

## There Is No Metaphysical a Posteriori Necessity

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*Abstract:*

In my paper I argue for the claim that even though Kripke is right that the classical two way connection between necessity and apriority does not exist, the *a priori* remains the only way how we know what is metaphysically necessary.

*Key words:*

*a priori, a posteriori, identity, Kripke, necessity.*

Water is H<sub>2</sub>O. Is it simply so? Or *must* it be so? Kripke believes the second: If true at all, it *must* be that water is H<sub>2</sub>O. What, however, are his reasons why it *must* be so? Roughly, they are as follows: If two things are identical to each other, then they are necessarily so. The necessity of identity can be proved from the necessity of self-identity and the Leibniz's Law. In his paper Kripke makes use of the well-known Barcan's proof [8, p. 72]:

- (1)  $\forall x \forall y (x = y \supset Fx \supset Fy)$
- (2)  $\forall x \Box (x = x)$
- (3)  $\forall x \forall y (x = y \supset (\Box (x = x) \supset \Box (x = y)))$
- (4)  $\forall x \forall y ((x = y) \supset \Box (x = y)).$

However, Kripke's final targets are two claims that enjoy wide acceptance by contemporary philosophers:

There are no contingent identities

and

At least some necessities are known *a posteriori*.

To reach these conclusions Kripke arranged two great conceptual divorces: He separated necessity from apriority and from analyticity [6, p. 4]. On his view, necessity is one thing and knowledge of it is quite another. Necessity does not depend on whether and/or how it is known. Further, for some expressions it is true, that what an expression refers to does not depend on which sense that expression has. Such expressions Kripke call 'rigid designators'. They refer not through their senses but by picking out their referents directly in all possible worlds in which the later exist. In my paper In that what follows I argue for the these that at least one of the Kripke's divorces was unhappy and in order to talk sensibly about metaphysical necessity we need to restore its linkage with apriority, even if it must be looser than it was once thought by Leibniz or Kant.

### 1. Kripkean Account of a Posteriori Necessity

Kripkean view on necessity in general is broadly 'Leibnizian'. Following Leibniz and Karnap, he defines necessity of a statement as its truth in all possible worlds. He accepts that there are at least weak *de re* necessities which are known *a posteriori*. One of the most clear examples of such *a posteriori* known *de re* necessities are statements like

(1) Water is H<sub>2</sub>O

or

(2) Phosphorus is Hesperus.

He claims that if the linguistic expressions on both sides of an identity sign are rigid designators then the identity statement asserts not only simple contingent identity, but also *de re* necessity. Since the rigid designators pick out the same referents in all possible in which they have them. So, if the asserted identity is true at all, it is true in all worlds in which the rigid designators on both sides of the identity sign have referents.

In his famous paper 'Identity and Necessity' (1971) Kripke argues for the claim that since every true identity statement is necessary, so every identity discovered in the course of an empirical investigation is necessary too. Thus, according Kripke, there are no true identity statements that are contingent. Therefore, his point is that an identity statement, if true at all, always is necessarily true, no matter how we come into knowledge of it. The necessity is thus free from way of its knowing.

In a very oversimplified manner we can state his argument as follows:

1. All true identities are necessities;
2. Some true identities are discovered *a posteriori*;
3. Therefore, some necessities are discovered *a posteriori*.

In defense of the first premise Kripke says that once we accept that it is necessary that each thing is identical to itself, then we must conclude that if two things are identical to each other, then they are necessarily so. Thus, according to Kripke, in discovering such truths like (1) or (2) we discover not only some contingent facts but metaphysical necessities also.

This assertion goes, however, against our strong intuition that the world could be other way it in fact is. We could imagine that Phosphorus and Hesperus are distinct and water is not H<sub>2</sub>O. But if Kripke is right then our intuition goes somewhere wrong. What is the source of the mistake, however? Kripke's answer says, that we are mistaken because we fail to distinguish between metaphysical and epistemological possibility. The first is the way how the world in itself could be or could not be, while the second is the way how we could or could not think of it in the light of our other beliefs. Thus, we are able to imagine things that are not possible in the reality. And the non-identity of Phosphorus and Hesperus or water and H<sub>2</sub>O are exactly such things. We due these possibility intuitions alone to deficiency of our beliefs about the subject matter. But once the relevant facts are established we must repair our intuitions on the subject matter.

## 2. Philosophical problems of *a posteriori* necessity

Michael Dummett writes:

The philosophical problem of necessity is twofold: what is its source, and how do we recognize it? [1, p. 327]

Bob Hale and Aviv Hoffman give the following comment upon Dummett's phrase:

His first question plainly presupposes that there is such a thing as necessity; and his second equally plainly presupposes that it is a possible object of knowledge. [6, p. 3]

I agree with them that these presuppositions must be made in order to capture both Dummett's questions. Further, we can suppose that the existence of such a thing as necessity consists in the existence of some modal features which make necessary items distinct from those that are non-modal at all.

Let us consider some examples. First, it may be true *simpliciter*, that

(3) I am sitting.

The statement supposes to express a simple, i.d. non-modal truth. It does say nothing about what is the relation of my present position towards ways it could be. It does say nothing about whether I could be in a non-sitting position instead of being in the sitting one or I could be not and the sitting is the unique position which is available for me. If there is some feature in virtue of which my actual position bears a definite relation towards either contingency or necessity, then it must be true either that

(4) I am sitting *possibilter*

or

(5) I am sitting *necessiter*.

I will call a feature which possession explains how a modal statement can acquire its truth value *source of modality*. If the feature explains the truth of a necessary statement, then I will call it *source of necessity*. If the feature explains the truth of a contingent statement I call it *source of contingency*.<sup>1</sup> The question I try to answer later is thus what is the source of necessity in the case of necessary identity statements *de re*. What features, if any, should be added to those that are already there to provide truthmakers for simple statements in order to convert these simple non-modal truths into necessary ones.

If necessity poses a possible object of knowledge how then we reach it? More precisely, how we acquire knowledge of the features which turn a simple non-modal truth into necessary one? I suppose that truth of some simple non-modal statements can be known *a priori* whereas truth of other simple non-modal statements is known *a posteriori*. Examples of later are (1), (2), (3). Examples of the former are

(6) I sit if I am sitting;

(7) Water is water;

(8) Phosphorus is Phosphorus.

All statements known *a priori* seem to be easily convertible into necessary ones even if not in the same way. (6) is necessary but its necessity don't go behind the boundaries of the language. It is only *de dicto*. I am not such that I couldn't stay when I am sitting. The statements (7) and (8) may be necessary not only *de dicto* but *de re* as well. It seems very plausible that water is such that it couldn't be something else than water<sup>2</sup>. And the same is true of Phosphorus. In that what follows I am interested only in *de re* necessity which involves identity assertions. That is, my question is what is the source of necessity of true necessary *de re* identities.

Consider (7). What is it that permits us to convert it into a necessary statement? The simplest answers might seem to be its *analycity*. (7) is necessary because it is analytical. The problem with that answer is that it is hard to see how analycity, may it be what it will<sup>3</sup>, is able to explain more than only a *de dicto* necessity. Because analycity of (7) amounts to synonymy of the senses of two alike expressions on both sides of the copula: whatever water is it is that what it is. Analycity is a linguistic or semantic feature of statements, not metaphysical one. It characterizes relationships of senses of linguistic expressions. [7, p. 17, 40 ff] And thus analycity is not able to account for *de re* necessity which is a metaphysical feature of things, rather than linguistic one. Therefore, we may conclude, that the analycital *a priori* as such cannot be source of metaphysical necessity. At this point, my conclusion stays in no contradiction to Kripke's one. He also holds that neither apriority nor analycity are reliable routes to metaphysical *de re* necessity.

As next we can state the hypothesis that sources of metaphysical *de re* necessity are essences of things. In the contemporary philosophy this idea is widespread enough. Kit Fine expresses the thought as follows:

... any essentialist attribution will give rise to a necessary truth; if certain objects are essentially related then it is necessarily true that the objects are so related (or necessarily true given that the objects exist). However, the resulting necessary truth is not necessary simpliciter. For it is true in virtue of the identity of the objects in question; the necessity has its source in those objects which are the subject of the underlying essentialist claim.[4, p. 7]

Consider again (1). According to the hypothesis stated above, if (1) does capture the essence of water we could see it as the source of metaphysical *de re* necessity for:

(9) Water is metaphysically necessarily such that it is H<sub>2</sub>O.

Granted that we know (1) *a posteriori*, how then we are certain that (1) is about water's essence and not about something else?

For consider also the following statement about water:

(10) Water is a liquid.

Does it express an essential truth about that stuff?

We might observe how under different conditions an aggregate of H<sub>2</sub>O molecules which is big enough equally takes form either of a solid, or of a liquid, or of a fluid. At the same time it seems impossible for a liquid neither to be a solid nor a gas, if *being a liquid* is an essential feature of the liquid in question. Naturally, we could say that *being a liquid* is not a part of water's essence, but is only one of its modes. On the other hand, *being a liquid* seems to be a part of water's definition and thus constitute a part of that what is it to be water, at least if we are guided by Kit Fine's idea that essence of a thing and its definition are at bottom the same. [4, p. 11]

Once confronted with a case as mentioned above we might ask the following question: what in our observation of water's behavior allows or interdicts us to include or exclude the property of *being a liquid* from water's essence? Granted *being H<sub>2</sub>O* is a part of water's essence and granted this is a fact which was established *a posteriori*, we might doubt that water has the property of *being a liquid* and that of *being H<sub>2</sub>O* both essentially. Thus, we have to decide which of the two is essential one and which not. I don't see how the decision could be made *a posteriori* alone. Moreover, even if we could say that water's *being H<sub>2</sub>O* is grounded on a better observation which reveals the essence of that stuff somewhat deeper than water's *being a liquid* which is nothing more than a superficial sight upon that what water really is, we will have then to answer the following question: How the expression 'Water is H<sub>2</sub>O' does exactly mean?

Even at first look we have here many options. First, it might mean that a water molecule is identical to H<sub>2</sub>O. Second, that a water molecule is composed of two hydrogen atoms and one oxygen atom. In either case we read the expression as if it were about a chemical thing – a certain molecule, but on the first reading, it asserts something about its identity, whereas, on the second, it asserts something about its composition. We may, however, conceive the same expression as if it were not about water molecule at all. For example, it could mean the stuff in my glass which I use to drink each morning. In that case it would, perhaps, asserts of it that it is composed mostly of water molecules. Or something like this. Either way, in every case the underlying empirical observation would be the same. And we should consider the question like whether many things do compose one unique thing when they come in the vicinity of each other? Or, is composition essential to that what it is composition of? Is actual identity of a thing essential to that thing? Are composition and identity the same relation? None of the questions seems to be answerable *a posteriori*. If there is any way to answer them, it is plainly *a priori*.

### 3. Necessity and the A Priori

In my view there are some things we should ask about Kripke's putative examples of *a posteriori* metaphysical necessity. Many writers pointed to the circumstance that Kripkean proof of metaphysical necessity of empirically discovered identities is not possible without such principle like necessity of identity or Leibniz' Law, which are clearly *a priori*. [9, p. 742, 4, p. 11, 5, p. 147–164] Thus, this proof gains its strength from purely *a priori* statements. On the other hand, almost nobody of the contemporary philosophers doubt that Kripkean examples are examples of genuine metaphysical necessity. If so, one could defend the following thesis:

Some metaphysical necessities hold partly in virtue of their *a posteriori* contents.

Even if we could not reach any metaphysically truth directly through empirical investigation, we could gain some important parts of it this way. The claim is not so innocent as it might appear to the first sight.

Consider mind-body problem. Suppose, we have empirical evidence that this mental state *S* is identical to that physical state *S'*. Does it amount to a metaphysical necessity that *S* = *S'*? If yes, then having enough analogous evidences we could by induction infer that all mental states of the type to which *S* belongs are identical to the type of physical states to which *S'* belongs. And that all this is a metaphysical necessity. Following this way further we may step by step reach the conclusion that all, or at least all known to us, mental states are identical to physical states and this conclusion will hold with the strength of metaphysical necessity. Thus, it would be allowed to solve the mind-body problem empirically. Many philosophers are very close to believing in such an option. Hence, the existence of metaphysical necessities *a posteriori* is welcome to them.

Unfortunately, this option is unavailable to us, if we look at the problem of source of metaphysical necessity more carefully. I see at least two considerable embarrassments which impede us to reach metaphysically necessary truths by means of an empirical investigation. First problem is why should we think that a necessary truth which has an *a posteriori* content as its part does express metaphysical necessity rather than natural one. Second problem is, why should we think that the necessity of a necessary truth which has an *a posteriori* content holds in virtue of its *a posteriori* content rather than in virtue of something else?

Consider the first problem. Suppose that there is a natural order in our world. We might think it as a set of laws which govern over all and only concrete particulars existing in that world. Call things which are governed by such laws natural things. It is plausible that water is one of the natural things. All what is naturally possible in our world is determined by the laws of that world. It does not mean that there is only one way in which our world could be. Because there could be many non-identical sets of natural things that exist in it as well as the laws themselves could be indeterministic. Thus, there is a sensible non-trivial notion of natural necessity for our world. We could say that something is naturally necessary in our world iff it is *in virtue of* laws of our world that it is *not possible* that it is not the case in our world. Natural necessity could be thought either as necessity *sui generis* à la Kit Fine or as appropriate restriction or relativisation of metaphysical necessity. [3] In each case the natural necessity could be different from the metaphysical necessity at least intensionally. Only then the naturalistic claim that natural necessity coincides with metaphysical necessity would be a non-trivial one. Suppose further that the natural things in our world have natural essences. We could say that something is a natural essence of a thing iff its possession by that thing is due entirely to natural laws. In somewhat other way we could determine the natural essence of a thing as a set of properties which that thing has in virtue of natural laws. This whole set of such properties constitutes natural identity of a thing. Natural essences could be different from metaphysical ones. For example, water as natural thing could have the property of *being identical to H<sub>2</sub>O* as a part of its natural essence. Water *as such* could have a property of *being a substance* as a part of its metaphysical essence. Then a philosophically interesting question about the relationship between metaphysical essence of a thing and its natural essence arises whether they coincide or not.

Take the water example again. We grant that it is necessary, that water is H<sub>2</sub>O. Which kind of necessity, however, does the phrase express? According to one reading, it could mean something like

(11) It is necessary, that under certain conditions two atoms of hydrogen and one atom of oxygen compose one water molecule.

According to another reading, it could mean something like

(12) It is necessary, that water is such that it is composed of two atoms of hydrogen and one atom of oxygen.

I think, it is clear that the expression 'it is necessary that' in (11) means natural necessity, whereas in (12) it means metaphysical necessity. In my view, the first reading is preferable in that case of water. But even if (12) is the right one, it seems to hold in virtue of some *a priori* principles like

Composition of a thing is essential to it

and

Essence entails metaphysical necessity.

I believe, from all that we must come to the conclusion that even if natural and metaphysical necessities coincide, the argument for that coincidence must be *a priori*.

Let us turn to the second problem I indicated above. Does the necessity of a necessary statement that has an *a posteriori* content as part hold in virtue of that *a posteriori* content?

Look at the water case again. Let us now understand 'is' as 'identity' rather than as 'composition'. It seems that the best candidates for being source of metaphysical necessity are essences of things which are the parts of the non-modal proposition that has to be converted into the corresponding necessary one. In our water case there three essences which could be the source of necessity: essence of water, essence of identity relation and essence of H<sub>2</sub>O. The further question is

what feature of a thing could count as its essence? Following Kit Fine, we could suppose that essences of things are their identities or, may be, haecceities. It seems, however, that there is no empirical way to decide whether a feature of a thing belong to the essence of that thing. Moreover, in the water case it is the essence of the identity relation seems to be the all best candidate for being source of necessity, because it has the property of holding necessarily, if it holds at all. Perhaps, necessity of identity is not indisputable. But anyway, it is an *a priori* affair to decide whether the identity relation is necessary or not. The question could not be answered in a empirical way. The same goes for haecceity of water or H<sub>2</sub>O. We could not say on the basis of any empirical investigation of these things whether a certain feature of them is their haecceity. Consequently, the essence of whatever part of the proposition ‘Water is H<sub>2</sub>O’ may be the source of its necessity, it is always an *a priori* inquiry which helps us find an appropriate answer to the question.

#### 4. Conclusion

Which moral then have we to draw?

I think that if there is such a thing as metaphysical *de re* necessity then it exists not in virtue of apriority or analyticity. Because both are not appropriate features of this modality as such. Necessity is rather a relation of a thing’s essence to ways of its being. Here Kripke was right. Where he was mistaken, however, is the way we know necessity. The A priori is the only way to know what is metaphysically necessary. No metaphysical necessity could be known through empirical investigation. The Kripkean divorce of necessity and apriority turned out to be all too hasty. A repeated union is needed, even if that time it should be more loose than in the times of Leibniz and Kant. A two way connection between necessity and apriority indeed does not exist. Because it is not true that a proposition is necessary if it is *a priori*. The real connection is much subtler. Nonetheless, it is very tough and substantial. Apriority remains a necessary, even if not sufficient, condition not for the necessity itself, but for the knowledge of it.

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## Notes

1. In this paper I omit impossible statements out of consideration.
2. Think, however, of the biblical story about the Marriage at Cana (John 2, 1- 11), which while seeming perfectly intelligible, presupposes that at least God is able to turn water into wine.
3. Today there are two main positive, i.d. non-skeptical, accounts of analycity: Frege-Carnapean, or Logical analycity, and Locke-Kant-Katzean, or Mereological analycity. According to Frege-Carnapean account, a statement is analytical iff its truth-value determined by definitions of the terms involved in the statement and logical laws. According to Locke-Kant-Katzean account, a statement is analytical iff its truth-value is determined only by meanings of terms involved in that statement. See more in Katz J. *Sense, Reference, and Philosophy*, Oxford University Press, 2004, p. 40 ff.