that stick \(S\) at \(t_0\) is the standard for “one meter”.
Suppose that someone grants suppositions (i)–(iii). Suppose further that they stipulate a counterfactual situation in which both of the following statements are true of that situation:

(a) Stick S at t₀ is the standard for “one meter”.

(b) Stick S at t₀ is not one meter long.

I do not think that there is anything necessarily incoherent about this stipulation. Does it follow from it that the standard for “one meter” is only contingently one meter long? No. If one accepts suppositions (i)–(iii) above, one takes the meaning of “one meter” to be determined by the length of the actual stick S at t₀. For by (i), it is stick S at t₀ which is the standard for “one meter”. By (ii), it is stick S at t₀ in the actual world which is serving as the standard for this expression, since our description of counterfactual situations is to be made with essential reference to the actual situation (and not, for instance, to some counterfactual one). By (iii), stick S at t₀ determines the meaning of “one meter” by stipulating that if something is one meter long, that entails that it matches the length of stick S at t₀, and vice-versa.

Now although it is perfectly possible to suppose that stick S at t₀ in the counterfactual case is not the length of the standard meter, statement (a) cannot be read as a statement expressing the standard for “one meter” as this term is used in the actual situation. For what we mean by “one meter” in the actual case is set by suppositions (i) and (iii), and by supposition (ii) we should take “one meter” to function in the counterfactual case with reference only to the way it functions in the actual one. So at best, statement (a) would be a stipulation of some other meaning for “one meter”. That is, by the above suppositions, what is meant in the actual case by “one meter” is determined by the length of the actual stick S at t₀, whatever that might be.

If we were interested in clarity here, we could choose to write (a) as

(a*) Stick S at t₀ is the standard for “one meter*”.

Would stipulation (b) have to change in this case? Not necessarily; it might still perfectly well function as a stipulation about the counterfactual situation stating in effect that, given that something is said to be one meter long if it is the length of the actual S at t₀, S at t₀ in the counterfactual case is not one meter long. Alternatively, we might also change (b) to read:

(b*) Stick S at t₀ is not one meter* long.
Given stipulation \((a^*)\) however, stipulating \((b^*)\) would be very strange. It would mean, at the least, that relative to the counterfactual situation, something's being one meter* in length would not entail that it was the same length as stick \(S\) at \(t_0\) in the counterfactual situation, and something's matching stick \(S\) at \(t_0\) in the counterfactual situation would not entail its being one meter* in length. Given what I have said about something's being the standard for a property above, I claim that to deny these entailments is to introduce a completely different concept of a standard in the context of talk about standards for linear measurement (and most other contexts also). Hence, I think that if one wished to stipulate both \((a^*)\) and \((b^*)\) of some single counterfactual situation, the word "standard" in \((a^*)\) would have to be given a new meaning. I do not deny that one could do this. I do deny that one could do it in a way that plausibly supported Kripke's conclusions about necessity and the a priori.

Given suppositions (i)–(iii), I don't see any way to describe a counterfactual situation which simultaneously establishes that the statement "The standard meter (or "Stick \(S\) at \(t_0\)"") is one meter long" is contingently true, which doesn't include both statements \((a)\) and \((b)\) (or their near equivalents) in the description, and which doesn't equivocate on the meaning of "one meter" between these two statements. That is, given assumptions (i)–(iii), to conclude that the statement "The standard for 'one meter' is one meter long" has the status of a contingent statement, we must say something about standards for metric lengths and their properties in counterfactual situations. Statements \((a)\) and \((b)\) are examples of how we might do this. But I see no reading of \((a)\) and \((b)\) which renders it the case that the actual standard for one meter, namely stick \(S\) at \(t_0\) in the actual situation, is something other than one meter long. By these suppositions something's being one meter long entails that it is the length of stick \(S\) at \(t_0\) in the actual situation. So stipulating \((b)\) would not show that stick \(S\) at \(t_0\) in the actual situation is not one meter long. Nor would stipulating both \((a)\) and \((b)\), for stipulating \((a)\) would either be an unclear way of stipulating \((a^*)\), or else it would contradict supposition (i). Of course we could abandon supposition (i). For instance, we could have multiple standards for "one meter". But this wouldn't show that, given that stick \(S\) at \(t_0\) in the actual world is our standard for "one meter" it is only contingently one meter long. We could also abandon supposition (ii), but not only is (ii) a reasonable supposition that Kripke himself accepts, there doesn't seem to be any way in which rejecting it would give us Kripke's conclusion in the intended sense. We could also refuse supposition (iii). This would allow for the possibility that the expressions "one meter" or "one meter*" could be truly predicated of something without that thing corresponding to the length of the standard.
But this forces us into an untenable account of what it is to be the standard for a property.

For Kripke, defining “one meter” by selecting stick $S$ at $t_0$ as the standard for the application of this expression only fixes the reference of “one meter”. It doesn’t give the meaning of this expression. Since for him it is the length of the standard meter which makes it the standard, some particular thing $x$ matches the standard for one meter if and (presumably) only if it can be said to be the same length as that standard, i.e.:

$$x \text{ matches } s \text{ if and only if } L(x) = L(s).$$

Assume that there is, in fact, a standard for one meter. On this conditional assumption, the statement,

$$\alpha: \text{The } s \text{ such that } (x)(x \text{ matches } s \leftrightarrow Lx) \text{ is } L$$

is known a priori and is necessarily true. It is known a priori because it follows from the stipulated definition (DS) and from my account of what the matching relation in the meter case is for Kripke. It is necessary because the denial of this statement involves the denial of a self-identity. For suppose for a reductio that some standard meter $s$ were not correctly said to be $L$. Then, absurdly, $s$ would not match the length of $s$, i.e., $L(s) \neq L(s)$.

Now given the conditional assumption that there is a standard for one meter, statement $\alpha$ can be paraphrased as saying, in part, that the standard (such as stick $S$ at $t_0$) such that something’s matching the length of that standard is one meter long, is one meter long. So if my above definition of a standard (and of the standard meter) is accepted, this statement winds up necessarily true, in the sense that it is entailed by such suppositions as that there is a standard, and that anything with the same length as the standard is one meter.

Since there seems to be no good reason for rejecting (DS) as an account of what it is to be a standard, and since doing so, when conjoined with Kripke’s other assumptions, cannot be made consistent with the claim that what we choose as the standard for “one meter” might possibly fail to be one meter long, this latter claim ought to be rejected.

4. WITTGENSTEIN ON THE STANDARD METER

Wittgenstein, as I noted, does not think that the standard meter can be said either to be or not to be one meter long. As I reconstructed his reasoning, something is correctly said to be “one meter” only if it matches
the standard meter bar in the appropriate way, where I suggested that the "appropriate way" be thought of as a matching of the endpoints of the object measured with those of the standard meter bar when the former is placed alongside the latter. Similarly, something is correctly said not to be "one meter" only if it fails to match the endpoints of the standard meter bar when compared with it. Since the standard meter bar cannot be placed against itself to see if its endpoints align, it fails a necessary condition for applying the expression "one meter" to it. We can say neither that it is, nor that it is not, one meter long.

So is the expression "The standard meter in Paris is one meter long" meaningful at all? To deny that it is certainly seems counter-intuitive, if not false. But I don't think that Wittgenstein is claiming that this expression has no sense at all or, absurdly, that it cannot be uttered, but only that one cannot use this expression to ascribe a property to the standard meter. So although it's true that Wittgenstein claims that we cannot say that the standard meter is one meter long, I think that the sense in which we cannot say this is the sense in which we cannot assert it, that is, we cannot treat this expression as making a true or false empirical proposition.

In fact, a look at some of Wittgenstein's other discussions of explanations and standards reveals a different possible role for this expression, not as a description, but as a substitution rule. An early suggestion of this is made in his (1978), where Wittgenstein writes that "The ostensive definition may be regarded as a rule for translating from a gesture language into a word language" (1978, 88). Here and in previous pages (cf. 58–61 of ibid.) Wittgenstein explains how, given an antecedent grasp of certain forms of explanation (gestures, expressions, etc.), one can understand an explanation of the form "the color of this object is called 'violet' " as a rule substituting a gesture and a standard sample for an expression. A much later passage confirms this picture. In considering the proposition that 12 inches = 1 foot, he writes:

No one will ordinarily see this last proposition as an empirical proposition. It is said to express a convention. But measuring would entirely lose its ordinary character if, for example, putting 12 bits each one inch long end to end didn't ordinarily yield a length which can in its turn be preserved in a special way. The proposition has the typical (but that doesn't mean simple) role of a rule. (1983, 355)

The conversion formula has the sense of a rule. It is not a description. A rule stipulates a pattern of action; in this case, a pattern of using an expression. A rule does not assert anything, true or false, necessary or contingent. A fortiori it does not assert that something is necessarily true.

I believe that Wittgenstein would treat the expression "The standard meter is one meter long" in the same way. He has shown how he thinks
that samples, such as color samples, can serve a role as part of an ostensive explanation, which he thinks formulate rules, and here there is no reason to suppose he would think any differently for explanations of standards of length. To the contrary, he goes on in section 50 of (1968) to construct an example for a color-sample for the use of the expression “sepia” which he clearly thinks exactly parallels the standard meter. So the expression “The standard meter is one meter long” might be said to have a sense, for Wittgenstein, not because it ascribes some property to the standard meter, but because it formulates a rule which stipulates, in effect, that if one wishes to say of an object that it is “one meter in length”, then it must correspond, according to some appropriate technique of comparison, to the standard meter in Paris.

Doesn’t this simply reinforce the appearance that the standard sample has to be exactly one meter in length, for only thus can it serve as that which an object must match if it is to be one meter long? No, for here Wittgenstein uses his claim that the standard meter is part of our means of representation to block this move:

And to say “If it did not exist, it could have no name” is to say as much and as little as: if this thing did not exist, we could not use it in our language-game. – What looks as if it had to exist, is part of the language. It is a paradigm in our language-game; something with which comparison is made. (1968, section 50).

Wittgenstein is thus claiming that to say that something must exist in order to be named (or by extension, that something must have a certain property in order to serve as a standard) is a misleading way of merely saying that if one wishes to use language to name or describe things in a certain way then one must use objects or standards appropriate to that form of naming or description. This amounts to the rather humdrum observation that if we are to use certain norm-governed practices, such as linear metric measurement, we must assign objects such as the standard meter in Paris a special role. There is thus no de re necessity here; it is not necessary that certain objects exist, nor if they exist is it necessary that they have certain properties. Rather, the necessity here concerns only how we must treat certain objects in order to represent the world in particular ways.

If this captures Wittgenstein’s account of how the standard meter functions as a standard, then it is easy to see that his account satisfies my condition (DS), above. Since the substitution rule just is a stipulation of what counts as the correct application of “one meter”, it licenses the requisite entailments. Here it is worth noting an interesting difference between Wittgenstein and Kripke concerning what exactly is functioning as the standard for “one meter”. For Kripke, it is the length of the bar. For Wittgenstein, it is the bar itself, not its length. Something is one meter long
for Wittgenstein if it matches the endpoints of the bar, not if it matches the length of the bar. This explains why it is that for Kripke, but not for Wittgenstein, ascriptions of metric length can be intelligibly made of the bar, since for Kripke the standard only contingently possesses a certain length, which is the length of one meter. For Wittgenstein the expression “The standard meter is one meter long” does not describe the meter bar at all, but rather expresses a rule. For Kripke, this expression describes the bar. As I have shown, we ought to think that given Kripke’s assumptions about what aspect of the bar is the standard, even if we treat this statement as a description, it express a necessary truth known a priori.

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NOTES

1 For the sake of argument I am assuming that a particular bar, such as that kept by the International Bureau of Weights and Measures, really is used as the standard for the use of the expression “one meter”. I am further assuming that it is used in the way described here. Wittgenstein does not himself specify here that the meter bar is to be used in this way, but he does make clear that a standard must be grounded in a technique in order to function as such (see, for example, his 1983, p. 355). I think that the technique that I describe here of comparing the endpoints of the standard meter with the object to be measured to see if they match is an obvious and plausible example of such a technique.

2 Wittgenstein considered the grasp of a technique to be essential to knowing how to use a word correctly (cf. 1968, sections 262, 557, and p. 208), to understanding the meaning of a sentence (cf. sections 199, 520 of ibid.), and to knowing how to follow a rule (ibid. section 692; 1968, p. 303, 346). The importance of grasping a technique is also evident in the section following the meter-bar example; in considering how it is that simple expressions may correspond to simple objects (as in the language-game described in section 48 of (1968)), the task is taken to be to describe what it means to say “that in the technique of using the language certain elements correspond to the signs” (ibid., section 51, Wittgenstein’s emphasis). Our job, Wittgenstein continues, is to describe this technique: “In order to see more clearly, here as in countless similar cases, we must focus on the details of what goes on; must look at them from close to” (ibid.).

3 Naturally we could have two distinct standards for saying of something that it is one meter long. If we did, we would need either to assure that the standards would not fluctuate relative to each other, or that we had some technique for dealing with such fluctuations, or that any fluctuations were such that they went unnoticed by us or were of no importance to us. Plainly Kripke’s argument is intended to proceed regardless of whether we have one standard for the use of an expression or many, for he wants the reader to “suppose that
the ‘definition’ given is the only standard used to determine the metric system. I think the problem [of there being a difference between ‘one meter’ and the length of the standard meter bar at some time] would still arise” (1972, footnote 20). So however it is intended to work, Kripke’s argument against Wittgenstein cannot rest on the fact that there may be more than one standard for the application of the expression “one meter”.

Kripke doesn’t always distinguish between using and mentioning the expression “one meter” (cf. pp. 54–5 of ibid.). I believe that clarity would best be served by speaking only of the standard meter as the standard for the correct application of the expression “one meter”, and I generally put the argument out in this way. However, given that Kripke himself does not always put the argument in this way, phrasing my argument solely in this way might run the risk of its being accused of constructing a ‘straw man’ against Kripke. My argument does not hang on there being a use/mention confusion in Kripke. Hence, I will speak of standards for properties, and not simply for the use of terms, where it seems to best capture what Kripke intends.

I will here bypass the interesting question of whether a bar at one particular time could even possibly serve as a standard for linear measure.

An alternative formulation of this condition would make this more explicit:

\[(\text{DST}) \quad s \text{ is the standard for } 'P' \text{ if and only if } (x)(x \text{ matches } s \leftrightarrow 'P' \text{ applies to } x).\]

This formulation would be more likely to avoid confusions between, for instance, “one meter” describing an individual on the right-hand side of the logical entailment, and its being mentioned as a component in a definition. I use (DS) above only because it conforms more closely to Kripke’s own exposition which, as noted, does not clearly distinguish between the use and mention of “one meter”.

I wish to follow Kripke’s suggestion (1972, 15) that the conceptually more neutral expression “counterfactual situation” be used in place of the expression “possible world”, since I agree with him that this may avoid a certain reification that confuses the issue. Nonetheless, I think that what I say about counterfactual situations could be directly extended to possible worlds as Kripke characterizes them.

Kripke makes it clear that he considers counterfactual situations to be stipulated (1972, 44, 49). The “descriptions” of these situations are thus descriptions which we stipulate to hold in that case. As I will note presently, there is the potential for some confusion here. These “descriptions” are not true reports of facts, but stipulated constraints on what holds in an imaginary case. The similarity with actual descriptions is thus limited.

I say “at best” because I could imagine someone insisting that by supposition (ii) we couldn’t possibly stipulate new meanings for expressions in counterfactual cases. This would be an untenable reading of (ii), for it requires only that expressions used in describing a counterfactual situation have the meaning they have been given in the actual situation. It does not require that we, absurdly, cannot define new expressions, or define new meanings for old expressions, in counterfactual cases. By suppositions (i) and (iii), stipulations (a) and (b) conjointly define a new meaning for “one meter” for the counterfactual situation, since, compared with the definition of this expression in the actual case, they license a different set of entailments (I take this to be a sufficient condition for difference of meaning). Stipulations (a) and (b) ‘describe’ the counterfactual situation only in the attenuated sense in which they prescribe a new meaning for a term. That we use the same expression (“one meter”) in both the actual case and the counterfactual one does not change these facts.
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