

Identity, Necessity and *a Prioricity*: The Fallacy of Equivocation

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The aim of this paper is to discuss Kripke's reasons for declaring the existence of both necessary a posteriori as well as contingent a priori statements, thus breaking the traditional extensional coincidence of the two pairs of concepts: necessary-contingent and a priori-a posteriori. As I shall argue, there is no reason, from Kripke's work at least, to reject the usual picture of the topic. The appeal of his arguments rests on the ambiguity with which his expressions are used and on the introduction of new senses for old notions. This does not mean, however, that all Kripke's and Putnam's intuitions on singular terms and natural kind nouns are wrong. Once Kripke's ideas are properly understood, they are much more harmless than they are presented to be and they do not pose a threat to traditional relations between modal and epistemological categories.

1. Introduction

After all, it is the old story of the fallacy of equivocation all over again: Kripke's claim that there are necessary *a posteriori* and contingent a priori truths rests upon misuse and ambiguity. Once we realize this, his theses turn out to be either new and revolutionary but false, or else bland and trivial but true. The fallacy of equivocation is not seen just once; it occurs over and over again in Kripke's use of technical notions such as 'necessary' or '*a priori*', and sometimes there are several equivocations interfering with one another. Let us call necessary a posteriori and contingent a priori statements mixed statements. In 'Naming and necessity' Kripke 1972 gives new senses for some old notions alongside their traditional ones and entangles the traditional and the new in quite an arbitrary way to create the illusion that there are mixed statements.

My main concern in this paper is to show that Kripke, Putnam and their followers have offered us no reason to believe in the existence of this hybrid. I shall argue that in 'Naming and necessity' we can find (i) two different accounts of identity, one metalinguistic and the other metaphysical; (ii) at least two senses of 'necessary', a traditional one and a new, narrower one; and (iii) a peculiar usage of '*a priori*', strongly context-dependent, besides the familiar conception.

I shall point out the specific ambiguities in Kripke's work and show the different senses in which he uses the key semantic, modal and epistemological notions. To this end, I will focus my analysis on three statements which he claims are mixed. The first is

(1) 'Water is H₂O',

an example of identity statement between natural kind terms, which according to Kripke is necessary a posteriori; the second is

(2) 'Hesperus is Phosphorus',

which he claims is also necessary a posteriori like every identity statement between proper names; and the third is

(3) 'a meter is the length of stick S at time t',

which according to him is a definition that gives the meaning of the term 'a meter' and is thus contingent a priori.

Before considering statements (1), (2) and (3) in detail, let me state what I shall take to be the traditional senses of 'analytic', 'synthetic', 'necessary', 'contingent', 'a priori' and 'a posteriori':¹

A sentence is *analytically true* (*analytically false*) if it is true (false) by virtue of the meaning of the terms involved. Otherwise it is synthetically true (synthetically false).

A truth is *knowable a priori* if it is knowable independently of all experience. Otherwise it is known a posteriori, if known at all.

A sentence expresses a *necessary truth* (*necessary falsity*) if it is true (false) in every possible world. If it is true in the actual world but not in all possible worlds, it expresses a contingent truth.

I shall now begin the analysis of Kripke's examples.

2. Identity between natural kind terms

Sentence (1) is 'water is H₂O'. According to Kripke, 'water' and 'H₂O' are both rigid designators, i.e. purely referential expressions working like proper names and denoting the same object in every possible world, and (1) is a sentence which expresses a necessary fact known a posteriori.² Putnam claims that his own view of natural kind terms is very similar to Kripke's, although he does not affirm that they have no meaning. According to Putnam, natural- and artificial-kind terms are *indexicals*.³ Both authors hold that (1) is not a definition; in fact, they say, no set of predicates could be a definition of a term like 'water' because one of its functions, if not the fundamental one, is to refer to some substance common in our world. The explanation they offer for the status of (1) is confusing. It would seem to be as follows:

(1a): 'water is H₂O' is necessary

because

(1b): if there were a substance exactly like water except for its molecular structure, it would not be water—although we could call it 'water'.

In any case, (1) is not a definition because

(1c): its negation is not a contradiction—it is 'conceivable but not possible' (see Putnam 1975, 150).

1 I am not suggesting here that the traditional meaning of these notions are patently clear. Sumner and Woods 1969, 7, discern, for instance, three senses of 'analytic' and correspondingly of 'synthetic', three senses of 'necessary' and therefore of 'contingent', and another three of 'a priori', in their traditional usage. What I shall endeavour to show is that Kripke's usage of 'necessary' and 'a priori' are different from all of these.

2 Kripke 1972, 331: 'Theoretical identities [...] are generally identities involving two rigid designators and therefore are examples of necessary a posteriori'.

3 Cf. for instance, Putnam 1975, 152. Nevertheless, it is not obvious that Kripke's rigidity and Putnam's indexicality are equivalent notions.

Furthermore,

(1d): (1) is knowable a posteriori—it is a scientific discovery, not a matter of some sort of stipulation (see, for instance, Kripke 1972, 323).

Then (1) is an example of necessary truth known a posteriori.

Other examples of necessary a posteriori truths are the following:

(4) 'Cats are animals'.

(5) 'Gold has the atomic number 79'.

(6) 'Heat is molecular motion'.

The arguments in favour of these sentences being mixed statements seem to be that:

(4a): 'Cats are animals' is a necessary truth

because

(4b): if in a certain counterfactual situation we had things that looked like cats but were actually demons, these demons would not be cats. They would be demons in a cat-like form.

But

(4c): 'Cats are animals' is not analytic. We could have discovered that cats are demons.

So,

(4d): we know that cats are animals a posteriori (see Kripke 1972, 32).

In the case of (5) the argument is:

(5a): 'Gold has the atomic number 79' is necessary

because

(5b): given that gold has this atomic number, nothing that does not have this structure could be gold.

But

(5c): the whole theory of molecular and atomic structure could turn out to be false, and so it is not a contradiction to say that gold may possibly not have the atomic number 79. That is, (5) is not an analytic sentence. It is not a definition which gives the meaning of the term 'gold' (see Kripke 1972, 319 ff.).

So,

(5d): 'Gold has the atomic number 79' is knowable a posteriori.

The argument for (6) is:

(6a): 'Heat is molecular motion' is necessary

because

(6b): we would not describe any counterfactual situation in which something else—a stream of photons, for example—produced the characteristic sensation of heat as one in which heat would not be molecular motion.

But

(6c): (6) is not a definition. It is possible to imagine that we had discovered that (6) is false.

So,

(6d): We know its truth value a posteriori (see Kripke 1972, 325).

Kripke qualifies (true) identity statements between natural kind terms as necessary truths knowable a posteriori because he considers them, like (2), as identity statements between purely denotative terms. He attempts to show that sentences containing natural kind terms give rise to this sort of mixed statement; but some of the examples he uses are in no obvious way identity statements at all. At first glance, neither (4) nor (5) are identity statements; but (5), unlike (4), can be restated in such a way that it looks as if it were, namely,

(5*): 'gold is the element with the atomic number 79'.

This possibility is not open for (4), for there is no sense in which (4) can be construed as an identity statement.

I do not even endorse the view that (1) and (6) are identity statements, because I do not accept that common nouns work as proper names. It is very difficult to say what they could denote if indeed they do, but I shall not continue this discussion here.⁴ As I see it, the logical form of (1) is something rather like

$$(x) [\text{water}(x) \supset \text{H}_2\text{O}(x)],$$

and the same goes for the others.

Even if they were identity statements, however, they would still not be mixed. So let us concede to Kripke that (1), (4), (5) and (6) are identity statements between rigid designators. The arguments above all have the same structure and in consequence if they go wrong, they do so in the same way. Let it suffice, therefore, to focus on (1).

'Water is H₂O' is necessary because nothing with a different structure would be water, even if we could call it 'water'. Nevertheless, we might have discovered that water is not H₂O, and for this reason (1) is not analytic and is known a posteriori. Here both 'analytic' and 'a posteriori' have their familiar meanings, but that is not the case with 'necessary'. In the traditional picture, if something is necessary, it is true in every possible world, i.e., it is impossible that a world exists in which it is false. So, if Kripke is thinking of this traditional sense, we could not have discovered that (1) is not true. That we could have discovered that water does not have this structure means that this situation is not inconceivable and while I do not maintain that every possible state of affairs must be conceivable, I do maintain the reverse: that every conceivable situation is logically possible. Here I follow Wittgenstein, who in *Tractatus*, proposition 3.02, affirms that what is thinkable is also possible. Therefore Kripke must be using this term in another sense in the arguments above.

Salmon presents a weaker and therefore more defensible account of Kripke's view on common nouns (Salmon 1982, 42–75). He distinguishes three senses of 'sense' in Frege's theory: what Salmon calls 'sense₁' is the conceptual content of an expression, sense₂ is the way in which an expression determines its reference and sense₃ is the information value of the expression (sense₃ is an epistemic notion). Salmon takes Frege's view as identifying these three notions in one and so Kripke and Putnam's theory of direct reference would state that these notions should not be confused. Salmon's interpretation especially is that sense₁ does not determine sense₂. In Salmon's words (p. 56),

It would be silly to deny that these sorts of terms evoke certain concepts in the minds of their users (sense₁), or that they secure their designations in some

4 To see two different viewpoints, compare Zemach 1976 and Donnellan 1971.

manner (sense₂), or that they contribute to beliefs that are formulated using them (sense₃). What the direct reference theory denies is the Fregean assumption that the same thing is responsible for all three, that the mental concept evoked by a term is what secures the reference and is also what forms a part of the user's beliefs and desires.

I feel that Salmon's interpretation is closer to Putnam's account than Kripke's. In any case, that the direct reference theory affirms that most common nouns are purely referential devices or simply that they have an irreducible referential component as a part of their meaning is not relevant to the conclusion I wish to establish.

Kripke holds that *given* that 'water' is the word we use to refer to certain stuff, and that it is a rigid designator with the function, among others perhaps, of pointing to some substance, water is *this* substance and nothing else. In other words, 'water' refers to water, whatever it might have been. If it happened to have the molecular structure H₂O, then water is H₂O and nothing is water unless it has this structure. It does not seem that we are dealing here with the familiar sense of 'necessity' but rather a narrower one, in which necessity is not truth in every possible world but in every world similar to the actual world, w*, in some relevant aspects, in this case in those aspects which make water H₂O, i.e., in every world which shares with ours the baptismal act of the introduction of 'water'.

This is coherent with Kripke's position about possible worlds. He is nominalist about possible worlds and he uses this terminology to explain the way our language works in counterfactual situations. To say in this context that 'water' refers rigidly to water is to say, therefore, that in counterfactual statements 'water' will refer to the stuff that actually is water.

Putnam's thesis that meanings are not just in our heads is very reasonable, as is Kripke's remark that we do not have a privileged path to the knowledge of necessary truths. This does not imply, however, that some necessary truths are known a posteriori, although it does entail that some of them could remain unknown forever. Nor does it mean that statements such as (1), (4), (5) and (6) are non-analytic necessary truths, in a traditional sense of 'necessary'. They are not analytic in this picture because the internal structures of water, gold, cat, etc. do not form part (or do not exhaust) the meanings the terms 'water', 'gold', 'cat' etc. They are not analytic because their negations are not contradictory. But in this particular case, they are not logically necessary.

One could answer that Kripke is dealing here not with logical but metaphysical necessity. I do not know of any developed explanation of what metaphysical necessity is and Kripke's viewpoint seems to identify this necessity with the idea that our world is the way it is and, once it is this way, it cannot be otherwise. If this is so, we should be very careful with the term 'necessary' here. I shall call this account 'necessity*'.⁵ But necessity* is not necessity. If we qualify a truth as necessity*, we are not saying that things could not have been any other way, but that given that they are in fact the way they are, they cannot be any other way. Of course, we do not know a priori most necessity* truths but this does not imply new relationships among the old notions. Necessity* truths are truths about the actual world, w*.

5 I shall use the sign '*' to suggest a strong relationship with the actual world which is sometimes referred to as w*.

Statement (1) is necessary* because the term 'water' has been introduced as a result of our interacting with our world, in presence of some stuff that is very common in w^* and to refer to this stuff. That is the reason why 'water' refers to water and, given that water actually is H_2O , 'water' would not refer to anything which were not H_2O . How else but looking at the world could we have discovered the internal structure of water? If in this context somebody claims that (1) is a posteriori, as Kripke does, one cannot but say 'of course'.

Does this mean that Frege or Kant were wrong when they drew the map of relationships between the metaphysical notions of necessary and contingent and the epistemological notions of a priori and a posteriori? It does not follow. All we can say is that Kripke and Putnam, on the one hand, and Kant and Frege, on the other, understand different things under the term 'necessary' and maybe also 'a priori'. If we want to use possible-world terminology in the way Kripke does, after the manner of a metaphor, we could define

'necessity*' =_{df} 'true in every possible world which shares certain relevant features with our own'.

Thus the conclusions in the arguments above are that (1), (4), (5) and (6) are necessary* a posteriori. But a necessary* truth is only true in some worlds, those which share relevant features with w^* , not in every possible world in any of the traditional senses. 'Necessary*' is closer to 'contingent' than to 'necessary'.

It is obvious that necessary* truths are knowable a posteriori because they are related to the way our world in fact is; and in this sense natural kind terms in necessary* statements are indexical or rigid because they refer to w^* , *this* world. In fact they are as indexical as any other term in any natural language. So the previous argument for the status of (1) turns out to have the following structure: 'water is H_2O ' is a necessary* truth knowable a posteriori, but not necessary in a traditional sense because if our chemical theories were proved wrong, (1) would be a false statement. It would be false in some possible worlds, the actual world being one of them. Notice that if we speak of necessity*, every true eternal sentence which describes the actual world is necessary* and, if we assume that our language is a product of our relationships with the actual world, every term in our language, except perhaps syncategorematic ones, is rigid.

Putnam characterizes natural kind terms as indexical in some sense. He does so to highlight their referential aspects as against the descriptivist viewpoint attributed to Frege, Mill, Russell, Searle *et al.* Nevertheless, they are not indexical in the sense that 'I' or 'now' are, but are referentially linked to an aboriginal act of baptism. So different baptismal acts give rise to different references. Natural kind terms are not world-relative in the sense that their reference depends on the world in which they are uttered, as Putnam (1973, 707) stresses, but on the way they were introduced for the first time.

Kripke's and Putnam's theories about natural kind terms could be generalized towards a *Theory of the rigidity of natural languages*. This theory amounts to saying that terms in natural languages mean what they actually mean and refer to what they actually refer to. So, provided that earthian natural languages have been developed through contact with the actual world, we could say that all terms in them are rigid: some reference to the earthian stuffs they were introduced to name is part of their meanings. And the possibility of widening this theory, far from demonstrating its power, only shows how harmless it really is.

2. Identity statements between proper names

(2) is also an example of identity statement between rigid designators, in this case between proper names, and therefore it is also, according to Kripke, necessary a posteriori. Roughly speaking, advocates of Kripke's theory would offer the explanation that both 'Hesperus' and 'Phosphorus' are proper names. They designate rigidly as every proper name does, and once they designate one object, the same one in this case, they do so in every possible world. Nevertheless, our knowledge of the truth value of (2) was the result of a scientific discovery. And so, although (2) is true in every possible world, i.e., metaphysically necessary, it is a posteriori from an epistemological point of view. If we accept the notion of rigid designator, an identity statement, like (2), if it is true at all, is necessarily so, and if false, it is necessarily false. But in the case of (2), which it is, we can only know empirically. Or so they say.

Here again we come across the divide between the two traditionally related concepts of necessity and a priority. Kripke distinguishes between ontological and epistemological necessity and maintains, as in the previous example, the sensible view that we do not have privileged access to necessary truths. This point is quite acceptable but from it do not follow the theses drawn by Kripke. The Kripkean view amounts to the acknowledgement of the fact that there are many informative identities with grammatically proper names; one famous example is statement (2), another is the Quinean 'Everest is Gaurisanker', together with the consequence of his modal theories that the referent of a name remains unchanged in every possible world. To say that some true identity statements are a posteriori but necessary is a possible way out of the so-called 'paradox of identity', one of its best known formulations being proposition 5.5303 in Wittgenstein's *Tractatus*.

It is clear from Kripke's irony in *Smidentity* and in the words he devotes to Frege in 1972 that he supports what some philosophers have called *the objectual view* on identity. The objectual view affirms that identity is a relationship between objects, that the sign of identity is a two-place first-level relator and so an alternative view to Frege's metalinguistic concept in *Begriffsschrift*. This is also widely considered as Frege's view in 'On sense and reference'. In the objectual conception, an identity statement says something of objects themselves and not of their names and what it says is that an object is identical to some object. But given that no object is identical to any other, the content of an identity statement is that some object is identical to itself. Naturally, if the correct view of identity were this objectual interpretation, we should agree with Kripke in that identity statements state necessary truths: they state the self-identity of objects.

The problem then is to explain how this kind of statement can widen our knowledge—this is in essence the paradox of identity. If 'Hesperus is Phosphorus' conveys the information that Venus is identical to itself, it is difficult to see how anyone could fail to know it a priori. Of course, Kripke does not affirm that every identity statement like 'Hesperus is Phosphorus' is necessary but that it is necessary *if true*. What do we need therefore to determine that (2) is true? I suppose that we would need to know what the statement says or what fact it would affirm if it were. We predicate truth of what is said by a declarative sentence. Do we say by (2) that some planet is self-identical? Of course not. If it were, we would always know the truth value of any identity and this is not the case, as Kripke acknowledges. With his picture, we must first decide if an identity statement is true in order to know that it is necessarily so. And it will be true if the rigid designators occurring in it designate the

same object and not if some object is self-identical (in this case every identity statement would be true based on the unremarkable fact that every object is identical to itself). Curiously, the latter explanation resembles the metalinguistic view, as we must know that the referent of two designators is the same to be able to say that the statement states a necessary truth. But this is a trap. Nobody needs to know what the referent of any term is to be in position to affirm that an object is self-identical.

I hope that it is clear from the preceding paragraph that in Kripke's picture the characterisation of an identity statement as a necessary truth has two steps: the first is the discovery of its truth value and the second is the labelling of every true statement as 'necessary'. We need some mechanism to divide the set of identity statements into two subsets depending on their truth value and then we automatically stick the 'necessary' label on to the members of one subset. It is the nature of the first step that makes some of the true statements epistemologically a posteriori whereas it is in the second where we give account of their metaphysical necessity. All this would be a satisfactory explanation of the metaphysical and epistemological status of (2) except for the incompatibility of the two conceptions of identity required to make sense of the two steps.

In spite of what Kripke seems to maintain, the first step, i.e., the discovery of the truth value, conceals a metalinguistic interpretation of identity. For a statement like (2) to be true the two terms in it must be co-referential. On the contrary, the automatic qualification of a true identity statement as necessary requires the objectual view. The discovery of the truth value of (2) is that both 'Hesperus' and 'Phosphorus' refer (rigidly, if you will) to the planet Venus. In other words, we cannot know whether (2) is true or not until we are aware that the denoted object is the same—although that is not to say that we need to be aware that it is the same *as itself*. Nevertheless, the statement made by (2) is classified as a necessary truth because of the fact that, once it is established that the two terms refer to *this* object, it cannot be otherwise but identical to itself. But that is another story.

In Kripke's view, once 'Hesperus' and 'Phosphorus' refer to Venus they could not fail to do so and possible cases in which we had baptized two different planets 'Hesperus' and 'Phosphorus' would not be cases in which (2) would be false. Kripke explains (1972, 306):

Someone goes by and he calls two different stars 'Hesperus' and 'Phosphorus'. But are those circumstances in which Hesperus is not Phosphorus or would not have been Phosphorus? It seems to me that they are not.

Now, of course I'm committed to saying that they're not, by saying that such terms as 'Hesperus' and 'Phosphorus', when used as names, are rigid designators. They refer in every possible world to the planet Venus. Therefore, in that possible world too, the planet Venus is the planet Venus and it doesn't matter what any other person has said in this other possible world.

Now we know the reason: (2) is necessary because the terms refer rigidly to Venus and Venus cannot fail to be Venus. Here then the status of the identity sign in (2) seems to be a first-order relator. And (2) affirms that Venus is self-identical. But (2) is not a priori because we do not know, without further investigation, its truth value—although we doubtless know that Venus is identical to Venus. What we do not know is whether the two terms are used to name the same object. What we

discover through this investigation is that 'Hesperus' and 'Phosphorus' are co-referential terms. This information is what the supporters of the metalinguistic view of identity claim that these statements state and, in spite of widespread criticism, this approach does not imply that identity statements convey only linguistic information. We will sometimes need empirical investigation to conclude that two terms have the same reference.

It is possible to offer another interpretation of Kripke's claim that identity statements between rigid designators are necessarily true, if true at all. We could say that accepting rigidity amounts to maintaining that once a rigid designator acquires its reference, it must remain the same in every possible world. In this case, if 'Hesperus' and 'Phosphorus' name Venus rigidly, they will name this planet in every circumstance. The idea that 'Hesperus is Phosphorus' is a posteriori but necessary makes sense therefore. However, what *would* be necessary—or rather analytic—if indeed 'Hesperus' and 'Phosphorus' were rigid designators, would be that their reference did not change from one possible world to another. Once these terms are co-referential they will remain so. But in this interpretation we ought to consider identity as a metalinguistic relation. Anyway this is not Kripke's account as seen in the text from 'Naming and necessity' quoted above. Here he accepts that we could have used the names 'Hesperus' and 'Phosphorus' to denote two stars. In this situation, what could be meant by saying that 'Hesperus' and 'Phosphorus' necessarily denote the same object? The only way his words might make sense would be on the understanding that *once* these terms refer to something, they would do so in every context. Given that Kripke does not believe in possible worlds, all this would mean that we tend to use proper names *de re* in counterfactual statements. This is a far cry from the widespread view that Kripke has revealed novel relationships between traditional categories in epistemology and metaphysics and not at all an arresting philosophical discovery.

Although grammatically proper names are for Kripke *rigid designators*, the case of 'Hesperus' and 'Phosphorus' is slightly different because Kripke himself is open to the idea that these terms could be hidden descriptions, as we shall see. And this exception obscures the status of (2) even more.

The clarity of Kripke's picture is therefore clouded not only by the two different accounts of its terms but also by the two conceptions of identity required in the steps already mentioned. Kripke entwines a concept of proper names as short for descriptions with his picture of them as rigid designators and at the same time he confuses two interpretations of identity statements. One of these is the Fregean view of identity as a metalinguistic relation between two linguistic entities, and the other is Kripke's ontological concepts of identity as something which holds between an object and itself. Although in the literature metalinguistic and ontological—or objectual—views are presented as two possible *interpretations* of a *single* concept of identity, the diversity between them is so great that it is preferable to consider that we are in the presence of two notions. The objectual view requires the identity sign to be (apparently) a two-place first-order relator, as is, for instance, '*... loves ...*'. In this sense, identity is a relation between objects. Salmon, who partially subscribes to Kripke's view, explains the identity relation as follows (1982, 84):

Under our scheme of representing intrinsically relational properties by sequences, the property of *being identical with Phosphorus* is represented by the ordered couple (Phosphorus, the *identity* relation), that it (Venus, identity). In

the terminology of section 1.3, it is the haecceity of the planet Venus, the property of *being this very thing*. The assertion that Venus has this property essentially, or any property entailed by this property, is little more than a boring truism, and can hardly begin to stir the emotions of foes of Aristotelian essentialism.

Salmon investigates the metaphysical weight of the direct reference theory and concludes that from Kripke's position on names and nouns no non-trivial form of essentialism follows. I wish to use this text by Salmon to draw attention to the fact that our identity statement, if interpreted objectively, amounts to the haecceity of Venus and that we could have thought of the identity sign as a one-place first-order predicable. We are using the two-place sign '=' for some other reason, but in order to affirm the haecceity of Venus we could have chosen an easier way than (2). This property does not require the use of a two-place predicate—a one-place one would have done just as well—because self-identity is a property of objects—of every object—and not of ordered (or unordered) couples. In the metalinguistic interpretation, on the contrary, the sign must have two argument places because co-referentiality is a diadic relation between signs. Of course it is reflexive under certain conditions, but not exclusively so. The representing of haecceity through a two-place relator is a luxury, and a very expensive one at that. Expressing co-referentiality this way is an unavoidable necessity.

As I have said, these two interpretations of identity statements give rise to two different *notions* of identity. In order to distinguish neatly between them, I propose to use two signs. I shall call the Fregean notion 'identity₁' or '=₁' and the Kripkean one 'identity₂' or '=₂'. Identity₁, unlike identity₂, is in fact a relation. '=₁' is a two-place predicable whose arguments are terms but '=₂' expresses a property of objects, namely self-identity, so we can always represent it through a one-place predicable as '*... is self-identical*'. Let us suppose that we have an object *o*; Kripke's account holds that an identity statement represents the object *o* as having the property of self-identity. I shall represent it as '*o*=₂'. Thus, after introducing Kripke's account, an identity statement like 'Hesperus is Phosphorus' theoretically admits both interpretations: either 'Hesperus' and 'Phosphorus' are names for the same object (identity₁) or Venus is self-identical (identity₂). The relation expressed by '=₁' is covertly metalinguistic (as Frege realized); and so '*a* =₁ *b*' means that *a* and *b* have the same reference. '=₂' is not metalinguistic but ontological; therefore '*a*=₂' means that *a* is self-identical.

Let us now consider how Kripke's ambiguity on the status of names and his muddling of the identity concepts affect his argument that (2) is a mixed statement.

3. Names as hidden descriptions

In spite of Kripke's criticisms of what he calls 'the Frege-Russell view' on names, he does not reject Frege's position completely and is open to the suggestion that 'Hesperus' and 'Phosphorus' have some meaning capable of being expressed by certain descriptions. (2) will mean in this case something like 'the object we saw in the evening is the object we saw in the morning'. He even recognizes that the meaning of 'Hesperus' is a description⁶ and hints that, when names are better

⁶ Kripke 1972, 301: 'There may be some cases where the description picture is true, where some man really gives a name by going into the privacy of his room and saying that the referent is to be the unique thing with certain identifying properties. "Jack the Ripper" is a possible example that I gave. Another was "Hesperus".'

interpreted as descriptions, identity₂ is not the most adequate approach. In his words (1972, 256–257):

you see a star in the evening and it's called 'Hesperus'. [. . .] We see a star in the morning and call it 'Phosphorus'. [. . .] So we express this by 'Hesperus is Phosphorus'. Here we're certainly not just saying of an object that it's identical with itself. [. . .] A very natural thing is to say that the real content [is that] the star we saw in the evening is the star which we saw in the morning.

And he is right. If the content of (2) is that the star we saw in the evening is the star we saw in the morning, we are not merely claiming the self-identity of Venus. What we *are* claiming is that two descriptions have the same referent, to take a Fregean perspective, or what I think is better, an object satisfies the two properties of '*... being the star we saw in the morning*' and '*... being the star we saw in the evening*'. Venus does not in fact satisfy any of these properties given that it is not a star at all but this is irrelevant for the content of our statement. We can follow Wittgenstein by eliminating the identity sign and express the identity of object by the identity of sign. The logical form of (2) will be then $(\exists x) (Fx \ \& \ Gx)$.

For identity statements—from a grammatical point of view—with at least one description, the Wittgensteinian conception suffices in extensional contexts. Obviously, accepting Wittgenstein's solution does not mean that we adopt a metalinguistic approach, or an objectual view of *identity*, because there is no identity predicable or relator to be given a logical status. If there is anything at all, identity is shown by the quantifier and the variables, and the existential quantifier with its binded variables is not a predicable of objects, but of concepts. The thesis that identity is not a first-level predicable but a second-level one has been recently defended in Williams 1989. He agrees with Wittgenstein in that identity is not a relation between objects and that we do not need an identity sign to express anything we wish to express in extensional contexts. Williams's disagreement with Wittgenstein occurs in contexts induced by intensional operators where we will need a new operator with the status of quantifier to explain out the difference between

(2A): Kripke thinks that Venus is the morning star and that Venus is the evening star

and

(2A*): Kripke thinks that Venus is the morning star and is the evening star.

From (2A*), but not from (2A), follows

(2A'): Kripke thinks that Venus is the morning star and that it, the same thing, is the evening star,

if we interpret the epistemical operator transparently or *de re*.

The difference between (2A) and (2A*) lies in that the proposition after the epistemical operator in the former is the result of attaching two arguments—in this case two instances of the same name—to the two-placed conjunctive predicable '*... is the morning star and - - - is the evening star*'. The proposition after the epistemical operator in (2A*), on the other hand, is constructed by forming a one-place predicable '*... is the morning star and is the evening star*' out of the two-place conjunctive one by means of a new operator (Williams's identity

operator) and then attaching to it a unique argument. The structure of (2A*) is more complex, therefore, than that of (2A) and the two propositions after 'Kripke thinks that' are not identical although materially equivalent.

If 'Hesperus' and 'Phosphorus' were short for descriptions and the content of (2) were not then the haecceity of Venus, the epistemological status of (2) would be a posteriori, but its metaphysical status would not be in any way necessary. Venus probably possesses self-identity necessarily but neither 'being the star we saw in the morning' nor 'being the star we saw in the evening' are essential properties of the planet Venus. Leaving aside the fact that Venus is not a star, 'being the heavenly body we saw in such and such a time of day' is not required for Venus to be Venus. Under the hypothesis that these two names are not used here as rigid designators, neither (2) is a necessary truth nor would this follow from Kripke's view. But even if they were and (2) meant that the star we saw in the morning was the star we saw in the evening, as Kripke says, the two mentioned properties would not be necessary properties of the planet Venus. If they were, the theory of direct reference would have some kind of non-trivial essentialism as a consequence, contrary to Salmon's conclusion.

It is also puzzling that Kripke's proposed examples of identity statements between rigid designators use terms with a very natural interpretation as short for descriptions, even for Kripke himself. It is very revealing that the other example of identity statement between proper names which he introduces is 'Cicero is Tully' (posing exactly the same problem) and that he does not use expressions such as 'Nixon' or 'this table' which are better candidates for rigid designators. But let us go on and check what the situation would be with a real identity statement between rigid designators.

4. Names as rigid designators

Let us suppose, then, that 'Hesperus' and 'Phosphorus' are logically proper names, i.e. 'rigid designators' in Kripke's terminology, and let us interpret identity as Kripke sees it, as a relation not between names but between an object and itself. Thus if (2) is true, the fact it expresses is an instance of the principle of identity. But if this is the correct view on identity and the content of an identity statement is that an object is self-identical, how could an identity statement say anything false? Of course, one could answer that (2) would have been false if Hesperus and Phosphorus were different objects. But let us consider the situation with a statement of a different kind: 'Kripke is fond of dogs' would be true if Kripke were fond of dogs and false if Kripke were not fond of dogs. What then is the reason for the following discrepancy: that (2), which says that Venus is self-identical, is true when Venus *is* self-identical, but if it were false, it would be so not because of the non-self-identity of Venus, but because of the non-co-referentiality of the two terms? In other words, a statement of the form 'Pa' is true if *a* is a P and false if *a* is not a P. But a statement like 'a=b' is true because the object *o* is self-identical and false if the names 'a' and 'b' refer to different objects. The metalinguistic interpretation easily accommodates the falsity of an identity statement: 'a=b' would be true if 'a' and 'b' were co-referential terms and false if they were not. But what about the objectual interpretation? It would seem that the advocates of the objectual view were using the objectual view to explain true identity statements and the metalinguistic view to explain false ones. Naturally, an objectualist could answer that the fact which renders an identity statement false is that two *objects* are not the same *object* and that

there is nothing metalinguistic about it. But that two objects are different does not contradict that one object is identical to itself. The negation of the statement that Venus is identical with itself is that Venus is not identical with itself but this does not ever occur. An identity statement, therefore, if it states that something is identical to itself, cannot be false. The content of 'Kripke is fond of dogs' divides possible worlds into two classes, one in which it is true and one in which it is false and a possible world in which Kripke is and is not fond of dogs cannot exist. But every possible world is one in which every object is identical to itself and every two objects are distinct from each other. On the other hand, there is no possible world in which an object is not identical to itself. And we know all this a priori. So there must be something wrong in Kripke's picture of (2) and in every account which, like Kripke's, considers identity as a relation between objects.⁷

5. The status of statement (2)

The conclusion I wish to draw from the present section is that to say that (2) is an epistemologically a posteriori statement but metaphysically necessary is to confuse several incompatible accounts of identity. One of them is taking identity as a property of objects. From this view it follows that identity statements are necessary but given that in an objectual context identity statements would affirm the *haecceity* of objects, they are also a priori. The fact that we do not know a priori a good deal of identity statements supports the idea that here we do not state *haecceity*. If we do not embrace the objectual view, two options are open to us: identity is not a relation between objects because it is a relation between names—Frege's two alternatives—or because it is not a relation at all but a second-level operator that forms *n*-place predicables out of *m*-place predicables, $n < m$. This last is Williams's position. With both, the metalinguistic and the second-level views, many identity statements are a posteriori but not necessary except possibly in the innocuous sense that we may say that proper names must be interpreted *de re* in counterfactual statements.

The objectual conception is a philosopher's mirage. With identity statements when properly used in their ordinary sense we either state that there are two names for the same object or that a unique object has two properties. There is no need, however, to choose between the metalinguistic and the second-level views for each one has its own use: the metalinguistic view between proper names and Williams's concept in statements with at least one description.

But it is not just Kripke who tangles the two conceptions; this confusion is unfortunately quite widespread. Once we realize that what we usually take as *the* identity relation is in fact two different notions, a metalinguistic relation and an ontological property, we can reject the familiar argument in favour of the necessity of all identity statements which Kripke defends in 'Identity and Necessity' (Kripke 1971, 136). The traditional argument runs as follows:

- (i) $(x)(y) [(x = y) \supset (Fx \supset Fy)]$
- (ii) $(x) \Box (x = x)$
- (iii) $(x)(y) (x = y) \supset [\Box(x = x) \supset \Box(x = y)]$
- (iv) $(x)(y) [(x = y) \supset \Box(x = y)]$

⁷ It is very common to interpret Frege's view in 'on sense and reference' as objectual. Some scholars think that Frege changed his view on identity from *Begriffsschrift* to 'On sense and reference', but this evolution is not obvious (see, for instance, Dejnozka 1981). This is not the place to go into it, however.

Step (i) is usually called 'Leibniz's Law', the indiscernibility of identicals; step (ii) is the thesis that every object is self-identical; step (iii) is the result of changing all instances of 'F₋' in (i) for '(x=_)'; and (iv) follows from (ii) and (iii). The conclusion normally drawn is that every true identity statement is necessarily true; and philosophers who feel uncomfortable with this idea sometimes blame intensional notions, as does Quine. But we have no need to do this. If we want this argument to remain valid, we obviously cannot interpret identity as a metalinguistic relation. This argument does not work for what I have called 'identity₁' and this is true not only for the incoherence of mixing objectual quantifiers with quoted expressions. The argument is valid for identity₂ although it is hardly startling, as it merely states that every object is necessarily self-identical. In this interpretation, Ruth Barcan Marcus 1947 and Kripke 1972 are right: if identity is a relation between objects—the relation every object has to itself and to nothing else—then every true identity statement is necessary as it claims an object's self-identity.

Nevertheless, philosophers are justified in feeling ill at ease with this argument for it seems to establish that every identity statement such as 'Hesperus is Phosphorus', 'Cicero is Tully' or 'the Everest is the Gaurisanker' states a necessary truth and this conclusion is not so palatable as that which states that every object is self-identical. Given that nobody would reject that every thing is identical to itself (although many would in fact reject that the three sentences quoted above make necessary statements), it must be because people think that what is claimed in them is more than mere self-identity. Identity as a first-level relation between objects is nothing but self-identity and then one feels uneasy with R. Barcan's argument (see Marcus 1947) cited above because it is based on identity as a two-place first-level predicable while nobody actually interprets identity statements using an objectual view. This is very reasonable because identity is *not* a first-level relation between objects. This does not mean, though, that Barcan's argument is formally invalid. Her argument shows how the relation represented by '=' behaves in the calculus and this relation is defined by the formal rules that govern it. If this relation has anything to do with what is stated in our so-called identity statements in English or in Spanish is another story. Nor does all this mean that we could not have introduced 'identical' in our natural languages as an adjective like 'bald' or as a transitive verb like '... hates ...'. What I mean is that we do not affirm self-identity out of philosophy books and that we seldom use identity statements between logically proper names. When we are in the presence of an identity statement between purely referential expressions the most reasonable interpretation is the metalinguistic one and the statement is usually a definition.

6. Definitions which fix the reference of a rigid term

Example (3) is a definition which fixes the reference of a rigid designator through an (allegedly) non-rigid phrase. Sentence (3) was, 'a meter is the length of S at t'. Let us see what Kripke thinks the meaning of (3) is. (3) is a definition of the term 'a meter', and is one which fixes the reference of the term. According to Kripke, 'a meter' designates rigidly and points to a certain abstract object; but 'the length of S at t' is not rigid. As he says, 'In some counterfactual situations the stick might have been longer and in some shorter if various stresses and strains had been applied to it'. (Kripke 1972, 275).

In Donnellan's terminology, this quotation seems to mean that the description is being used attributively (see Donnellan 1972). But as (3) is in some sense a definition (not giving the meaning but fixing the reference), we know a priori that it is true. In Kripke's words (1972, 275),

What is the *epistemological* status of the statement 'Stick S is a meter long at t', 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 used stick S to fix the reference of the term 'one meter', then as a result of this kind of 'definition' [. . .], he knows automatically, without further investigation, that S is one meter long.

The conclusion he draws is that (3) is a contingent truth knowable a priori. The argument seems to be as follows:

(3a): 'The length of S at t is a meter' is a contingent truth,

because

(3b): if various stresses and strains had been applied to it, stick S might have had a different length. That is, there are some possible worlds in which 'Stick S is a meter long' is false. So, (3) is contingent.

And

(3c): (3) is not an analytic statement—if it were, it would be necessary⁸—, because 'the length of S at t' does not give the meaning of 'a meter'.

Nevertheless,

(3d): as (3) is, in some sense, a definition, we do not need empirical investigation to know that (3) is true. We know it a priori.

According to this, a definition is not always an example of analyticity. Kripke's use of these notions is in this example as follows: a definition is an analytic statement only if the expressions on both sides of the identity relation are synonymous. But we can only speak of synonymy when there are meanings as intensional entities and this does not occur in Kripke's account which is a purely extensional one. Every analytic truth is necessary, but not so every definition and certainly not one which fixes the reference, because in order to fix it we do not use a necessary property of the object. But a definition is always known a priori.⁹

Thus Kripke relates *a priori* to stipulation through some kind of definition in the sense that every definitional statement is knowable a priori. Since he distinguishes between *definitions which give the meaning* and *definitions which fix the reference* we know a priori statements which express identity of meaning between two phrases as well as statements which express identity of reference between two designators (a rigid one and a description which fixes the reference of the term). But in the latter

8 Kripke 1972, 264: 'At any rate, let's just make it a matter of stipulation that an analytic statement is in some sense true by virtue of its meaning and true in all possible worlds by virtue of its meaning. Then something which is analytically true will be both necessary and a priori'.

9 In 1972, 352, footnote 63, Kripke says: 'I am presupposing that an analytic truth is one which depends on meanings in the strict sense and therefore is necessary as well as a priori. If statements whose a priori truth is known via the fixing of a reference are counted as analytic, then some analytic truths are contingent; this possibility is excluded in the notion of analyticity adopted here'.

case we only know it a priori if the statement is a 'definition'. In 'Naming and Necessity' we read (1972, 279):

The case of fixing the reference of 'one meter' is a very clear example in which someone, just because he fixed the reference in this way, can in some sense know a priori that the length of this stick is a meter . . .

But the notion of analyticity is related only to definitions which give meaning, so we may have a definition-statement known a priori though not analytic. Furthermore, for Kripke every analytic statement expresses a necessary truth—but not the other way round—and can be known a priori. Note that the question of whether an identity statement is a definition is for most of the time not a semantic question but a pragmatic one.

One can use (3) as a definition, and as the last quotation makes clear, we know something a priori because we have fixed the reference in this way. We are faced with an account of a priority which is not only pragmatic, but also subject-relative. With Kripke's use of 'a priori' we never know, when looking at a statement, if it is a priori or not: it depends on context.

So, in Kripke's argument for the mixed status of (3) he has introduced an account of a priority which is more restricted than the Kantian or Fregean senses. Traditionally, we know something a priori if we know it is true through analysis of the concepts involved, without appealing to experience. I shall call this traditional view 'a priority₁'. Kripke accepts this sense but introduces another viewpoint: something is known a priori for the speaker if she stipulates it is true. And specifically, an identity statement between two referential terms is a priori for the speaker if she stipulates that the reference of one of the terms is to be the object referred to by the other. Let us call this sense 'a priority₂'. The two senses are different; a statement could be a priority₂ without being a priority₁. 'Aristotle is Alexander's teacher' is, in itself, neither knowable a priori₁ nor a priority₂. However it may be knowable a priority₂ for the speaker if she fixes the reference of 'Aristotle' in this way.¹⁰ But it is difficult to say that this statement in itself is knowable a priori₁. We will need to discern between the two senses of 'a priori' to understand the use of descriptions in the argument above.

And now let us go back to Kripke's argument for the mixed status of (3). Are we right in supposing that the description is used in this argument only attributively, as Kripke suggests?¹¹ I think not. The appropriate reading of the description changes from one step to another. It must be attributive in (3a) and (3b) but not in (3c) and (3d). Step (3d) is especially interesting; what Kripke maintains here is that (3) is a priority₂: 'the length of S at t' does not give us the meaning of 'a meter'. If it did, (3) would be analytic and hence a priority₁. The description is used simply to fix the reference. But if this is true, we are not saying in (3), 'Whatever the length of S might be we will call it "a meter"'—we are not using the description attributively at all. We

10 Kripke 1972, 279: 'A man might know it a priori in some sense, if he in fact fixes the reference of "Aristotle" as the man who did one of these things'.

11 Kripke affirms that he always interprets descriptions attributively. We can read in 1972, 254: 'I'm just going to use the term "referent of the description" to mean the object uniquely satisfying the conditions in the definite descriptions'. And in p. 343, footnote 3: 'Call the referent of a name or description in my sense the "semantic referent"; for a name, this is the thing named, for a description of the thing uniquely satisfying the description'.

are using it referentially, to point out an object we can already identify,¹² inasmuch as afterwards we may realize that we had failed in our definitional act. For let us imagine we want to make our metric system more practical. 'A meter' used to be a function of the earth's circumference. If we now need something more manageable we could say, 'Well, let's make a bar of a very stable alloy of this length' (this function of earth's circumference), 'and we'll have a far handier unit of measurement. From now on, "a meter" will be the length of this bar'. But should we by any chance make a miscalculation, this would not imply that necessarily we had to accept that 'a meter' had changed its reference and that it is now this new length. Rather we could say, 'This was not a definitional act, let's try again'. In other words, our act would have misfired. And 'a meter is the length of this bar' would be false. For this reason, (3) would not be knowable a priori₁.

As far as (3) is concerned, the description has sometimes been interpreted as attributive and sometimes as referential. And this ambiguity is in part responsible for (3) seeming to be a mixed statement. For if the description is attributive, 'the length of S at t is a meter' can convey information of both a linguistic and a factual nature. In the first case, we are using it as a definition which gives the meaning, as in, 'whatever the length of S at t we will use "a meter" as short for "the length of S at t"'. In this situation, (3) is obviously a priority₁—we do not need empirical information to know its truth value. And it is also analytic; in Kripke's sense, therefore, it is true by virtue of its meaning, and hence necessary. The second alternative occurs when we use (3) to convey information about the world. We describe the fact that this particular stick has this particular length at this particular moment, but we know it could have had a different length if external conditions were otherwise, so (3) is a contingent truth. Furthermore, the only way we have of knowing the truth value of (3) is by somehow measuring stick S, i.e., a posteriori. So (3) expresses a contingent truth knowable a posteriori. Of course, we cannot divine by merely looking at it whether (3)—with the description interpreted attributively—is a definition (and hence a priori) or a factual statement. It depends on the different speech acts one carried out.

Now let us suppose that the description is referential. This interpretation also has support in Kripke's work.¹³ If we use the description merely to fix the reference, the property expressed by it does not need to hold (or to hold uniquely) the denoted object, as it would need to if the description were attributive. Hence (3) will be an identity statement between referential expressions as in (2)¹⁴ and so they share the ambiguity of the two different notions of identity. Or else it will be a non-analytic definition, fixing the reference. In this case it is a priority₂ but not a priority₁ if, as Kripke's accepts, it is an accidental property of stick S to have this length. So in the

12 Kripke 1972, 274: 'He uses it to fix a reference. 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'.

13 Kripke 1972, 276: 'If, on the other hand, we merely use the description to fix the referent then that man will be the referent of "Aristotle" in all possible worlds. The only use of the description will have been to pick out to which man we mean to refer. But then when we say counterfactually "suppose Aristotle had never gone into philosophy at all" [...] [we] need only mean, "suppose that man had never gone into the philosophy at all"'. Notice that in this case the description is a rigid designator, as rigid as that man'.

14 Kripke himself seems to accept this interpretation. In 1972, 346, footnote 22 he says: 'If the ambiguity does not exist, then in the supposed rigid sense of "the length of S", "one meter" and "the length of S" designate the same thing in all possible worlds and have the same (functional) sense'.

most favourable case, we have a contingent statement knowable a priori₂; or rather, utterance, because a priority₂ is strongly dependent on context.

If we now consider the argument above, we will see that (3a) and (3b) can only be true if (3) is a descriptive sentence and the description attributive, or if the description is referential and (3) is a definition—in this case 'contingent' would have the sense of 'non-analytic'. (3c) is true only if either the description is attributive and the statement factual or the description is referential; and (3d) is only true if (3) is seen as a definition, with the description referential or attributive. Anyway, we have an argument here only if the description is referential. And then its conclusion would be that (3) is a contingent, non-analytic statement some of whose tokens could be known a priori₂ by some speakers, provided they have introduced the term in their particular idiolects, with the rigid references denoted by the description. Nothing very earth-shattering about that.

Casullo 1987 has already pointed out that Donnellan's distinction between the referential and the attributive uses of descriptions is responsible for the illusion of (3) as a mixed statement. There remain other ambiguities in Kripke's argument and we cannot discount the influence of the pragmatic component.¹⁵ Kripke not only shifts between an attributive and a referential use of the description, but he also uses 'a priori' as 'known to be true by stipulation', in the sense that if one fixes the reference of a term using the reference of a description, i.e., engages in some sort of baptismal act, one knows *without further investigation* that both expressions have the same reference. Having done this, one knows the truth value of (3) a priori₂. What is more, it would seem that, in this argument 'necessary' sometimes means 'true in every possible world', but 'contingent' means 'non-analytic'. 'Necessary' as opposed to 'contingent' in this sense, would mean 'true by virtue of the meaning'. Notice that if some terms, such as proper names, do not have meaning, an identity statement between them cannot *a fortiori* be analytic.

7. Conclusion

None of the examples discussed above, or any of the others offered so far by Kripke and Putnam, are mixed statements. In every argument there are ambiguities and equivocations, and the statements' supposedly mixed status is nothing but a chimera, the result of a sort of *Gestalt* switch between familiar and unfamiliar interpretations. As we have seen, two incompatible senses of identity have been used with two conceptions of proper names. Furthermore, the notions of 'necessary' and 'a priori' emerge with more than one sense. Kripke's claim therefore that (1) is a necessary truth but (3) is not, should not be interpreted as the affirmation that the modal status of the latter contrasts with that of the former; in the first example he is dealing with necessity* and in the second with necessity in its traditional concept—and the same may be said about their epistemological characterizations. What we have is simply that (1): 'water is H₂O' is necessary* and a posteriori, and that (2) 'Hesperus is Phosphorus' is either 'Hesperus =₁ Phosphorus' and contingent a posteriori or 'this object is self-identical' and therefore necessary a priori₁. Finally that 'a meter is the length of S at t' is, with the referential reading of the description,

¹⁵ As I said, (3) with the description used attributively can still have two different statuses depending on context and the same can be said for the referential use of it. But the pragmatic component is not only present after that the two uses of descriptions have been distinguished: the very distinction has not semantic value. It belongs to pragmatics (Bertolet 1980).

either, like (2), an identity statement and so either contingent a posteriori or necessary a priori, or a definition which fixes a reference and so contingent a priori₂, if the description is attributive, then (3) is either a descriptive sentence contingent a posteriori or an analytic definition necessary a priori₁. There is no threat here to old views on the relationships between semantic, modal and epistemological notions. There is, at best, a diluted sense of 'a priori' in which we might accept mixed statements: when (3) is contingent and a priori₂. Much ado about hardly anything.

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