

observe object *S*, then go through some sort of ceremony whereby they define a word in terms of *S*. Once they have done all of this they do not need to check anything, or observe anything, to know that *S* is one metre long. But this does not justify saying that the statement that *S* is one metre long is, for our definers, an *a priori* truth. We might as well say that the statement that my fountain pen is on my desk is for me an *a priori* statement, this on the grounds that once I have observed the location of the pen I do not *then* have to rely upon sense experience to know that my pen is on my desk.

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## PLANTINGA AND THE CONTINGENTLY POSSIBLE

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ONE of the interesting things in Alvin Plantinga's latest book, *The Nature of Necessity* (Oxford, Clarendon Press, 1974), is his contention that there are no states of affairs which are only *contingently* possible, i.e. possible in some possible worlds and not possible in others. This contention is important to Plantinga. His new version of the ontological argument is unsound if the contention is false. Nevertheless I want to suggest that what is possible varies from world to world. It should be noticed at the outset that the possibility in question is possibility 'in a broadly logical sense', to use Plantinga's words; not, for example, physical possibility.

### I

We intuit that a particular bicycle which, in fact, came into existence made up of parts  $P_1, P_2, P_3, \dots, P_n$ , could not have come into existence made up of totally different parts. On the other hand, this bicycle *could* have come into existence with *one* of its parts different from the one it actually had. For example, our bicycle could have been constructed with a spoke other than one of its actual front-wheel spokes. (The bicycle-builder says to his assistant, 'If you had ordered new spokes as I told you, this would have been a better bicycle'.)

Consider a possible world in which the bicycle now before us came into existence with a different spoke. Surely *that* bicycle could have come into existence with, say, a different handle-grip than one of the ones it did have at its origin, there, in that possible world. That is to say, we now see a second possible world in which the bicycle I indicated in the

first possible world came into existence with a different handle-grip. Proceeding in this fashion, we seem to work our way towards a world in which our bicycle came into existence made entirely of parts other than  $P_1, P_2, P_3, \dots P_n$ . The bicycle with which we began is one and the same as the one in the first non-actual world, and that, presumably, is one and the same as the one in the second, and so on. But, given our intuition, how can the first and last bicycle in this series be the same? We seem forced to hold that identity across worlds is not transitive, i.e. is not *identity*.

David Lewis would say that all these bicycles are linked by *resemblance*.<sup>1</sup> The bicycle in the first non-actual world is the 'counterpart' there of our bicycle—that is, it is the bicycle which, in that world, most nearly resembles our bicycle. The counterpart relation is not transitive. Thus Lewis has an easy escape from the puzzle about the bicycle. Unfortunately Plantinga, among others, seems to have shown that the counterpart theory is unacceptable.<sup>2</sup>

I want to offer a different solution to the problem about the bicycle. But first, to simplify matters, consider an object made up of just three elements—i.e. an 'alpha'. Suppose that a certain alpha (call it 'Alfred') came into existence ten minutes ago made up of elements  $E_1, E_2$ , and  $E_3$ . And suppose that the rules governing the re-identification of alphas permit us to say that Alfred could have been made up originally of  $E_4, E_2$ , and  $E_3$ , or of  $E_1, E_5$ , and  $E_3$ , or of  $E_1, E_2$ , and  $E_6$ , but they ordain that it is essential that Alfred have been made up of at least two of the three elements of which it was, in fact, composed.

Since Alfred, in fact, came into existence made up of  $E_1, E_2$ , and  $E_3$ , it is necessary that it should have been made up of at least two of these elements. But, if it had come into existence (and this was a possibility) made up of  $E_4, E_2$ , and  $E_3$ , then it would have been possible for it to have come into existence made up of  $E_4, E_5$ , and  $E_3$ . That is to say, it could have lacked a property which, in fact, it necessarily has.

Should the advocates of possible worlds say that there is a possible world,  $w_2$ , in which Alfred came into existence made up of  $E_4, E_5$ , and  $E_3$ ? Perhaps they should say that, relative to the actual world,  $w_0$ , there is no such world. But there is a world,  $w_1$ , such that, relative to *that* world,  $w_2$  is a possible world. (Presumably, in  $w_1$ , Alfred came into existence made up of  $E_4, E_2$ , and  $E_3$ .) How else can our claims about what would have been possible be analysed into talk about possible worlds?

There is a difficulty.<sup>3</sup> Surely there is a possible world—possible with respect to  $w_0$ —in which Alfred never exists, but some other alpha

<sup>1</sup> David Lewis, 'Counterpart Theory and Quantified Modal Logic', *Journal of Philosophy*, March 7, 1968.

<sup>2</sup> *The Nature of Necessity*, pp. 102–120. Also Fred Feldman, 'Counterparts', *Journal of Philosophy*, July 1, 1971.

<sup>3</sup> The problem that follows was suggested to me by Robert Stalnaker.

(Bernard) comes into existence in the same place, made up of  $E_3$ ,  $E_4$ , and  $E_5$ . Call this world ' $w_3$ '. We assume that  $w_3$  is exactly like  $w_2$  except for the fact that in  $w_2$  a certain alpha is Alfred, while in  $w_3$  the corresponding alpha is Bernard. But now we need to reconsider what we have just said. Notice that in both  $w_2$  and  $w_3$  exactly the same elements are arranged in exactly the same way in exactly the same place at exactly the same time, and thus an Alpha is brought into existence. How can this procedure create *different* alphas? Perhaps  $w_2$  and  $w_3$  are really the same world (and we are calling one alpha by two different names). On the other hand, perhaps  $w_2$  and  $w_3$  are different worlds (and Alfred and Bernard different alphas) simply because those worlds stand in different relations to the actual world.

Let's get back to the bicycle. A bicycle can survive the gradual replacement of each and every one of its parts. But, given that the bicycle came into existence made up of  $P_1, P_2, P_3, \dots P_n$ , it is not possible that it should have come into existence made up of entirely different parts. It could have originated with one of these parts replaced, or with two perhaps, with three, but not with a total replacement. Where, in this series, do we pass (*via* a region of indeterminacy) from possibility to impossibility?

Pretend that our bicycle could have come into existence with half of its parts replaced, but could not have come into existence with two-thirds of its parts replaced. Under this hypothesis, 'it is not possible that this bicycle should have come into existence made up of entirely different parts' cannot be interpreted to mean that there are no worlds of any sort in which the bicycle came into existence made up of entirely different parts. It can only be taken to mean that worlds in which this occurs, if there are any, are not possible relative to the *actual* world. For, after all, our bicycle could have come into existence with half of its parts replaced. And, if that had been the case, it would have been possible that our bicycle should have come into existence made up of parts entirely different from  $P_1, P_2, P_3, \dots P_n$ .

Now assume that our bicycle could have originated with any third of its parts replaced, and could not have originated with half of its parts replaced. Under this assumption, we have to cross from a would-have-been-possible world to a would-have-been-a-would-have-been-possible world in order to find "our bicycle" with all of parts  $P_1, P_2, P_3, \dots P_n$  replaced. I suspect that this cannot be done.

Our bicycle could have come into existence with one third of its parts replaced. And, if it had originated in that condition, it would have been possible for it to have come into existence with two thirds of its parts other than  $P_1, P_2, P_3, \dots P_n$ . We have moved from a possible world to a would-have-been-possible world. Next one wants to say 'Suppose our bicycle had come into existence with two thirds of parts

$P_1, P_2, P_3, \dots P_n$  replaced—in that case, a total replacement would have been possible'. But, by hypothesis, we *cannot* suppose that our bicycle came into existence with two thirds of parts  $P_1, P_2, P_3, \dots P_n$  replaced. Apparently, we can take one step into the realm of the impossible, but not two.

## II

Why does Plantinga believe that what is possible does not vary from world to world? He offers the following argument.

- (1) If a state of affairs  $S$  is possible, then it is necessarily possible; that is, possible with respect to every possible world.

From this, he claims, it follows that

- (2) Every possible world is possible with respect to every possible world.

And from this he derives

- (3) Any state of affairs possible with respect to at least one possible world, is possible with respect to every possible world. (Ibid., p. 54.)

No evidence is offered for (1). One has the impression that it is supposed to be intuitively obvious. My intuition is that it is false.

Alfred came into existence made up of  $E_1, E_2$ , and  $E_3$ . But it could have come into existence made up of  $E_4, E_2$ , and  $E_3$ , or of  $E_1, E_5$ , and  $E_3$ . Thus the state of affairs of Alfred's having come into existence made up of  $E_4, E_2$ , and  $E_3$  is possible; but it is not *necessarily* possible. There is a possible world in which Alfred came into existence made up of  $E_1, E_5$ , and  $E_3$ , and in *that* world it is *not* possible that Alfred should have come into existence made up of  $E_4, E_2$ , and  $E_3$ . The rules governing the re-identification of alphas forbid it. Hence it is only a *contingent* fact that this state of affairs is possible.