CRITICAL STUDY

The Nature of Necessity *(A. Plantinga)*

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Alvin Plantinga's recent book [1] might better be titled "The Nature of Necessity *De Re*", for almost all of it is concerned in some way with modal propositions about individuals as such. No one else has produced an up-to-date map of this territory on so large a scale, and the book can be recommended, as important and original, to all who are interested in modality *de re*. Its lucid and comprehensive exposition will make it a starting point for much future discussion. It is written elegantly, and with wit as well as attention to technical niceties. Although most sections of it will interest the specialist, the explanations consistently start near enough to the beginning to make the book very suitable for advanced undergraduate courses.

In addition to expounding and defending a theory of modality *de re* (chs. 1-6 and Appendix), Plantinga defends the thesis that there in no sense *are* any possible objects that do not exist (chs. 7-8), and discusses two subjects from the philosophy of religion—the Free Will Defense to the Problem of Evil (ch. 9), and ontological arguments for the existence of God (ch. 10)—with emphasis on their *de re* modal aspects. I shall discuss his defense of modality *de re*, his views about possible worlds and possible objects, and one issue about the Problem of Evil.

I. THE DEFENSE OF MODALITY *DE RE*

There are, as Plantinga claims, "philosophers who think to make tolerable sense of modality *de dicto* while finding modality *de re* utterly obscure" ([1]: 42). The centerpiece of his defense

of modality *de re* is an attempt to render it intelligible to such skeptics by explaining it in terms of modality *de dicto*. For example, the modal claim *de re*,

(1) Socrates is essentially a non-planet,

is to be explained as equivalent to

(2) Socrates is a non-planet and the proposition *Socrates is a planet* is necessarily false,

which according to Plantinga expresses a modal claim only *de dicto* ([1]: 29).

The problem for such an explanation is "to state general directions for picking out some proposition ... whose *de dicto* modal properties determine whether [an object] *x* has [a property] *P* essentially" ([1]: 30). There will generally be many distinct, indeed non-equivalent, propositions ascribing *P* to *x*. Thus if *x* is Socrates and *P* is snubnosedness, *Socrates is snubnosed* and *Xanthippe's snubnosed husband is snubnosed* both ascribe *P* to *x*. But which of them (if either) is the proposition whose modal status determines whether *x* has *P* essentially? It is chiefly because of ·this problem that the possibility of explaining *de re* in terms of *de dicto* modality has been doubted.

Plantinga proposes the following definitions as a solution to the problem:

D$_3$ For any object *x* and property *P*, if *x* and *P* are baptized [i.e. have proper names], then $K(x,P)$ is the proposition expressed by replacing '*x*' and '*P*' in '*x* has the complement of *P*' by proper names of *x* and *P*; otherwise $K(x,P)$ is the proposition that *would be* expressed by the result of the indicated replacement if *x* and *P* were baptized ([1]: 32).

D$_2$ *x* has *P* essentially if and only if *x* has P^1 and $K(x,P)$ is necessarily false ([1]: 30).

To D$_3$ must be added, strictly speaking, "that the proper name in question is, in the sentence in question, to *function as* a proper name of *x*" ([1]: 40).

This explanation seems to me to involve a vicious circle. An object (and perhaps even a property) may have many proper

names. For any x, P, therefore, there may be many sentences indicated by D_3 as expressing $K(x,P)$. The description of $K(x,P)$, as given in D_3, will be improper, and will fail in its task of picking out a single proposition, unless all of these sentences express the same proposition. Plantinga believes that they do; but as "questions of propositional identity are said to be difficult", he points out that it is enough for him if they express propositions that are all mutually equivalent. In that case he can define $K(x,P)$ as the *class* of these propositions, and "add that x has P essentially just in case each member of this class is necessarily false" ([1]: 36). But it is incumbent on him at least to satisfy us that all the members of the class are indeed mutually equivalent in certain cases.

Consider, for example, the claim that Phosphorus is essentially identical with Phosphorus—a claim that is true, according to any reasonable theory of modality *de re*. Since both "Hesperus" and "Phosphorus" are proper names of Phosphorus, both

> (3) Phosphorus has the complement of *being identical with Phosphorus*

and

> (4) Hesperus has the complement of *being identical with Phosphorus*

express K(Phosphorus, *being identical with Phosphorus*) according to D_3. (It may be an extension of the notion of a proper name to regard *"being identical with Phosphorus"* as a proper name of a property, but I take it to be an extension authorized by Plantinga, [1]: 31.) We will readily agree that (3) is necessarily false, but it is at least initially plausible to regard (4) as contingent. Plantinga, however, must show that they are logically equivalent. For if they are not, his explanation fails to account for the essential identity of Phosphorus with Phosphorus.

This is the point at which he becomes involved in a vicious circle. For his principal argument ([1]: 81-7) for the equivalence of (3) and (4), and for the necessary falsity of (4), depends on his theory of proper names. The argument is convincing if the theory is granted; but the theory, as Plantinga admits ([1]: 40f.), involves *de re* modal notions. Specifically,

his argument depends on the thesis that if N is a proper name of x and is used as such, then N expresses a property that x has essentially. This is obviously a modal claim *de re*, and not something that can reasonably be presupposed in explaining *de re* modality to those who doubt its intelligibility.

Plantinga tries, unsuccessfully I think, to refute this charge of circularity.[2] He argues that in trying to show the skeptic how to find a translation for modal claims *de re* he does not presuppose that the skeptic accepts his whole theory (or any complete theory) of proper names, but only "certain truths about proper names" ([1]: 41f.). He seems to offer three suggestions as to what these truths, which must not be modal claims *de re*, might be. But none of the three enables him to show the equivalence of (3) and (4).

(i) Plantinga's "account presupposes that proper names do not" function as abbreviated definite descriptions ([1]: 41). The theory thus rejected is indeed one possible ground for the opinion that (4) is contingent. But refuting theories that might lead one to regard (4) as contingent does not suffice to justify the opinion that it is necessarily false. For most of our pretheoretical intuitions are probably on the side of thinking it contingent. We need to be convinced of a theory that implies its necessary falsity.

(ii) Plantinga is willing to assume that proper names are roughly equivalent to demonstratives, so that (4) expresses a proposition also expressed by

> (5) This has the complement of *being identical with Phosphorus*,

where "this" is used to refer to Hesperus (cf. [1]: 41). This suggestion would need more defense than Plantinga gives for it; but suppose we accept it, for the sake of argument. Since "Phosphorus" is a proper name of Hesperus too, (4) also expresses a proposition expressed by

> (6) This has the complement of *being identical with that*,

where both "this" and "that" are used to refer to Hesperus. For similar reasons, (6) will express a proposition also expressed by (3). Therefore, it may be argued, (4) expresses the same proposition as (3), and is necessarily false.

In order to complete this argument, however, it is

necessary to show or assume that the proposition expressed by
(4) and (6) is the same, or at least has the same modal status, as
the proposition expressed by (3) and (6). And why should the
skeptic accept that assumption? Suppose that (4) expresses a
proposition expressed by (6) under the following circum-
stances: one points at Hesperus in the evening sky while saying
"this", and one says "that" without pointing, but intending the
reference of "that" to be fixed by a previous observation of
Phosphorus in the morning sky. Is it evident to pretheoretical
intuition that (6), so uttered, expresses a necessarily false
proposition? I think not. (Maybe it does, as Plantinga thinks (cf.
[1]: 84f.), express a necessarily false proposition; but I do not
think it intuitively evident that it does.) Or is it intuitively
evident that (6), uttered as I have described, expresses the same
proposition it would express if it were uttered while pointing at
Phosphorus in the morning sky during the utterance of both
"this" and "that"? I think not. In order to justify his views
about (6), Plantinga would have to invoke a theory of
demonstratives. I see no reason to believe that that theory
would be any freer of modal theses *de re* than his theory of
proper names.

(iii) Plantinga's final appeal is to intuition. His enterprise
does not require that the skeptic agree with his whole theory of
proper names. "It requires only that [the skeptic and Plantinga]
agree (at least for the most part) as to what propositions are
expressed by the sentences resulting from the indicated substi-
tutions of proper names into '*x* has the complement of *P*' "
([1]: 43). In particular, we may surely add, it requires the
skeptic to agree that (3) and (4) express the same proposition,
or logically equivalent propositions. Plantinga's explanation of
modality *de re* can avoid the vicious circle if (and so far as I can
see, only if) it is reasonable to expect this agreement from the
skeptic in advance of his acceptance of a *de re* modal theory of
proper names. To me it does not seem reasonable.

Even if Plantinga's explanation can be cleared of the
circularity charge, it will not resolve all important doubts about
the intelligibility of modality *de re*. At best it will solve one
problem arising from the opinion (not endorsed by Plantinga)
that all broadly logical modality must be understood in terms of
analyticity (cf. Quine, [12]: 174, [11]: 155; Plantinga,
[1]: 26-9). Since analytic truth, analytic falsity, and their

complements are thought to be properties of *dicta* (sentences, statements, or propositions) and not of relations between objects and properties,[3] it may have been supposed that a modal claim *de re* cannot be understood unless its truth or falsity can be seen to depend on the modal status of some identifiable *dictum*. Plantinga's explanation, if successful, enables us to identify the crucial *dictum* for that purpose.

He makes no attempt, however, to explain in general how the crucial *dictum* can be analytically false when his theory requires it to be. He holds, for example, that Socrates is essentially a non-number, and therefore presumably that the proposition *Socrates is a number* is necessarily false. But if, as Plantinga claims, "Socrates" is not an abbreviated description, how can "Socrates is not a number" express an *analytically* false proposition? Plantinga seems to accept views which imply that analysis of the meaning of a proper name, so far as users of the name must be in a position to know it, does not suffice to determine any properties of the object named (not even its having the complement of numberhood) except a certain historical relation to the present use of the name ([1]: 36-41, 137-44). This precludes his giving, for *Socrates is a number*, the usual sort of explanation for analytic falsity of an atomic proposition of subject-predicate form; and it is not evident that any alternative explanation, not presupposing the notion of an essential property, is available to him.

Another influential objection to the intelligibility of *de re* modality does not depend on the relation between necessity and analyticity. There is thought to be, as Richard Cartwright has put it, some "obscurity of the grounds on which ratings of attributes as essential or accidental are to be made" ([6]: 626). Terence Parsons refers to "the claim that the truth-conditions of essential sentences are so indeterminate as to leave them devoid of any significance" ([10]: 48f.). A similar opinion of the arbitrariness of modal judgments *de re* is probably one of the motives underlying Quine's scorn for the "favoritism" and "invidious attitude" involved in regarding some properties of an object as essential and others as merely accidental ([11]: 155).

Any obscurity of this sort is in no way cleared up by Plantinga's explanation of *de re* in terms of *de dicto* modality. If we are perplexed by the question, "Is Dancer's Image essentially or only accidentally male?" (Cartwright's example),

we will surely be just as puzzled by the question whether "Dancer's Image has the complement of maleness" is necessarily false. If this perplexity led us to reject modality *de re* as generating unintelligible questions, it should equally lead us to exclude proper names and individual constants from the scope of our *de dicto* modal operators.

Some modal judgments *de re*, of course, have straightforwardly logical grounds that do not seem obscure. Such are the judgments that Socrates has essentially the properties *being unmarried if a bachelor* and *being identical with Socrates* (cf. Plantinga, [1]: 61f.). The terms "essential" and "accidental" might have a legitimate role in expressing these judgments even if we had to regard them as undefined for such cases as the maleness of Dancer's Image.

But the best and most illuminating defense of *de re* modality would be a plausible general theory of the truth conditions of modal assertions *de re*. This might, for instance, consist largely in a statement of necessary and sufficient conditions for transworld or counterfactual identity of different types of thing. Plantinga disclaims possession of such a theory ([1]: 101). It would certainly be a very ambitious undertaking to construct one; and the theory of modality *de re* that he does give us is impressive and interesting in other respects. I cannot see, however, that he has made any great advance in the project of vindicating the intelligibility of modality *de re*.

II. POSSIBLE WORLDS

Plantinga makes such extensive use of the notion of possible worlds that it is disappointing, in a book on the *nature* of necessity, that he does not have more to say about the nature of possible worlds. If we try to work out the conception of their nature that is implicit in the book, however, something rather interesting emerges.

Following Stalnaker ([13]) we may distinguish two types of realism about possible worlds. *Extreme realism* is the theory of David Lewis. Lewis accepts the notion of a possible world as primitive. If someone demands an explanation, Lewis "can only ask him to admit that he knows what sort of thing our actual world is, and then explain that other worlds are more things of *that* sort, differing not in kind but only in what goes on at

them" ([9]: 85). And what indeed is the actual world? Lewis assumes that "I and all my surroundings" ([9]: 86) constitute it, or at least are constituents of it. It is a concrete object, or at least has concrete constituents. Other possible worlds, being things of the same sort as the actual world, also have concrete constituents—although some of those constituents are objects that do not exist in our actual world. Extreme realism is therefore a *possibilistic* theory. Possibilism is the doctrine that there in some sense *are* things that could possibly exist but do not. And I take it that if one is committed to the being of entities that have as constituents things that could exist but do not, then one is committed to the being of those constituents.[4]

The similarity of other worlds to the actual world implies also that in many cases the concrete constituents of non-actual possible worlds have, at those worlds, properties which are also exemplified in the actual world—such properties as greenness, wisdom, snubnosedness, and believing themselves to be actual (cf. Lewis, [8]: 186). And something's having greenness at some other possible world is just like something's actually having greenness, except that it occurs at a different (non-actual) place in the logical space constituted by the system of possible worlds. Here a notion of greenness (neutral as between actual and merely possible greenness), and a notion of having a property at or in a world, are presupposed as primitive. Having greenness (or any other property) actually, on the other hand, is *defined* as having it in the actual world.

This view gives rise to the Problem of Actuality: how is the actual world different from the other possible worlds? Each possible world is actual *in* itself, and therefore is possibly actual. Only the actual world is *actually* actual, of course. But that just means that it alone is actual *in* the *actual* world—which is circular. Lewis is content to accept a conclusion which seems implausible to me (cf. Adams, [3]: 215-20)—the conclusion that no world is actual except relative to a standpoint within itself, and that actuality is not an absolute distinction of any world. "The actual world" is an indexical expression, he thinks, normally denoting whatever world it is uttered in, and having no further meaning beyond that (Lewis, [8]: 184ff., [9]: 85f.).

I shall formulate the version of *moderate realism* about possible worlds that I believe Plantinga presupposes (rather than

that espoused by Stalnaker). Plantinga defines possible worlds as maximal possible states of affairs ([1]: 44f.). Unlike Lewis, he regards possible worlds as purely abstract objects,[5] which do not have concrete constituents. This might lead us to suspect that he rejects Lewis's claim that other possible worlds are more things of the same sort as the actual world. But I shall read Plantinga, instead, as supposing that all states of affairs, and therefore the actual world too, are purely abstract objects. I and my concrete surroundings are not constituents of the actual world, on this view. (Assuming that there is a whole, sometimes called "the actual world," of which I am a constituent, we could call it "reality" or "the actual universe.")

Plantinga's moderate realism about possible worlds is an *actualistic* theory, actualism being the doctrine that there in no sense *are* any things that do not exist. Plantinga thinks that there are (and indeed exist) possible worlds "in" which there "exist" objects that fail to exist in the actual world ([1]: 132, 187), but he denies that there are any such objects. These positions are rendered compatible only by the assumption that the worlds in question do not have as constituents the objects that "exist in" them.

Related to this actualism is the point that existing, or having a property, *in* a possible world is not like existing or having the property, according to Plantinga. The difference is made clear by his definitions of the former notions:

> To say that Socrates exists in *W* is not, of course, to say that Socrates exists, but only that he *would have*, had *W* been actual . . . .
> To say that Socrates has the property of being snubnosed in a world *W*, is to say that Socrates would have had the property of being snubnosed, had *W* been actual . . . ([1]: 47).[6]

The order of analysis here enables Plantinga to offer a solution to the Problem of Actuality. Unlike Lewis, he recognizes no notion of snubnosedness that is neutral as between actual and merely possible snubnosedness. His basic notion of having any property *P* is a notion of *actually* having *P*; it is prior, in his view, to the notion of having *P in* a possible world, and is used to define the latter. Therefore there is no need to explain a world's actually having the property of actuality in terms of its having it *in* the actual world. The actual world *has* the property of actuality. Other possible worlds do

not, but *would* have it if they were actual; it is not possible that
they be actual and not have it. That is all that it means to say
that every possible world is actual *in* itself ([1]: 49). Plantinga
can regard actuality, accordingly, as an absolute, not a
world-relative property of possible worlds, and of states of
affairs in general.

"Actual" is an undefined primitive in his theory, which in
that respect resembles what I have elsewhere called "the simple
property theory of actuality". His solution to the Problem of
Actuality is presented ([1]: 48f.) in response to an objection
(that the actual world's actuality will turn out to be its being
actual, like every other possible world, in itself) which I have
urged (in [3]: 221f.) against the simple property theory.
Plantinga's response seems to me adequate, as I have explained;
but I still think the objection cogent if the simple property
theory is combined, as I had assumed it would be, with extreme
realism about possible worlds. Lewis's extreme realism, and
particularly his conception of what it is for something to have a
property *in* a possible world, render Plantinga's solution (and I
would say, any satisfactory solution) of the Problem of
Actuality unavailable to him.

Actuality, as Plantinga conceives of it, is a property of
certain abstract objects (viz. states of affairs); and at least in the
case of such states of affairs as my wearing glasses, it
presumably consists in some sort of correspondence between its
abstract possessor and the concrete reality of which I am a
constituent. In this it resembles truth (conceived of as a
property of propositions). Indeed, it may *be* truth, for all
Plantinga is willing to assert. He declines to commit himself as
to whether "propositions just *are* states of affairs" ([1]: 45). If
propositions and states of affairs are the same objects, then
possible worlds may be identified with their books. (In
Plantinga's terminology "the book on a world *W* is the set of
propositions *true in W*" ([1]: 46). It is a maximal consistent
set of propositions.) And the actuality of a world may be
identified with the truth of its book. If we take the terms
"proposition" and "true" as primitive, and "state of affairs,"
"world," and "actual" as defined, these equivalences yield a
theory of actuality which I have elsewhere advanced under the
name of "the true story theory" ([3]: 225ff.).

Plantinga gives us no reason for postulating propositions

and states of affairs as two distinct types of abstract object. If
we suppose there is just one type, which would it be better to
call them—"proposition" or "state of affairs"? "Proposition"
has the advantage of conveying more naturally the view that
they are abstract objects. But a more important consideration
may be what conception we wish to suggest of the *structure* of
the objects. "Proposition" suggests that they have the
structure of sentences. "State of affairs", and "world" even
more strongly, suggest that they have a structure similar to that
of the more or less concrete reality which would exist if they
were actual.

III. POSSIBLE OBJECTS

There is not room here for a full review of Plantinga's extended
defense of the view that there are no non-existent objects
([1]: chs. 7-8). I must pass over, for example, his valuable
discussions of singular negative existential propositions and of
the function of names in fiction. I have just three observations
to make.

   (i) As Plantinga notes, one important argument for non-
existent objects is based on what he calls "the Ontological
Principle":

> Any world in which a singular proposition is true, is one in which
> *there is* such a thing as its subject, or one in which its subject has
> either existence or being ([1]: 137).

He attempts to dispose of the Ontological Principle by claiming
that it owes all its plausibility to one of its consequences, which
he thinks true and calls "The Restricted Ontological Principle":

> Any world in which a *predicative* singular proposition is true is one
> in which the subject of that proposition has being or existence
> ([1]: 150).

(A predicative singular proposition is one that predicates a
property of its subject.)
   I am not persuaded that the Ontological Principle owes all
its plausibility to the Restricted Ontological Principle. Plantinga
gives little or no argument to show that it does. And I find his
distinction between predicative and impredicative singular

propositions so difficult that it is not a source of much
plausibility to me. But the most important point here is this:
the unrestricted Ontological Principle is readily interpreted as a
consequence of the unrestricted validity of Existential Generali-
zation, for propositions, in all possible worlds; and that is a
plentiful source of plausibility for it. Plantinga admits that the
proposition *Socrates does not exist* does exist in worlds in
which it is true. But he denies that the proposition $(\exists x)(x$ *does
not exist*) is true in those (or any) worlds. This seems to involve
a restriction on the validity of Existential Generalization.
Logical systems (known as "free logic") have been developed
which are characterized by such a restriction, but it is surely
worth avoiding if possible.

(ii) According to Plantinga I would in no sense be if I did
not actually exist, but I have an *essence* (a property essential to
me and not possibly possessed by any other object) which
would exist even if I did not. He thinks there exist many
essences of non-existent persons (cf. [1]: 187ff.). It is striking
that Plantinga recognizes only one type of abstract object
concretely exemplified by me—namely, properties, and among
them most notably essences. Why not a duality corresponding
to the duality of states of affairs and propositions? Why not say
that I am the concrete exemplification of a *possible person*,
which is an abstract object that would exist even if I did not?
We could remain agnostic about whether essences just *are* such
possible objects, as Plantinga remains agnostic about whether
propositions just *are* states of affairs. In this way a theory of
possible but non-actual objects could be reconciled with
actualism; for non-actual objects would not fail to exist, but fail
only to be exemplified.

I doubt, however, that this suggestion will satisfy the
principal interests of the partisans of non-actual objects. For
example, it will not save the unrestricted validity of Existential
Generalization. If *Socrates does not exist* is true in some worlds,
$(\exists x)(x$ *does not exist*) will still not be true in those worlds; for
in those worlds the concrete person Socrates will not be in the
domain of quantification, and the (abstract) possible person
Socrates will exist. ("Socrates" is referentially ambiguous here.)
Furthermore, it may be suspected that an abstract possible
individual cannot provide a basis, as a concrete but non-existent
possible individual would, for truths involving the individual

thisness of the concrete individual. But this brings me to my next observation.

(iii) The place of possible but non-existent individuals is largely taken, in Plantinga's theory, by their essences. Essences, in Plantinga's sense (I would prefer to call them "haecceities"), are abstract individualities. He declines to answer the question, "Is each essence equivalent to some intersection of 'qualitative' or 'natural' properties?" ([1]: 100). A negative answer would imply that essences are not purely qualitative, not pure suchnesses, but include irreducible thisnesses. Plantinga evidently is not prepared to exclude abstract objects of this sort.

There are those, however, who find the notion of a purely abstract thisness (a thisness which can exist, or be, without the thing whose thisness it is) strongly counterintuitive. They think that all purely abstract objects are purely qualitative or general, and that there is no such thing as an abstract property of being *this* individual, or of bearing such and such a relation to *this* individual. Instead, they recognize only the individual itself, and (perhaps) properties and relations of which it is a constituent.

The rejection of abstract thisness would close off important options for an actualistic theory of possible worlds. For example, another question that Plantinga declines to answer is, "Are there worlds that differ solely by a permutation of individuals?" ([1]: 100). Suppose

(7) There are possible worlds that differ solely by a permutation of individuals that do not exist in the actual world.

Then there must be possible worlds that differ solely by one of them bearing to *this* non-existent individual the relation that the other bears to *that* non-existent individual. But if we also suppose that there is no such thing as a purely abstract property of bearing that relation to *this* individual, then we cannot consistently maintain (7) without admitting the non-existent individuals themselves to our ontology, as constituents of the possible worlds or of properties of the possible worlds—which is inconsistent with actualism.

A reduction of possible worlds to books affords no escape from this dilemma. The books to which the isomorphic worlds of (7) would be reduced will be distinguished solely by the fact that a set of singular propositions belonging to one book is

about *this* non-existent individual, whereas a set of singular propositions, otherwise exactly alike, belonging to the other book, is about *that* non-existent individual. But if there is no such thing as a purely abstract property of being about *this* individual, then the non-existent individuals must be constituents of the singular propositions, or of relational properties of the propositions—which again is incompatible with actualism.

Plantinga does not formulate the question, whether to admit a purely abstract thisness. But his views clearly tend toward an at least conditionally affirmative answer. For he admits unexemplified individual essences, but excludes non-existent individuals, regardless of whether the essences involve irreducible thisnesses.

IV. PROBABILITY AND THE PROBLEM OF EVIL

There are excellent things in Plantinga's chapters (9 and 10) about the philosophy of religion. His formulation of a modal argument for the existence of God ([1]: ch. 10) is the best I have seen, by virtue of his use of modality *de re*, although he has little light to shed on the evaluation of the possibility premise which we have known for some time to be crucial in such arguments. His new version of the Free Will Defense ([1]: ch. 9) contains fascinating material about God's knowledge of counterfactual conditionals, which I have criticized elsewhere ([4]).

Most of what Plantinga says about the Problem of Evil is about the *logical compatibility* of God and evil. Here, however, I will comment on his attempted refutation of the view that "the existence of evil, or of the amount of it we find (perhaps coupled with other things we know) makes it *unlikely* or *improbable* that God exists" ([1]: 193). I will simplify his argument, but not at any point on which I think my criticism bears.

Consider the following propositions. ("Turp" is Plantinga's name for a supposed unit of evil.)

(8) There are 10^{13} turps of evil.

(9) Every world that God could have actualized and that
      contains less than 10^{13} turps of evil, contains less
      broadly moral good, and a less favorable over-all
      balance of good and evil, than the actual world
      contains.

(10) God exists, and is the omnipotent, omniscient, and
      morally perfect creator of the world.

Plantinga's argument has, in effect, three premises:

[A] (8) does not disconfirm (9);
[B] If (8) does not disconfirm (9), then (8) does not
      disconfirm the conjunction of (9) and (10);
[C] If (8) disconfirms (10), then (8) disconfirms the
      conjunction of (9) and (10)

—from which it follows that (8) does not disconfirm (10).

Suppose that $\ulcorner p$ disconfirms $q \urcorner$ means that q would be
less probable with respect to our knowledge if we knew p to be
true than if we did not. Then [A] seems correct. So does [B],
though its antecedent is irrelevant, making [A] irrelevant too. It
is not in general impossible for a piece of evidence to disconfirm
a conjunction by disconfirming one conjunct without discon-
firming the other. Even so, (8) does not disconfirm the
conjunction of (9) and (10); for (8) is entailed by (9). Let (9′)
be the result of replacing "the actual world" in (9) by "some
world that God could have actualized and that contains 10^{13}
turps of evil." (9′) does not entail (8). But wouldn't (8) be
likely to be true if both (9′) and (10) were true? If so, (8) does
not disconfirm the conjunction of (9′) and (10). There is no
compelling reason to accept [C], however. A piece of evidence
can leave the probability of a conjunction unaffected, or even
increase it, while diminishing the probability of one conjunct.
"That bird is white" increases the probability of "That bird is
white and a crow", for example, while diminishing the
probability of "That bird is a crow".

But Plantinga says he is using "disconfirm" in a different
sense, in which p disconfirms q if q would be less probable than
not-q, with respect to our knowledge, "if p were the only thing
we knew that was relevant to q" ([1]: 194). Under this

interpretation (which seems to me an unfortunate choice) [C] is quite correct. For if one conjunct is less probable than its negation, so is the whole conjunction. Now, however, it is much less clear that (8) does not disconfirm (9) or the conjunction of (9) and (10). For it may be that (9) is inherently so implausible that it is less probable than its negation antecedently to all evidence, and remains less probable than its negation when (8) is added as our sole evidence. In that case the conjunction of (9) and (10) must be similarly improbable, with or without (8) as evidence. Then it follows, by Plantinga's definition of "disconfirm", that (8) disconfirms (9) and the conjunction of (9) and (10), vacuously. And the way is still open for (8) to disconfirm (10), non-vacuously.

I suppose that most philosophers who are inclined to accept the probabilistic argument from evil for atheism do indeed think that (9) is improbable antecedent to all empirical evidence. Naturally their belief is difficult to justify, and Plantinga may reasonably refuse to accept it; but it is widely held, and I cannot see that he has said anything persuasive against it. Perhaps he presupposes, in his definition of "disconfirm", that there are no probabilities prior to the evidence; but I cannot see how the evidential bearing of (8) on (10) can be assessed without some judgment of the probability of (9) or (9') antecedent to the evidence. If the antecedent probability of (9) or (9') is very high, (8) might be an important piece of evidence *for* theism. If it is very low, (8) counts strongly against (10)—unless (as I have argued in [2]) there is reason to doubt that a morally perfect creator would create the best world he could. In any case, a notion of disconfirmation that is to be useful in this context must allow for such prior probabilities.[7]

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NOTES

[1] The second "x has P" in D_2, like "Socrates is a non-planet" in (2), is present in order to accommodate Plantinga's view that if x does not exist x cannot have any properties at all, not even essential ones, although $K(x, P)$ can still be necessarily false.

[2] [1]: 40-3. He is responding to Camp, [5] 223f. The charge was also stated by Corrado, [7].

[3] Tyler Burge has reminded me, in this connection, that on one very influential view (not held by Plantinga) about singular propositions, the proposition that Socrates is a planet *is* a relation (or something very like a relation) between Socrates and the property *being a planet*.

[4] I am indebted to Thomas Wetzel for this point, which in his dissertation (in progress at UCLA) plays a part in an argument for the being of non-existent objects. It was he also who made me aware of the importance of the relation of constituency in these matters, although he uses "constituent" in a narrower and more precise sense than I do.

The account of possibilism and actualism given here is to be taken as correcting that in [3]; I no longer think that the question, whether the notion of a possible world is taken as primitive, is crucial. More important are the questions whether non-actual possible worlds are as similar as Lewis supposes to the actual universe of which we are constituents, and particularly whether they have non-existent constituents and whether the notion of having a property *in* a world is taken as prior to the notion of having it *actually*.

[5] I am indebted to correspondence with Plantinga for the use of "abstract" in this context, though I do not mean to claim his authority for my interpretation of his views.

[6] He offers other definitions as equivalent, but we need not quote them here.

[7] I am indebted, for discussion and comments, to Marilyn McCord Adams, Tyler Burge, David Kaplan, Alvin Plantinga, and Thomas Wetzel.