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THE NECESSARY A POSTERIORI: A RESPONSE TO TICHÝ

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I. INTRODUCTION

Pavel Tichý, in a recent article,¹ argues that Saul Kripke's purported examples of necessary *a posteriori* truths² are unsuccessful. I am sympathetic to some of Tichý's assumptions and to some of his conclusions. But his arguments seem misguided to me, and I will try to explain why.

The paper proceeds as follows. In Section II, I discuss Tichý's criticism of Kripke's treatment of the Hesperus-Phosphorus example. That criticism is seen to rest on the assumption that sentences which express the same proposition are interchangeable in epistemic contexts, an assumption Kripke would not accept. Nevertheless a revised version of Tichý's criticism may be successful.

In the rest of the paper I adopt Tichý's assumption and explore what someone who, unlike Kripke, accepts it might say about the necessary *a posteriori*. In Section III I quickly develop the idea that we have attitudes to some propositions indirectly in virtue of our attitude to other propositions. In Sections IV, V, and VI, I employ this idea to criticize some of Tichý's arguments. Section VII provides a brief conclusion and a tentative suggestion about how one might reformulate the positivist doctrine that the necessary and the *a priori* coincide.

It will be convenient to begin with a comment on the term '*a priori*' and '*a posteriori*'. Kripke uses these terms as adverbs modifying 'knows'. A proposition is known *a priori* if it is known independently of experience, and is known *a posteriori* if it is known by means of experience.

Tichý uses the terms '*a priori*' and '*a posteriori*' in a way Kripke avoids, as adjectives modifying 'proposition'. Tichý's use can be defined in terms of Kripke's as follows: a proposition is *a priori* if it *can* be known *a priori*; *a posteriori* if it is not *a priori*, i.e., if it cannot be known *a priori*.³

Mixing these two uses together yields an odd-sounding asymmetry: an *a*

priori proposition can, for all the definitions tell us, be known *a posteriori*, while an *a posteriori* proposition cannot be known *a priori*. Tichý's adjectival use is helpful for some purposes: it is needed to express simply the positivist thesis that the *a priori* and the necessary coincide and that the *a posteriori* and the contingent coincide. But I will for the most part restrict myself to Kripke's adverbial use.

II. IDENTITY STATEMENTS

The first example Tichý discusses is the infamous case of Hesperus and Phosphorus. On Kripke's view as defended in *Naming and Necessity* (pp. 101–105), we can find out only after empirical investigation that Hesperus = Phosphorus. But it is necessarily the case that Hesperus = Phosphorus. So it seems that there is something which is necessary and which can be known only *a posteriori*.

Tichý criticizes Kripke's use of this example as follows. He first provides a very brief argument that we *can* know *a priori* that Hesperus = Phosphorus (232). This argument may be reconstructed as follows:

- (1) The proposition that Phosphorus is Hesperus is identical with the proposition that Phosphorus is Phosphorus.
- (2) I can know *a priori* that Phosphorus is Phosphorus.

Therefore,

- (3) I can know *a priori* that Phosphorus is Hesperus.

(1) is taken to follow from Kripke's views on proper names.⁴ (2) seems uncontroversial. And the argument from (1) and (2) to (3) seems straightforward. (It is not, as we shall see.)

Since (3) *seems* obviously true given assumptions Kripke accepts, Tichý is led to suggest that Kripke is guilty of a sort of use-mention confusion. That is, when Kripke says that we can know only *a posteriori* that Phosphorus is Hesperus, he means rather that we can know only *a posteriori* that the sentence 'Phosphorus is Hesperus' is *true*. Thus, on Tichý's view, there is no one thing which is necessary and can be known only *a posteriori*. There is one thing, the proposition that Phosphorus is Hesperus, which is necessary but can be known *a priori*, and there is another thing, the proposition that

the sentence 'Phosphorus is Hesperus' is true, which can be known only *a posteriori* but which is contingent, not necessary.

Now let us return to the argument from (1) and (2) to (3). The argument may seem straightforward, but it is not. The argument presupposes, roughly, that if I know *a priori* that *P*, and *P* is the same proposition as *Q*, then I know *a priori* that *Q*.⁵ It presupposes that sentences which express the same proposition are interchangeable in epistemic contexts.

This is a natural assumption. It fits into a neat semantics for propositional attitude sentences which parallels the semantics of sentences involving possibility and necessity operators. It meshes with a view of knowledge, belief, and other attitudes which construes them as relations between people and propositions, and with a view of the semantics of 'Joe knows that *S*', 'Joe believes that *S*', etc., according to which these sentences state that the relevant relation holds between Joe and the proposition expressed by *S*.

Natural and appealing as this picture may be, it is *not* one which Kripke is prepared to accept. If Tichý's assumption were correct — if sentences which express the same proposition were interchangeable in epistemic contexts — then coreferential names would be interchangeable in epistemic contexts, since changing a sentence by substituting for one proper name another with the same reference will always produce a new sentence which expresses the same proposition as the old one. That Kripke is not committed to this view (which he calls a "Millian substitutivity doctrine") is suggested by *Naming and Necessity* and made explicit in 'A Puzzle About Belief':⁶

I would emphasize that there need be no *contradiction* in maintaining that names are *modally* rigid, and satisfy a substitutivity principle for modal contexts, while denying the substitutivity principle for belief contexts. The entire apparatus elaborated in "Naming and Necessity" of the distinction between epistemic and metaphysical necessity, and of giving a meaning and fixing a reference, was meant to show, among other things, that a Millian substitutivity doctrine for modal contexts can be maintained even if such a doctrine for epistemic contexts is rejected. "Naming and Necessity" never asserted a substitutivity doctrine for epistemic contexts.

Kripke takes the "official position" that "it would be foolish to draw any conclusion, positive or negative, about substitutivity" (p. 269), but in a footnote nevertheless goes so far as to say that "in the case of 'Hesperus' and 'Phosphorus' ... it is more plausible to suppose that the two names are definitely not interchangeable in belief contexts" (Note 43, p. 280).

Tichý's only evidence that Kripke could not literally mean that we cannot

know *a priori* that Hesperus is Phosphorus is the above short argument that we obviously can know this *a priori*. Since Kripke would not accept a crucial assumption of the short argument, there is no need to take seriously Tichý's proposed reinterpretation of Kripke as confusing use and mention.⁷

Nevertheless, a version of Tichý's criticism that the thing which is necessary and the thing which can only be known *a posteriori* are different things may still be appropriate.

If we use the term 'proposition' in such a way that sentences which are alike except for interchange of coreferential names express the same proposition, then it seems legitimate to translate "It is necessarily the case that Phosphorus is Hesperus" into "The proposition that Phosphorus is Hesperus is such that: it is necessary" (or: "is necessarily true"). But if 'proposition' is used in this way, and the substitutivity principle for names is false for epistemic contexts, then we cannot likewise translate "One can only know *a posteriori* that Phosphorus is Hesperus" into "The proposition that Phosphorus is Hesperus is such that: one can only know it *a posteriori*." So we cannot infer that there is something which is both necessary and such that one can only know it *a posteriori*.

If the substitutivity principle for names is false in epistemic contexts, then sentences like 'Joe knows that *S*' do not ascribe to Joe as an object of his knowledge the proposition expressed by *S*; such sentences do not state a relation between a person and the proposition expressed by *S*. This *could* be because they ascribe, in context, a relation between a person and some *other* proposition.⁸ But it seems more congenial to Kripke's views to suppose that 'Joe knows that *S*' states a relation between Joe and some non-propositional entity which *is* expressed or determined by *S*, some semantic value of *S* other than the proposition it expresses. Call the relevant semantic value, whatever it turns out to be, the "meaning" of *S*. Then it is the proposition expressed by *S* that is necessary, but the meaning of *S* which can only be known *a priori*; and the proposition and the meaning are different things.⁹

III. INDIRECT BELIEF

We have seen that Tichý presupposes something which Kripke would not grant: roughly, that coreferential names are interchangeable in epistemic contexts. But while Kripke would not grant this assumption, I am quite prepared to; I shall suppose for the remainder of this paper that it is correct.¹⁰

In this section, I will introduce briefly the idea that we sometimes believe one proposition *indirectly*, in virtue of believing a different proposition. With this notion in hand, it will be easy to see where several of Tichý's arguments go wrong.

It is often the case that there are propositions *P* and *Q* such that one believes *P*, one believes *Q*, and one believes *P* in virtue of believing *Q*. I will present an example, and then explain more fully what I mean.

It is reasonably uncontroversial that in some cases in which a *de dicto* belief ascription is true of one, a corresponding *de re* ascription is also true of one. For instance, consider Joe, who is sitting at his desk staring at Carl, a cup. The following *de dicto* ascription is true:

Joe believes that the cup he sees is on his desk.

This seems a case in which it is legitimate to take Joe's belief as being about a particular cup, Carl. So the corresponding *de re* ascription is also true:

The cup Joe sees is such that: Joe believes that it is on his desk.

The expression 'the cup Joe sees' is, in this second sentence, in referentially transparent position, and the cup Joe sees is Carl. So the following ascription is also true:

Carl is such that: Joe believes that it is on his desk.

Now, on Kripke's view there is no difference, in modal contexts, between the truth conditions of *de dicto* and *de re* readings of sentences involving proper names. No doubt he would deny the analog of this view for belief. But we have been assuming that the semantics of belief-sentences parallels that of modal sentences; if so, the above *de re* attribution should have the same truth conditions as this *de dicto* one:

Joe believes that Carl is on his desk.

So Joe believes one proposition, that Carl is on his desk, in virtue of believing another, that the cup he sees is on his desk.

There are several things to notice about this example. First, the two propositions believed really are different: there are possible situations in which the cup Joe sees is on his desk but in which Carl is not on his desk. If belief is regarded as a relation between a person and a proposition, we have here two different beliefs. Thus to say that Joe believes one thing in virtue

of believing another is not to say that attribution of the former belief follows from attribution of the latter together with a substitutivity principle. Such an argument could be successful only if both attributions ascribed belief in the same proposition.

Second, although the two beliefs are different, both reflect the very same mental state (at least in the narrow sense in which one's mental states are intrinsic or nonrelational features of one, or in which one's mental state supervenes on the physical and phenomenological facts about one). The psychological facts about Joe which make it legitimate to describe him as believing that the cup he sees is on his desk also license describing him as believing that Carl is on his desk. No extra mental fact is needed to license the second ascription. (In particular, Joe does not accept the sentence 'Carl is on my desk': 'Carl' is *our* name for Carl, not Joe's.) Thus to say that Joe believes one thing in virtue of believing another is not to say that he *infers* the former from the latter. Inference involves a change in mental state, but both propositions are believed in virtue of being in the very same mental state.

Third, the fact that Joe believes that Carl is on his desk is due only partly to narrowly psychological facts about Joe. It is also due partly to facts about the world independent of Joe's mental state: in particular, the fact that the cup currently in front of him is Carl. Suppose that the cup in front of him had been Karl, a cup indistinguishable from Carl. Then he could have been in the very same mental state, believed that the cup he saw was on his desk, and thereby believed not that Carl was on his desk but rather that Karl was on his desk. The proposition that the cup he sees is on his desk thus characterizes Joe's mental state more precisely and more nearly essentially than the proposition that Carl is on his desk.¹¹

Indirect belief is rather like indirect perception. The facing surface of an apple is a different object than the apple itself; to see the one object is not the same as to see the other. But one might see both in virtue of being in one and the same perceptual state; if so one sees the whole apple indirectly, in virtue of seeing its facing surface.

The example of Joe and Carl provides one case in which one believes a singular proposition in virtue of believing a general proposition. But not *every* belief in a general proposition gives rise to a corresponding belief in a singular proposition. If so then, Roscoe being the tallest spy, one would, simply in virtue of believing that the tallest spy is a spy, believe that Roscoe is a spy, and this seems wrong.¹² For our present purposes we need not

formulate a general principle giving the conditions under which one believes a singular proposition in virtue of believing a general one.¹³ It will be enough to see that any instance of the following schema is correct:

If someone, x , believes the general proposition that the unique object currently producing in him sensations F has property G , and in fact the object producing F in x is object a , and x perceives a , then x believes the singular proposition that a has G .

For surely one is sufficiently *en rapport* with an object one is currently perceiving to have *de re* beliefs about it.

I suspect that the little principle above remains true if we substitute 'knows' for every occurrence of 'believes'. But there are some reasons to doubt this. Kripke himself avoids problems peculiar to knowledge by alternating between e.g. 'knows *a posteriori*' and 'believes on the basis of a *posteriori* evidence' (see p. 35). Where my argument depends on the above principle, I will speak of belief rather than knowledge; for brevity I will abbreviate 'comes to believe on the basis of *a priori* evidence' as 'discovers *a priori*' and 'comes to believe on the basis of *a posteriori* evidence' as 'discovers *a posteriori*'.

IV. CAN WE DISCOVER NECESSARY TRUTHS A POSTERIORI?

I have committed myself to the assumption that coreferential names are interchangeable in epistemic (and doxastic) contexts. I thus accept, as Kripke probably would not, the short argument that we can know *a priori* that Phosphorus is Hesperus. Kripke has thus not shown (at least not, by means of this example, to those who accept interchange of coreferential names in epistemic contexts) that there are necessary propositions which we cannot discover *a priori*.¹⁴ But he has shown something very interesting: that there are necessary propositions which we *can* (and do) discover *a posteriori*.

I take Kripke to have made exactly parallel points about the contingent *a priori* and the necessary *a posteriori*: he has shown that there are some contingent propositions which we discover *a priori* (though they can be discovered *a posteriori*), and that there are some necessary propositions which we discover *a posteriori* (though we may also discover them *a priori*). But because of the asymmetric definitions of '*a priori*' and '*a posteriori*' as adjectives, the former point counts as a demonstration that there are contingent

a priori propositions, while the latter point does *not* count as a demonstration that there are necessary *a posteriori* propositions.

I suspect that Tichý would deny that Kripke has shown even that we *can* discover necessary propositions *a posteriori*. That he would is suggested for example by his discussion of another purported necessary *a posteriori* truth, the proposition that heat is molecular motion. Tichý argues roughly that this is not what scientists discovered: rather, they discovered “that our heat sensations normally occur just in case molecular motion in our immediate environment reaches a certain level, and they posited a causal link” (234). Tichý thus seems to want to say, first, that we did discover the (contingent) truth that:

- (4) The cause of our heat sensations is molecular motion

and, second that we did not discover the (necessary) truth that:

- (5) Heat is molecular motion.

I agree with the first claim. I even grant that the proposition expressed by (4) in some sense describes our cognitive state more accurately than the proposition expressed by (5). But I deny the second claim. On the view presented in the previous section, we discovered (4) and *thereby* discovered (5). Not that (4) and (5) represent the same proposition, or that we inferred (5) from (4); rather, we believe (5) *in virtue of* believing (4), in the sense of the previous section.

It is possible to argue, as I suspect Tichý would, that it is literally incorrect to describe our discovery as a discovery of (5), as the discovery that heat is molecular motion. *Really*, one might say, we don’t discover (5); we only discover (4), that the cause of our heat sensations is molecular motion.

But I don’t see how one could give grounds for this claim without denying generally that we have attitudes toward singular propositions in virtue of having attitudes toward general ones. But it seems likely that *all* our attitudes toward singular propositions (except perhaps some of those involving ourselves, the present time, and our current location) are ones we have only in virtue of our attitudes toward general propositions.¹⁵ So the view under consideration would have wide-ranging sceptical consequences: not only would we not *know* very many of the things we say we do, we wouldn’t even *believe* a great many of the things we say we do! Insisting that *really* we discovered only that the cause of heat sensations is molecular motion is like insisting that

really we see only an object's facing surface and not the object itself. In either case the result is scepticism.

V. ESSENTIAL PROPERTIES

Some of Kripke's purported examples of the necessary *a posteriori* are examples of attributions of essential properties to objects. Let Fred be a certain table. It seems that we can *find out* that Fred is made of wood. Yet (Kripke suggests), if Fred is made of wood, it could not have been made of anything else: the proposition that Fred is made of wood is necessary.

In Section IV, I conceded that, granting substitutivity for coreferential names, we can know *a priori* that Phosphorus is Hesperus; I went on to defend the view that we can *also* know it *a posteriori*. I am certain that we can also discover *a posteriori* that Fred is made of wood; but I am unclear as to whether we can discover this *a priori*. At least the same short argument will not show that we can.¹⁶

Tichý attacks these purported examples of the necessary *a posteriori* by way of an attack on Kripke's essentialism. The attack arises from Kripke's account of the apparent contingency of certain necessary truths. We sometimes say things of this sort: it could have turned out that Elizabeth II was born of different parents; it might have been that Fred was not made of wood. Does this mean that it is not necessary that Elizabeth II has certain parents, or that Fred is made of wood?

Kripke says no. Tichý summarizes his account: "What we mean is, according to Kripke, that the epistemological situation we are in when inspecting Elizabeth II is compatible with it being some other woman that we are inspecting" (238).¹⁷ So far so good. But Tichý's next sentence is remarkable: "It follows that unless the parenthood question has been conclusively sorted out, we cannot be sure that it is Elizabeth II that we are dealing with."

This is certainly a strange and unpalatable consequence; if it follows from Kripke's views it casts doubt on them. But it does not follow.

There are several things to notice about this case. First, the term 'epistemological situation' may be misleading. It would be natural to take the term broadly enough that one's epistemological situation would be different if one were seeing a different object even if all one's visual impressions were exactly the same. But Kripke does *not* use the term this broadly. To rule out this interpretation, he consistently speaks of "*qualitatively* identical epistemic

situations" (104, 142, 150). Since Tichý is criticizing Kripke, I shall assume that he means the term 'epistemological situation' to be taken in this narrow sense.

Second, there *may* be a sense in which Tichý's conclusion is correct. By 'sure', Tichý could mean 'absolutely certain', and absolute certainty may be so strong that I cannot be absolutely certain of *P* unless it is impossible that I should be in the qualitative epistemic situation I am in even though not-*P*. If so I can be absolutely certain of very little — just necessary truths and perhaps propositions about my own sense impressions. But Tichý is trying to show that Kripke's view leads to absurd consequences, and it is not at all absurd to be told that we cannot be absolutely certain, in this strong sense, that it is Elizabeth II we are dealing with.

Presumably, then, Tichý does not mean, by 'sure', 'absolutely certain'. In fact, Tichý seems to use 'be sure' and 'know' interchangeably. But on this reading, the supposed consequence of Kripke's view that we cannot be sure we are dealing with Elizabeth II does not follow. Supposing that it does commits Tichý to this thesis:

If my qualitative epistemic situation is compatible with either *P* or *Q*, though in fact *P* is true, then I cannot know *P*.

But this would make knowledge require the impossibility of error. My epistemic situation is compatible both with my being in San Antonio and with my being a brain in a vat on Mars. If the above thesis were correct, I would not know that I am in San Antonio. But surely I *do* know this.

In a way the thesis makes knowledge require even *more* than mere impossibility of error. I know that I am here now. The method by which I arrived at this belief is, in a clear sense, infallible: no matter when or where I apply the method, it will lead me to a true belief. But my epistemic situation is quite compatible with my being at some other place or time. If the thesis were correct, I could not even know that I am here now!

It may seem that Tichý would have a stronger case if his thesis concerned, not what we can know or be sure of, but what we can believe. What underlies the thesis seems to be something like the implausible view that my cognitive state when I know *P* *guarantees* that I know *P*, where this includes guaranteeing that *P* is true. But one might reject this view and yet accept the weaker view that my cognitive state in *believing* *P* guarantees that I believe *P*.

If this weaker view were correct, then I could not *believe* that I was

inspecting Elizabeth II. I could be in the same cognitive state I am in fact in although I had never encountered Elizabeth II, but always only a duplicate. In that situation I would not believe I was examining Elizabeth II. So my cognitive state alone does not guarantee that I believe that I am inspecting Elizabeth II; so if the weaker view is correct, I do not believe that I am examining Elizabeth II. This would have the consequence that I do not *know* that I am examining Elizabeth II, since I cannot know something without believing it.

But even the weaker view is surely false. If the weaker view is correct, then there is no indirect belief; but we have seen reason to think there is indirect belief. Adopting the weaker view would lead to the scepticism about belief noted at the end of Section IV.

VI. AN EPISTEMIC CIRCLE?

Tichý elaborates the complaint we have been considering into what he takes to be a dilemma for Kripke. Tichý writes that Kripke's essentialism involves "an epistemic circle. In order to establish that an object has an essential property we have to inspect that object. But we cannot be sure that we are inspecting the right object unless we know beforehand that the object has that essential property" (240).

Thus on Tichý's view Kripke is committed to something like the following two theses:

- (T1) To find out that an object, *a*, has an essential property, *F*, I need to:
 - (i) know that the object I am examining is *a*, and
 - (ii) find out (empirically) that the object I am examining is *F*.
- (T2) To find out that the object I am examining is *a*, I need to:
 - (i) know what properties *a* has essentially, and
 - (ii) find out that the object I am examining has those properties.

If (T1) and (T2) were both true, then we could never find out *either* what object we were examining *or* what properties a particular object had, since we could do neither until we had already done the other. Presumably at least one or the other must go.

Tichý suggests that Kripke should, given other things he holds, retain (T2)

and give up (T1) (by holding that we know *a priori* what essential properties any particular object has). He also suggests that the *truth* is that (T2) is false; he puts this by suggesting that we "admit the obvious, namely that when we inspect an object we know perfectly well which particular object it is; in other words, that the numerical identity of a directly inspected object is always epistemically unproblematic (241)." But Tichý argues that acknowledging this involves giving up individual essentialism.

Let us examine these claims. I will proceed as follows: first, I will give reasons for thinking (T2) to be false. I will then show that, contrary to Tichý's view, rejection of (T2) does not require one to give up individual essentialism. Finally, I will suggest that it is precisely the rejection of (T2) which makes it possible to retain (T1) given Kripke's view of possible worlds.

Once we acknowledge the existence of indirect propositional attitudes, (T2) seems obviously false. I can know that I am examining *a* without knowing what *a*'s essential properties, including *F*, are.

Here are some arguments for this conclusion in the special case in which *a* is Fred and *F* is the property of being made of wood. Suppose that I do not know that Fred is made of wood. I do know that the object I am examining is *this* object. But, in this context, 'this object' directly refers to the same object 'Fred' names. So (by a plausible substitutivity principle) I know that the object I am examining is Fred.¹⁸

Second argument: suppose I introduce the name 'Joe' as a name for whatever object I am currently examining. Then I know that I am examining Joe.¹⁹ 'Joe' names the same thing 'Fred' names. So I know that I am examining Fred.

I believe that these first two arguments are successful. But one might have many objections to them. (Maybe 'this object' is a disguised description; if it is a directly referring term then maybe I *don't* know that the object I am examining is this object; and maybe dubbing the object I am examining 'Joe' enables me to know only that the object I am examining is *named* 'Joe', not that it *is* Joe.²⁰)

If the first two arguments are successful it is because something like the following, third, argument lies behind them. I discover that the object which I am examining is the object which is giving me such-and-such sensations. As a matter of fact, the object giving me such-and-such sensations is Fred. So *in virtue of* discovering that the object I am examining is the object giving me such-and-such sensations, I discover that the object I am examining is Fred.

If this is right, then (T2) is false. Tichý himself seems to believe that (T2) is false: he just thinks Kripke cannot admit that it is. Why not? Because then, Tichý thinks, individual essentialism collapses. Here is the argument:

Imagine once again that a table is subjected to a woodenness test. Surely the purpose of the test is to eliminate some otherwise conceivable possibility. Now if the numerical identity of the table is unproblematic [i.e., if we know that the table we are examining is Fred], it cannot be the possibility that we are dealing with some other table. It can only be the possibility that the *very same* table is not wooden.

If this is a real possibility, then Fred is not essentially wooden; the same argument could then be applied to other properties to show that Fred has none of its properties essentially, and individual essentialism would have been shown to be false.

The error here comes in the third sentence. To see why, let us consider the case of Pat the pen. Suppose I visit a pen manufacturer one day, and in the course of showing me around the plant he shows me Pat. He informs me that Pat, alone of all the pens they have made, has a distinguishing characteristic: the name 'Pat' is inscribed on it in red ink in a place which cannot be seen without taking the pen apart. He even takes Pat apart and shows me its name. He then leaves the room with Pat, comes back in a few minutes, and presents me with a gift-wrapped pen. He does not say whether the pen is Pat or not; nevertheless it is in fact Pat.

I take Pat home and use it for several days. But one day I pick it up and gaze at it with a certain curious gleam in my eye. Now on Tichý's view, and mine, there is no problem about the "numerical identity" of the pen I am examining. But I decide to test the pen to determine whether it is Pat.

Now return to my quote from Tichý and apply it to the present case. "Surely the purpose of the test is to eliminate some otherwise conceivable possibility." Right: in this case, one would expect, the possibility the pen is not Pat. But read on: "if the numerical identity of the [pen] is unproblematic, it cannot be the possibility that we are dealing with some other [pen]. It can only be the possibility that the *very same* [pen] is not [Pat]."

Thus the "otherwise conceivable possibility" we are ruling out is the "possibility" that Pat itself is not Pat.²¹ Tichý's claims thus commit him straightforwardly to the view that it is genuinely possible that Pat is not Pat.

Someone might object that the test I employed was not really a test for Pat-hood. Really I just tested the pen to see whether it had the name 'Pat' inscribed on it; and surely it is possible that Pat might not have had 'Pat'

inscribed on it. I respond that my test is just as much a Pathood test as drilling a hole in a table (say) is a woodenness test. It is not a necessary truth that the pen I test is Pat if and only if the test comes out positive – but that is a feature of virtually all tests. (I concede that the test is only *indirectly* a test of Pathood. But again, virtually all tests are like that.)

How can we acknowledge that “the numerical identity of a directly inspected object is epistemically unproblematic” without the absurd consequence that Pat might not be Pat, and without abandoning individual essentialism? The phenomenon of indirect belief makes possible the following answer. What happens when I test Pat for Pathood? One thing that happens is this: I discover that the pen I am examining and which is giving me sensations F is the same as the pen I was introduced to as ‘Pat’ a few days ago and which gave me sensations G. This is a contingent truth, and discovering it involved ruling out the contingent falsehood that the pen giving me F is some other pen than the one which gave me G.

But *in virtue of* discovering that contingent truth, I discovered that Pat is identical with Pat. As a shorthand for the “in virtue of” terminology, we might say that I discovered that Pat (under the description: pen giving me F) is identical with Pat (under the description: pen which gave me G). (But this terminology can easily be misleading.) That Pat is identical with Pat is necessary. So in virtue of discovering a contingent truth, I discovered a necessary truth. What do you rule out in discovering a necessary truth? Why, a necessary falsehood! – In this case, the necessary falsehood that Pat is not Pat, ruled out in virtue of ruling out the related contingent falsehood mentioned above.

Similarly, I discover the contingent truth that the table I am examining is wooden, and thereby discover the necessary truth that Fred is made of wood, ruling out the necessary falsehood that Fred is not made of wood.

We have now seen how to reject (T2) without abandoning individual essentialism. It is time to return to (T1), which Tichý argues Kripke should reject. Tichý writes that the view that essential properties can be known *a priori* “is something Kripke should be committed to by his view of possible worlds as products of our own stipulations. If I want to establish that [Fred] is essentially wooden, all I have to do is run through all possible worlds featuring [Fred] and check that in each of them [Fred] has been stipulated to be wooden.”

The first thing to notice about this passage is that it involves a view of

possible worlds to which Kripke is not, so far as I can see, committed. Tichý's interpretation of Kripke's view seems to be that we just make up possible worlds; which worlds there are is a matter of decision or stipulation. But in fact Kripke's negative points about possible worlds seem to be just these two: first, possible worlds are not big concrete things, but rather abstract states of the one and only big concrete thing; second, in considering counterfactual situations we need not specify them purely qualitatively. Neither point implies that we make up possible worlds. As David Lewis has noted, Kripke is plausibly understood as meaning by "stipulation" not creation but selection: "When we stipulate we are selecting. Out of all the worlds there are, we stipulate which ones we wish to consider."²²

Suppose, then, I wonder whether Fred is necessarily wooden. I may begin by stipulating that I will consider those worlds in which Fred exists. My question is then whether in all those worlds Fred is wooden, and *this* question cannot be resolved by stipulation: it depends on what worlds there are.

If my initial stipulation had to identify Fred by its essence, then all I would need to do is check my specification of its essence to see whether it contained woodenness. But Kripke rejects precisely this requirement.

Suppose that the "general modal status"²³ of propositions is known *a priori*; that is, suppose that we know *a priori* that if Fred is made of wood, then it is necessarily made of wood.²⁴ Then I might still fail to know whether Fred was *necessarily* made of wood because I did not know that Fred was *in fact* made of wood.

VII. CONCLUSION

Some of Tichý's conclusions rest on an assumption about substitutivity which Kripke would not accept. If we grant the assumption, then Tichý successfully shows that we can discover true identity statements involving names *a priori*, but not that we can discover *a priori* what properties things have essentially. Many of Tichý's arguments require an implausible rejection of the possibility of indirect belief as described in Section III.²⁵

Are there necessary *a posteriori* propositions? I have argued that we certainly *can* discover necessary propositions *a posteriori*, but have left it an open question whether there are necessary propositions which we *can only* discover *a posteriori*.

What effect do the considerations here presented have on the positivist

doctrine that the *a priori* and the necessary coincide? My explanation of how we discover necessary propositions *a posteriori* involves our believing them indirectly, in virtue of believing contingent propositions. I would argue that Kripke's examples of the contingent *a priori* involve, similarly, our believing the contingent propositions indirectly, in virtue of believing necessary propositions.

This suggests that a reformulation of the positivist thesis along something like the following lines may well be correct. Let us say that someone *directly believes* a proposition just in case he could not fail to believe it without being in a different cognitive state. Then perhaps one can directly believe a proposition on the basis of *a priori* evidence only if it is necessary, and can directly believe a proposition on the basis of *a posteriori* evidence only if it is contingent.²⁶

NOTES

¹ Pavel Tichý, 'Kripke on Necessity A Posteriori', *Philosophical Studies*, Vol. 43 (1983), 225–241.

² Saul Kripke, 'Naming and Necessity', in Donald Davidson and Gilbert Harman (eds.), *Semantics of Natural Language* (Dordrecht: D. Reidel, 1972), pp. 253–355, 763–769; reprinted, with a new preface, as *Naming and Necessity* (Cambridge: Harvard University Press, 1980). All page references will be to the 1980 version.

³ Similar remarks may be found in Colin McGinn, 'A Priori Knowledge and A Posteriori Knowledge', *Proceedings of the Aristotelian Society*, Vol. 76 (1975–76), 195–208, at 195; Philip Kitcher, 'A Priori Knowledge', *Philosophical Review*, Vol. 89 (1980), 3–23, at 3–4.

⁴ Tichý is a bit careless in his defense of this claim. He attributes to Kripke the view that "the semantic function of the term 'Phosphorus' is simply to refer to Venus" and that the names 'Hesperus' and 'Phosphorus' are "connotationless". Kripke is not committed to anything this strong, though he is committed to the view that the only semantic function of proper names which is relevant in contexts of metaphysical modality (e.g. "It is necessary that ...") is to refer to Venus. (On the relation of Kripke's views to various kinds of connotation or sense, see Nathan Salmon, *Reference and Essence* (Princeton: Princeton University Press, 1981), Section 1.1, and Salmon, review of Linsky, *Names and Descriptions*, *Journal of Philosophy*, Vol. 76, No. 8 (August, 1979), 436–452 at 442–3.)

It does clearly follow from Kripke's views that if two names refer to the same thing, interchanging them in contexts of metaphysical modality will not affect the truth of the containing sentence. If S is any English sentence, let 'the proposition that S' denote whatever semantic value of S is relevant in contexts of metaphysical modality. So understood, (1) does indeed follow from Kripke's views on proper names.

⁵ A bit more carefully: letting S and R range over English sentences, the argument presupposes that if 'I can know *a priori* that S' is true (in a context c), and S expresses (in c) the same proposition that R expresses (in c), then 'I can know *a priori* that R' is true (in c).

⁶ Saul A. Kripke, 'A Puzzle About Belief', in A. Margalit (ed.), *Meaning and Use* (Dordrecht: D. Reidel, 1979), pp. 239–283. Quotation is from Note 9, p. 273. Compare pp. 20–21 of the Preface to the 1980 edition of *Naming and Necessity*.

⁷ A reinterpretation which should seem implausible anyway, given Kripke's sensitivity to the use-mention distinction; see e.g. Note 25, p. 62, on 'sloppy, colloquial speech, which often confuses use and mention'. There is, however, an apparently careless paragraph in 'A Puzzle About Belief' which could be used to support Tichý's interpretation: see p. 243.

⁸ For suggestions about belief along these lines, see Robert Stalnaker, 'Indexical Belief', *Synthese*, Vol. 49 (1981), 129–151; Bas C. Van Fraassen, 'Propositional Attitudes in Weak Pragmatics', *Studia Logica*, Vol. 38, No. 4 (1979), 365–374. For criticism of Van Fraassen's proposal, see J. Paul Reddam, 'Van Fraassen on Propositional Attitudes', *Philosophical Studies*, Vol. 42 (1982), 101–110.

⁹ Perhaps this objection is not very serious. After all, if meanings uniquely determine propositions then we can say that a meaning is necessary just in case the proposition it determines is necessary. In that case there is one thing, the meaning, which is both necessary and *a posteriori*. But my guess is that any plausible candidates for what I have called "meanings" will be things which do *not* uniquely determine propositions. (For instance, suppose "meanings" turned out to be David Kaplan's "characters", as described in Kaplan, 'On the Logic of Demonstratives', in Peter A. French *et al.* (ed.), *Contemporary Perspectives in the Philosophy of Language* (Minneapolis, University of Minnesota Press, 1979), pp. 401–412, and much more fully in *Demonstratives*, unpublished. It makes no sense to speak of a *character* as necessary, since the same character will determine different propositions in different contexts.)

¹⁰ I shall accept this assumption without argument. It is argued for in Tom McKay, 'On Proper Names in Belief Ascriptions', *Philosophical Studies*, Vol. 39 (1981), 287–303. Also relevant is G. W. Fitch, 'Names and the "De Re – De Dicto" Distinction', *Philosophical Studies*, Vol. 39 (1981), 25–34. (Most writers on the subject suppose, with Kripke, that the assumption is false.)

¹¹ The proposition that Carl is on his desk clearly does not characterize Joe's belief state essentially, since as we have just seen Joe could easily have been in the same mental state without believing that proposition. I doubt that the proposition that the cup he sees is on his desk characterizes his mental state essentially, either. But it characterizes that state *more nearly* essentially: we will have to travel to more remote regions of logical space to find a possible situation in which he is in the same mental state but does not believe *that* proposition.

¹² This was the objection raised by critics of Quine's early conjecture that it was always legitimate to "export" a singular term from inside to outside a belief context. See W. V. Quine, 'Quantifiers and Propositional Attitudes' and David Kaplan, 'Quantifying In', both reprinted in Leonard Linsky (ed.), *Reference and Modality* (Oxford, 1971).

¹³ For an account of *de re* belief which I believe can be adapted to provide such a principle, see David Lewis, 'Attitudes *De Dicto* and *De Se*', *Philosophical Review*, Vol. 88 (1979), 513–543, at 538–543.

¹⁴ Kripke himself is presumably disbarred from speaking of discovering, knowing, etc., propositions, since as we have seen if on his view there are things we know, they must be something other than propositions. But since I grant the substitutivity principle for names this terminology is open to me.

¹⁵ Part of this claim should be controversial, but part should not. Take any attitude of mine toward a singular proposition – say, my belief that water is wet. I might have been in exactly the same cognitive state and yet not have believed that water is wet (believing instead, perhaps, that XYZ is wet). (For a well-known argument for this conclusion, see Hilary Putnam's discussion of "Twin Earth" in 'The Meaning of Meaning', in Putnam, *Mind, Language and Reality*, *Philosophical Papers*, Vol. 2 (Cambridge:

Cambridge University Press, 1975), pp. 215–271, at pp. 223–227; see also Tyler Burge's extended discussion of a similar argument in 'Individualism and the Mental', *Midwest Studies in Philosophy*, Vol. 4 (1979), 73–121.) So it should be clear that I believe the proposition that water is wet partly in virtue of my cognitive state and partly in virtue of the way my environment happens to be. What should be controversial is only that my cognitive state is essentially describable by means of some general proposition. For further discussion of all this, see my *Beliefs and Their Objects* (Ph.D. dissertation, Princeton University, 1982).

¹⁶ Here are two possible arguments. (1) Suppose that there is only one necessary proposition. Then, given that sentences which express the same proposition are interchangeable in epistemic contexts, 'Fred is wood' expresses the same proposition as 'Hesperus is Hesperus'; so if I discover *a priori* that Hesperus is Hesperus, I discover *a priori* that Fred is wood.

(2) Suppose that sentences alike except for interchange of any coreferential rigid designators express the same proposition. And suppose that the conjunction of all Fred's essential properties is a property only Fred could have. (Kripke expresses some hesitation about this second assumption: see *Naming and Necessity*, p. 46.) Let F express this conjunction, except for woodenness. Then 'the table which is wood and F' rigidly denotes Fred. Presumably we discover *a priori* that the table which is wood and F is wood. But then we discover *a priori* that Fred is wood.

But I have not committed myself to a view of propositions which would make the first assumption of either argument true. (Note that both are true if propositions are, as they are sometimes taken to be, sets of possible worlds or functions from worlds to truth values.) For instance, perhaps singular propositions, but not general propositions, have as constituents the objects they are about. Then the proposition that Fred is wood would have Fred as a constituent, but neither the proposition that the table which is wood and F is wood nor the proposition that Hesperus is Hesperus would. (This sort of view was entertained by Russell and has been revived by David Kaplan.)

¹⁷ Kripke does not actually maintain that if I say 'Fred could have been made of ice' I mean (1): 'It could have been the case that the table I was inspecting was made of ice'. Perhaps it is more plausible to interpret Kripke as attributing to me something like the fallacious inference from (1) and (2): 'The table I was inspecting = Fred' to (3): 'It could have been the case that Fred was made of ice'. (Compare *Naming and Necessity*, pp. 143–4 and Note 72.)

¹⁸ I am being harmlessly careless about use and mention here and in what follows.

¹⁹ Indeed, this parallels Kripke's purported examples of the contingent *a priori*. On my view we know this proposition *both a priori and a posteriori*. For my treatment of the contingent *a priori* see *Beliefs and Their Objects*, Chapter Five, Section II.

²⁰ For something like this last objection see Keith S. Donnellan, 'The Contingent *A Priori* and Rigid Designators', in Peter A. French *et al.* (ed.), *Contemporary Perspectives in the Philosophy of Language* (Minneapolis: University of Minnesota Press, 1979), pp. 45–60.

²¹ On my view it is in fact *conceivable*, though not *possible*, that Pat is not Pat. Kripke seems to take the view that the impossible is not conceivable either; thus his explanations of what we are "really" conceiving when we *think* we're conceiving that e.g. heat is not molecular motion. I think it better to say that we can conceive the impossible, but only indirectly. Whenever we conceive the impossible we do so in virtue of conceiving something possible.

²² David Lewis, 'Individuation by Acquaintance and by Stipulation', *Philosophical Review*, Vol. 92 (1983), 3–32, at 18.

²³ The term is from Albert Casullo, 'Kripke on the *A Priori* and the Necessary', *Analysis*, Vol. 37 (1977), 152–159.

²⁴ Kripke does make this assumption: see 'Identity and Necessity', in Milton K. Munitz

(ed.), *Identity and Individuation* (New York: New York University Press, 1971), p. 153.

²⁵ Indeed, more of his arguments than I have mentioned seem to require such a rejection. One might respond to his criticism of Kripke's views about the word 'heat' (235–6) by acknowledging that any competent speaker of English truly believes that 'heat' names molecular motion, but suggesting that this belief may well be indirect.

²⁶ I am indebted to Steven Luper-Foy for helpful discussion about this paper. Work on the paper was supported by a summer stipend from the National Endowment for the Humanities.

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