MUSTN'T WHATEVER IS REFERRED TO EXIST?[1]

Gilbert Plumer

Some have claimed that though a proper name might denote the same individual with respect to any possible world (or, more generally, possible circumstance) in which he exists, it certainly cannot denote him with respect to a possible world in which he does not exist. With respect to such a world there must be a gap in the name's designation, it designates nothing. This is a mistake. There are worlds in which Quine does not exist. It does not follow that there are worlds with respect to which 'Quine' does not denote. What follows is that with respect to such a world 'Quine' denotes something which does not exist in that world. Indeed, Aristotle no longer exists, but 'Aristotle' continues to denote (him).

This is the gist of an argument David Kaplan (1973, p. 503) gives for postulating what has come to be called "Kaplan rigidity," as opposed to "Kripke rigidity"[2]--proponents of which are mistaken, according to the argument. It is an argument from analogy between time and modality. It quite rightly supposes that our temporal intuitions are more secure than our modal ones, and it trades on this. Others have subscribed to the argument by full rehearsal (e.g., Salmon 1981, pp. 37-40) or simple appropriation (e.g., Almog 1986, pp. 219-20, 231), yet there is no evaluation of it in recent discussions of the issue of Kaplan versus anti-Kaplan rigidity (Steinman 1985; Smith 1987; Deutsch forthcoming).

Section I of my discussion will be devoted to making the specific

question in dispute more precise, for it seems the argument gains forcefulness at the expense of carefulness. And this is not just because the argument is analogical. Section II will be devoted to criticizing the argument from the broader perspective of the general philosophical framework with which Kaplan and others operate. The relevant elements of this framework are the theory of singular propositions, the correspondence theory of truth, a formal semantics for tensed and modal language according to which some truth-value bearers change their truth-value through time and possibility, and finally, a particular treatment of a class of negative existentials which motivates the belief in Kaplan rigidity. I shall try to show that there is reason to believe that this framework is self-contradictory, and then in section III that the least radical yet still plausible way of resolving the problem would be to give up the final element of the framework. To this end I shall argue for an alternative treatment of the relevant class of negative existentials, one which is generalizable, eliminates the need for Kaplan rigidity and its temporal analog, and which so far as I know is new in that it involves a conception of truth at n-tuples of distinct times (worlds). And I will conclude by briefly considering a more radical way of resolving the apparent contradiction, viz., giving up the commitment to truth-value bearers which change their truth-value through time and possibility. This would also eliminate the need for Kaplan rigidity and its temporal analog.

I

Who would deny that "'Aristotle' continues to denote (him)"? But

notice that the argument is cast simply in terms of the name
"Aristotle" ("Quine") with respect to different times (worlds). Yet
a name is a word, and it seems a word cannot itself denote anything.
Kaplan would appear to agree, for on the preceding page he summarizes
his "view of the reference of proper names" in terms of "the proper
name used on some particular occasion."[3] This means that in the
argument we should understand the temporal case, as I believe we
naturally would anyway, to bespeak tokenings of the name "Aristotle"
at different times (to token an expression is to think it, and if
communication is desired, to utter or write it). Now the problem is
that the modal dual to this is tokenings of the name "Quine" in
different worlds, yet this is irrelevant, for the issue concerns
evaluations with respect to different worlds of a given tokening of
the name "Quine." The issue is over whether such a tokening denotes/
designates/refers to Quine even in worlds where he doesn't exist.
What is probably the right thing to say about the modal dual that is
actually present in the argument is unwittingly expressed by Kaplan
himself as an explanation of why some subscribe to anti-Kaplan
rigidity: "A simple confusion between our language and theirs...[T]he
inhabitants of a world in which Quine never exists would likely have
no name for him. So what!...It is our terms and formulas whose
denotation and truth value are being assessed with respect to the
possible world in question" (p. 505). Notice from this passage that
although Kaplan often speaks simply in terms of something not existing
in a world, what is meant, naturally enough, is never existing in the
world. In view of all this, the question in the modal case becomes:

(1M) Does a tokening of a designator designate the designatum (d) even
in worlds where d doesn't exist at any time?

If it were determined that the answer is affirmative for tokenings of
a kind of designator, then that kind would be Kaplan rigid in what we
have found to be the intended sense. Kaplan and his followers believe
that proper names and indexicals are Kaplan rigid (Kaplan extends the
doctrine to indexicals in his 1977, esp. sec. IV). But perhaps they
ought not discriminate against DD's (definite descriptions). W. P.
Alston argues that while "DD's exhibit type nonrigidity...DD tokens
are rigid, when used as designators" (1980, p. 34; cf., e.g., Brody
1979 and Wettstein 1981). In other words, the doctrine that DD's are
not rigid is a result of a failure to distinguish between types and
tokenings, and between tokenings which do and those which do not
exhibit the singular referring use. And it seems there could be no
good grounds for holding that DD's are rigid, but only proper names
and indexicals are Kaplan rigid. So the affirmative and negative
answers to (1M) might well be taken as applying to any natural
language designator.

The exact temporal dual to (1M) is:

(1T) Does a tokening of a designator designate the designatum (d) even
at times when d doesn't exist in any world?

Suppose I now token "Quine." The question (1T) poses with respect to
that tokening is whether it designates Quine at times when he exists
in no possible world--as if Quine could change from and (after a
respite) back into a round square! The problem is that (1T) presupposes
that something existing at one time could at an earlier or later time

be necessarily non-existent, and this is absurd, and so too the argument from analogy between time and modality for postulating Kaplan rigidity. Or so it appears.

There is a relatively painless way of adjusting (1M) to remove the absurdity in its dual:

(2M) Does a tokening at a time (t) of a designator designate the designatum (d) even in worlds where d doesn't exist at t?

The exact temporal dual to (2M) is:

(2T) Does a tokening in a world (w) of a designator designate the designatum (d) even at times when d doesn't exist in w?

(2M) leaves open the question of whether or not d ever exists in such worlds. Hence, if an affirmative answer to (2T) could be established, and thereby such an answer to (2M) on analogy between time and modality, it seems one could with impunity go on to not require duality and claim an affirmative answer to (1M). The alternative to (1M) and (2M) is a formulation that entirely eliminates the time variable, in which case we have the spectre of treating the (non-) existence of individuals such as Quine as timeless (Quine may be God-like in some respects, but not this one).

II

The reason Kaplan and others hold that the answer to (2T) is affirmative has to do with the problem of negative existentials, the problem being how we are to make sense of their being true (this definition is Cartwright's, 1960). Their concern is restricted to the

kind of negative existential which uncontroversially has a referent
(as opposed to, e.g., now tokening "the present king of France doesn't
exist" or "Pegasus doesn't exist"). In a relatively straightforward
way, these seem incapable of being true, but then how could a
particular's finiteness in time be semantically represented? Kaplan
writes "suppose I say,

(3) I do not exist.

Under what circumstances would <u>what</u> <u>I</u> <u>said</u> be true? It would be true
in circumstances in which I did not exist" (1977, p. 15; note the
language of the correspondence theory of truth). He argues that "we
must distinguish possible occasions of <u>use</u>--which I call <u>contexts</u>--
from possible circumstances of <u>evaluation</u> of what was said on a given
occasion of use" (p. 12), and regards "the what-is-said in a given
context--as propositions" (p. 13). Thus, although the proposition (<u>P</u>)
expressed by Kaplan's$_\wedge$tokening of (3) is false (e.g.) where the context
1977 A.D.
of the tokening determines the circumstance of evaluation, <u>P</u> is true
(e.g.) in the circumstances of the actual world at the turn of the
century. (Cf. Salmon 1981, pp. 37-38 and Almog 1986, pp. 219-20.)

   Why exactly is this supposed to require an affirmative answer to
(2T)? Kaplan, Salmon, and Almog are not explicit on this matter, and
as far as I can see, the only non-question-begging reasoning suggested
by the texts goes like this: Propositions are "constructions" which
are <u>brought into existence</u> by tokening sentences. Given that nothing
1977 A.D.
other than Kaplan's$_\wedge$tokening of (3) is involved in the construction
of <u>P</u> (i.e., given that <u>P</u> is not, as we might say, "over-constructed"
by other sentence tokening acts), a necessary condition of <u>P</u>'s being

true at 1900 A.D. is the tokening of "I" involved designating Kaplan at 1900 A.D. For, on the one hand, if this tokening of "I" designated something other than Kaplan with respect to 1900 A.D., you'd have a different proposition with respect to 1900 A.D. than P. So? Well, P wouldn't exist with respect to 1900 A.D., and presumably, a proposition is true at a time only if it exists then. On the other hand, if Kaplan's tokening of "I" designated nothing with respect to 1900 A.D., again you'd have P not existing with respect to 1900 A.D. Looking at this case from another angle, one of the links in the correspondence with the facts at 1900 A.D. would definitely be broken.[4]

The overall argument for postulating Kaplan rigidity involves "the now widely recognized close analogy" between time and modality which consists of the similar way they are treated in "the formal semantics for quantified tensed languages and modal languages" (Salmon 1981, p. 37). What is particularly relevant to our purposes in this similarity of treatment is a commitment to propositions (or to sentences) which are neutral with respect to both time and modality. In contrast to this, if for example (3) were understood as synonymous with "I do not actually exist now," P would be specific as to time and modality, and P's truth-value would change "neither through time nor possibility" (Kaplan 1977, p. 105; cf. 22-23). I shall go along and presume that some truth-value bearers change their truth-value through time and possibility, although this presumption will be questioned at the end.

What also stands out as relevant, as Graeme Forbes points out (1985, p. 28), is that on one widely recognized formal semantics, "an S5 model M for a set X of sentences of quantified modal logic" includes

"a non-empty set D of possible objects" such that there is "for each individual constant occurring in some sentence in X, an assignment to it of a referent, some object in D (so that the reference of a constant is the same at every world)" (my emphasis). And the situation in tense logic is essentially parallel (p. 39). If natural language designators mirrored individual constants in these respects, it would follow that natural language designators are Kaplan rigid and the answer for them to (2T) is affirmative. Nevertheless, one must be careful to realize that whether there is this mirroring is precisely a version of the question at issue.[5] After all, it's not as if natural language designators are like individual constants in every other respect; for example, reference is context-sensitive for the former in ways that it is not for the latter. So it would be question-begging to merely assert that they are alike in the respect of rigidity. There is a deeper point to make too. Even if one conceives of the enterprise of tense and modal logic as the regimentation (not just representation) of natural language, it is problematic whether one can, simply by fiat, make individual constants do what natural language designators cannot do. In particular, if it is impossible for natural language designators to, roughly speaking, refer to that which does not exist, then how could this be possible for individual constants? It is worth noting in this connection that there are semantics for quantified S5 (Davies 1978) which embody anti-Kaplan rigidity (in every case save one, but see below).

Now it is true that Kaplan-style semantics is distinctive in that it proposes that indexicals and proper names are "directly referential" (for discussion, see Deutsch forthcoming). Part of what this means is that they are expressions "whose semantical rules provide directly

that the referent in all possible circumstances is fixed to be the actual referent" of a possible occasion of use (Kaplan 1977, p. 12). But as far as I can see, there is no support other than what has already been reviewed for including in "all possible circumstances" those circumstances in which "the actual referent" does not exist.

The other notion in the concept of direct reference is that "in the case of a singular term which is directly referential, the constituent of the proposition is just the object itself" (p. 13; cf. 12). It is not, e.g., "Quine-under-a-guise-F, Quine-under-a-mode-of-presentation, Quine's qualitative essence, not even the nonqualitative property of being-identical-with-Quine." Rather, it is the "flesh-and-blood individual: Quine." (Almog 1986, p. 220; cf. Salmon 1986.) This is the guiding idea of the theory of singular propositions or what has been called "the new theory of reference" (Wettstein 1986, p. 185).

But now the problem should be clear. It is that the following four tenets collectively contain a contradiction:

(4) The object itself is a constituent of a proposition such as P, and

(5) the proposition is true at any time the object doesn't exist.

(6) A proposition is true at a time only if it exists then.

(7) A proposition exists at a time only if all its constituents exist then.

In our example, the contradiction reduces to holding that Kaplan does not, and that he does, exist at 1900 A.D. Up to this point in this

section we've seen how (4) and (5) figure, and how (6) seems to figure, in the view of Kaplan and others. But even though they don't explicitly hold (6), they ought to, as will be argued in the next section. As for (7), it seems a required element of any reasonable theory of propositions, but perhaps this especially pertains to the theory of singular propositions since its orientation is relatively concrete. As Almog says, "if some of the 'building blocks' of the proposition are contingently available objects, the hazardous vicissitudes of these objects infest what is constructed from them" (1986, p. 231). Given the analogy between time and modality, "temporarily" may be substituted for "contingently" in his statement. To say of a proposition that it exists at a time is to say that it wholly[6] exists at that time. This does not appear to be so for certain other kinds of entities, for instance, persons. I now exist, but might not now be whole, having lost, e.g., an arm. But a singular proposition cannot undergo such change. A singular proposition just is an object(s) and a "property" (or relation) in a certain structure, just is (according to Kaplan) "the ordered couple of these two components" (or generally, the ordered n-tuple; 1979, p. 387). "Without one of its constituents" it "could no more retain its identity than could a set without one of its members" (Fine 1985, p. 156; cf. 162).

III

It seems to me that (4), (6), and (7), when properly reformulated, are true; it is (5) that has to go, and with it, the motivation for believing in Kaplan rigidity. Now (4) is a consequence of "the new theory of reference," and in light of the vigorous support already

given the theory by Kaplan and others, not to mention space constraints, I shall here simply presume that the theory is correct (when properly recast). And at the end of the last section we saw some reason for believing (7), so that next leaves the job of arguing for (6) and the job of proper reformulation. My argument for (6) will be derived mainly from "the new theory of reference," which indicates that Kaplan, et al. ought to avow (6).

On a combination of "the new theory of reference" and what appears to be the most credible theory of truth, the correspondence theory, it is at best gratuitous to postulate propositions as bearers of truth-values. The correspondence theory says that truth is a matter of fitting the facts. This "fitting" or correspondence is naturally and plausibly understood as a relation of representation, with the relata being sentence tokenings on the one hand, and facts or states of affairs on the other, such that a sentence tokening is true (false) iff it represents (fails to represent) a state of affairs. A state of affairs or fact should be taken as a way things are, an aspect of the world, not (circularly) as a truth. Like a tower made of building blocks, a state of affairs is a structured entity with constituents, constituents which include "flesh-and-blood" individuals themselves. Insofar as this is "picture-thinking," there is a respect in which it should embolden rather than embarrass: picture-thinking is a good antidote and the fair counter to the anti-naturalistic fantasies of Platonic Heaven. And it is not picture-thinking in all cases; I should think that a tower made of building blocks is a (complex) state of affairs. In any case, by postulating propositions you're already committed to sentence tokenings (as the means by which propositions

are expressed) and, on a correspondence theory, to facts or states of affairs (as that to which true/false propositions correspond/don't correspond).[7] These middlemen ought to be eliminated, provided, I suppose, that you admit merely possible states of affairs and sentence tokenings (in order to preserve such principles as that every truth-value bearer has a contradictory). Yet in view of common modal locutions such as "I might have (said)...," these possibilia are entrenched in a way that propositions are not, provided that prop-ositions are not identified with meanings. And this is an identification which "the new theory of reference" cannot make because, e.g., it would be incompatible with its treatment of indexicals. On pain of fantastic ambiguity, the meaning of an indexical is "the semantical rule which fixes the reference" (Kaplan 1977, p. 43), not the object referred to by a tokening of one. In brief then, "the new theory of reference" should bespeak states of affairs instead of propositions.[8]

One should be particularly careful on one point. As already intimated, it seems best to not treat facts or states of affairs as being, by their very nature, constructions; rather, it is sentence tokenings and their meanings whose essence is that of a construct. One reason is to avoid being committed to a variety of backward causation. Consider our working example again. If you hold that Kaplan's tokening of (3) ("I do not exist") "generates" or brings into existence the state of affairs of his not existing ($\underline{P}$), then (aside from sounding like suicide) you hold that something which occurs in 1977 A.D. brings about something ($\underline{P}$) which exists at 1900 A.D. (or partially exists then, as I'll argue). It seems best to regard states of affairs as concrete facts, only some of which happen to be constructions, e.g.,

a tower made of building blocks. (In an important sense, this also applies to merely possible states of affairs. For example, many of them are such that if they had been actual, they would have been sensible.) However, notice that even given that this is right, it still does not by itself eliminate the need for an affirmative answer to (2T). For it could still be claimed that Kaplan's tokening of (3) is _true_ at 1900 A.D., which requires that it _represent_ a state of affairs which exists then, which in turn requires that Kaplan's tokening of "I" _designate_ him then. This brings us straight to my next point.

In order to deal with the temporal questions we've raised, truth must be relativized to time. The straightforward way of relativizing the above statement of the correspondence theory of truth, viz., that a sentence tokening is true (false) iff it represents (fails to represent) a state of affairs, is: A sentence tokening is true (false) at a time t iff it represents (fails to represent) a state of affairs which exists at t. Call this _the principle of temporalized correspondence_. As will be discussed, this principle is restricted to sentence tokenings which are neutral with respect to time, which is appropriate since that is how Kaplan's tokening of (3) is being understood.

Given the above, the criticism in section II can now be properly reformulated. The following four tenets collectively contain a contradiction:

(4') The object itself is a constituent of a state of affairs such as _P_, and

(5') a sentence tokening which represents the state of affairs is true at any time the object doesn't exist.

(6') A sentence tokening is true at a time only if it represents a
     state of affairs which exists then.

(7') A state of affairs exists at a time only if all its constituents
     exist then.

Needless to say, (6') is entailed by the principle of temporalized
correspondence.

It seems that the way the principle formulates the relativization
to times (taken singly) is the obvious, natural way to do it. Notice
that in the formulation I use "exists" rather than "obtains." I
purposely eschew the latter, philosophically fashionable term because
it is ambiguous as between meaning (A) _true_ or something similar, or
(B) _exists_. On interpretation (A) the principle of temporalized
correspondence would be pretty vacuous if not flatly circular. And on
(A) the difference between states of affairs and propositions would be
obscured since, supposedly, propositions bear truth-values. Moreover,
(A) would raise the question of whether there are in existence
necessarily non-obtaining states of affairs (like necessarily false
propositions), whereas (B) rules out such denizens of Platonic Heaven,
for the idea of an existent but necessarily non-existent state of
affairs is self-contradictory. This is not to deny there are necessarily
false _sentence tokenings_. They exist, e.g., "the number five is even."

There is an alternative formulation of the principle of temporalized
correspondence, viz.: a sentence tokening is true (false) at a time t
iff at t it represents (fails to represent) a state of affairs. But
if this isn't equivalent to the original formulation, then I have no
idea of what it means. The real question is whether there is an

acceptable alternative formulation which would permit Kaplan's tokening of (3) to be true at 1900 A.D. Now Kit Fine holds (4), and (5) and (7)-- or at least their modal duals.   And evidently unlike Kaplan, et al., he recognizes that this means the modal dual of (6) poses a problem. So he distinguishes between "inner" and "outer" truth (1985, p. 163):

> According to the outer notion, a proposition is true in a
> possible world regardless of whether it exists in that
> world; according to the inner notion, a proposition is true
> in a possible world only if it exists in that world...
> According to the outer notion, we can stand outside a world
> and compare the proposition with what goes on in the world
> in order to ascertain whether it is true. But according to
> the inner notion, we must first enter with the proposition
> into the world before ascertaining its truth.

We'll see that there is something correct hidden in this picture. Otherwise, one difficulty with it is that it is ad hoc; on the explicit level there is little or nothing to recommend it except that it is a resolution of the sort of contradiction at hand. But that justification would equally warrant rejecting or amending (4), (5), or (7) (e.g., just denying that (7) holds for negative propositions would be just as ad hoc, as well as anti-naturalistic and anti-"new theory of reference"). Another difficulty is that Fine's solution does not in any straight-forward way yield a principle of temporalized correspondence for "outer" truth. What could such a principle possibly be? Without such a principle, the nature of truth itself is obscured. It seems that the only reason for maintaining that "a proposition is true in a possible world regardless of whether it exists in that world" is confusing this

idea with the truism that many sentence tokenings are true in worlds or at times where/when <u>they</u>, the sentence tokenings (not the states of affairs they represent), do not exist or occur.

In my view the mistake is regarding Kaplan's tokening of (3) as true <u>at</u> <u>a</u> <u>time</u> in virtue of (5'), which would mean that it represents a state of affairs which wholly exists at a single time. Kaplan wants to make sense of his tokening of (3) not being eternally false (or true!). This can be done without inconsistency by holding that a negative existential sentence tokening which has a referent and which changes its truth-value over time so-changes in that it is true at, i.e., it represents a state of affairs which exists at, some pairs of distinct times and otherwise is false with respect to time. Such a state of affairs exists at a pair of distinct times in that its constituents are the referent itself from one time, and whatever corresponds to "does not exist" (or a synonymous expression) from the other. Such a state of affairs exists at every pair of distinct times which is such that the referent exists at one of the times yet does not exist at the other. In no other way does the state exist with respect to time. Notice that I am not talking about <u>ordered</u> pairs. Sequence in the set-theoretic sense doesn't make any difference here, though it may figure in the structure of states of affairs.

If this is acceptable, then contrary to (5') there is no need to treat negative existential sentence tokenings which have referents as true at single times, hence no need to answer (2T) affirmatively, in order to semantically represent a particular's finiteness in time. And it could be argued, <u>mutatis</u> <u>mutandis</u>, that there is no need to answer (1M) affirmatively--thereby postulating Kaplan rigidity--in order to semantically represent a particular's contingency. The

underlying problem seems to be that an affirmative answer to (2T) (or
to (1M)) violates the dictum that whatever is referred to must exist.
This is why one's immediate reaction to the postulation of such
temporal (or modal) rigidity is, I believe, incredulity. It seems that
Kaplan's tokening of "I" in his tokening of (3) designates him only
at times when he exists, and likewise that a tokening of "Aristotle,"
as in "Aristotle is Greek," designates him only with respect to times
at which he exists. In fact, it may designate him at only some of the
times he exists, as in "Aristotle is a philosopher," since such a
sentence tokening presumably is true only at times when Aristotle was
an adult. This means that in a sense it is not the case that
"'Aristotle' continues to denote (him)." That is, a (e.g.) present
tokening of "Aristotle" does not designate him with respect to the
present time. One must be careful to not confuse this with holding
that the tokener does not refer to Aristotle at the present time. Of
course the tokener's act of reference takes place at the time of
tokening. This belongs to the phenomenon of what Kripke calls
"speaker's reference" (Kaplan: "user's reference"), as opposed to
"semantic reference," and this paper is about the latter (cf. footnote
no. 3). Still, it's worth remarking that in the "speaker's reference"
sense, it _is_ the case that "'Aristotle' continues to denote (him)."

Permit me to further defend my account by considering a couple of
possible objections here. First, it might be said that it is a matter
of common sense that if Kaplan does not exist at a certain time, then
something is true of Kaplan with respect to that time, in virtue of
the fact that he does not exist then. But I agree. The grammatical
predicate "does not exist" is true of Kaplan with respect to that

time--which is not the same thing as saying that tokenings of "Kaplan does not exist" are true with respect to that time, except perhaps in a derivative and highly misleading sense (misleading, that is, maybe even to the point of self-contradiction). And neither is saying that Kaplan doesn't exist then the same thing as saying that tokenings of "Kaplan does not exist" are true then. Second, a consequence of my account is that Kaplan's tokening of (3) is _false_ at 1900 A.D. Why wouldn't this itself require an affirmative answer to (2T)? If Kaplan's tokening of "I" didn't designate him at 1900 A.D., shouldn't his tokening of (3) be assigned _no_ truth-value with respect to that time? But this objection derives from a failure to keep the "new theory of reference"/correspondence theory of truth/concrete states of affairs picture firmly in view. Kaplan's tokening of (3) is false at 1900 A.D. in that it _fails_ to represent a state of affairs which (wholly) exists then; or, equivalently (since it does represent _some_ state of affairs, unlike, e.g., a tokening of "the number five is even"), it represents a state of affairs which _does_ _not_ _exist_ at 1900 A.D. This furnishes no basis whatever for the idea that Kaplan's tokening of "I" represents _qua_ designates him with respect to 1900 A.D.

My account is suggested by the part of "the new theory of reference" which proposes that a singular proposition, or better, state of affairs, just _is_ an object and a "property" in a certain structure, just _is_ (according to Kaplan) "the ordered couple of these two components" (Kaplan's particular specification of the structure may not be correct). For a state of affairs, so-understood, whose two components can't exist at the same time in the structure (such as the state of Kaplan's non-existence), isn't it straightforward to say that

the state exists at pairs of distinct times? This involves a one-to-one correspondence between the number of components or constituents of a state of affairs and the nature of its existence in time, and thereby the nature of temporalized truth. Even in cases where the times at which the constituents exist in the structure not only can be but are the same, e.g., the state of my being hungry, we could regard the state of affairs as existing at pairs of identical times. But since there is this identity, the state exists at times taken singly (which, it might be noted, would not be so with ordered pairs of identical times).

Just as "the new theory of reference" is generalized, so too can this account. Consider the state of affairs of my being between George Washington and Abe Lincoln in adult height. None of the three objectual constituents of this state exists at any time another exists. And since the relational constituent (betweeness in adult height) exists in the structure at the same times as the objectual constituents, the state of affairs exists at triples, rather than quadruples, of distinct times. The state exists at every triple composed of one time from each of the periods of my, George Washington's, and Abe Lincoln's adult existence. In no other way does it exist with respect to time. Moreover, some states of affairs exist at single times as well as n-tuples of distinct times, such as my being a descendant of my mother, since the periods of our existence partially overlap. Such considerations lead to a generalized version of the principle of temporalized correspondence: A sentence tokening is true (false) at a time t or n-tuple of distinct times T iff it represents (fails to represent) a state of affairs which exists at t or T. Notice how this

coincides with some of what Fine says (in the passage quoted earlier).
His example of "outer truth" is "Socrates does not exist." As he puts
the modal case, "we stand outside a world...in order to ascertain
whether it is true" in that world. But exactly where do we "stand"?
Presumably, we "stand" in any world where Socrates exists. It looks
like he implicitly holds that mention of two worlds is needed to make
sense of truth here. On the other hand, with "inner truth" (e.g., my
"I'm hungry") only one world is needed. The point is that Fine's
distinction between inner and outer truth may be just a confused
version of the modal dual of my distinction between truth at a time
and truth at an n-tuple of different times.

I believe that this distinction, in addition to having such
precedents as Fine's, is confirmed by a number of desirable applications
and ramifications. I can only briefly discuss two here. First, Salmon
holds that "there are some impossible objects" which are true in some
possible worlds, e.g., the "singular proposition" that Nothan is
taller than Salmon. Nothan is the individual who would have developed
from the union of the ovum from which Salmon actually developed with
a sperm cell from Salmon's father which never actually fertilized any
ovum. Supposedly, the proposition cannot exist because its objectual
constituents, Nothan and Salmon, can't coexist--they are "incompossible
individuals." Even waiving questions this raises about the nature of
incompossibility and the status of merely possible individuals, I
think, as does Salmon himself, that most would regard it as an absurd
result. What he should have said to avoid it is that such a propo-
sition is true and exists in some pairs of distinct possible worlds--
in this sense it is a possible "object"--or rather that such a state

of affairs and sentence tokenings which represent it exists and are true (respectively) in such loci. After all, Salmon allows for "cross-world relations" like being taller than, so why not cross-world states of affairs and truth?[9] Relationships are (one type of) states of affairs. Of course this would also avoid having to appeal to Kaplan rigidity since tokenings of the sentence "Nothan is taller than Salmon" couldn't be true in a world unless they represented qua designated both Nothan and Salmon there. It seems to me that it is no accident that Davies' semantics for quantified S5, which otherwise embodies anti-Kaplan rigidity, is, as he says, "obliged" to appeal to Kaplan rigidity in the case of incompossible objects (p. 437). For his semantics, like all others so far as I know, lacks a conception of truth in n-tuples of distinct worlds (times). Second, this conception yields an effective criticism of an argument by Alvin Plantinga which may be taken as against the modal dual of (7) (a proposition exists at a time only if all its constituents exist then). We need only consider its conclusion, viz., "it is possible that both Socrates does not exist and the proposition Socrates does not exist exists" (1983, p. 10). The criticism is that Plantinga does not give any reason why we shouldn't understand his "it is possible that" to mean in some possible worlds as applied to the first conjunct of his conclusion, but in some pairs of distinct possible worlds as applied to the second conjunct.

Finally, let us consider sentence tokenings which are not neutral with respect to time. It is important to see that the generalized principle of temporalized correspondence does not apply to such tokenings. It does not apply to any sentence tokening which is specific

as to time because the state of affairs represented, if any, includes some time(s) as a constituent(s). Suppose I now truthfully token "I'm (now) hungry." If we regarded this tokening as now or forever true, hence as representing a state of affairs which now or forever exists, then by (7') we'd be committed to saying that the present time, one of the state's constituents, now or forever exists. If this doesn't commit us to the absurdity of postulating a meta- or hyper-time, then I don't know what it means. (Contrast holding that the "property" of non-existence exists at a time t. There doesn't seem to be any absurdity here; it just means that something (e.g., Kaplan) does not exist at t or nothing exists at t.) Besides, the state of my now being hungry couldn't exist forever because neither I nor (I dare say) hunger exists forever. Sentence tokenings which are specific as to time are _timelessly_ true or false, and that is the sense in which they don't change their truth-value over time. Although it's often done, this is not to be conflated with the idea that they are _eternal_ in the sense that they are true throughout time or false throughout time. Bracketing modality for a moment, what applies to sentence tokenings which are specific as to time is the original form of the correspondence theory, viz., a sentence tokening is true (false) iff it represents (fails to represent) a state of affairs. And since truth-value is not relativized to time, neither is representation or designation, so the question (2T) poses about temporal rigidity, and indeed, the notion of temporal rigidity _per se_, cannot usefully arise.

My discussion perhaps has been artificial insofar as it has pre-supposed sentence tokenings which are neutral with respect to time.

I am just not sure. In natural languages (or at least those with which I am familiar) many, perhaps even all, sentence tokenings are specific as to time in that they contain explicit or implicit temporal indexicals.[10] If there really are no truth-value bearers which change their truth-value over time, then a restructuring to accommodate this would be the (more radical) way of eliminating the apparent self-contradiction in the general philosophical framework with which Kaplan and others operate. This would require giving up as inapplicable (5'), (6'), and (7'), since they all presuppose the relativization of truth to time.

It seems that parallel points could be made about modality in terms of the indicative and subjunctive moods and so on. So it may be concluded overall that it is a confusion to postulate either the temporal rigidity of an affirmative answer to (2T) or Kaplan rigidity, whether or not there are truth-value bearers which change their truth-value through time and/or possibility. The idea that whatever is referred to must exist has the weight of the years behind it, which is no accident.

FOOTNOTES

[1] I am grateful to Albert Casullo, Harry Deutsch, Graeme Forbes, Saul Kripke, and Nathan Salmon for help with this paper.

[2] Although this term has gained some currency, it appears to be a misnomer; so in what follows I shall use "anti-Kaplan rigidity" instead. In correspondence Kripke points out that the formulation of the concept of rigidity on pp. 48-49 of Naming and Necessity (1980) is (and was meant to be) neutral on the issue of Kaplan versus anti-Kaplan rigidity, and that on pp. 77-78 he even stated his "opinion in passing" that proper names have (what I'm calling) Kaplan rigidity, though this was "almost an inadvertence." Compare his p. 21n.

[3] He goes on: "This view of the reference of proper names is anti-intentional. It says what the name (in use) refers to, not what a user refers to, or intends to refer to, or is most plausibly taken to be talking about, in using the name. The latter (user's reference) is an important, but different, sense of 'refer'" (pp. 502-03). Cf. Kripke's distinction between "semantic reference" and "speaker's reference" (1979).

[4] Kaplan speaks of propositions as "constructions" (1977, pp. 3, 13); moreover, he says "under certain circumstances what is expressed by 'Hitler does not exist' would have been true, and not because 'Hitler' would have designated nothing (in that case we might have given the sentence no truth value) but because what 'Hitler' would have designated--namely Hitler--would not have existed" (p. 11). Salmon writes "on the usual theories of the truth-value of a simple subject-

predicate sentence containing a nondenoting subject term, we should not expect the sentence displayed above ["Nathan Salmon is dead"] to be true with respect to a future time if the name 'Nathan Salmon' denotes no one with respect to that time" (1981, p. 37). And Almog says "we have a name for Quine, namely, 'Quine'. Using it here and now, in a sentence like 'Quine is a philosopher', we generate a proposition. Call that proposition 'Phil'...Having generated Phil, by, among other things, assigning a referent to 'Quine', we proceed to the second stage: <u>evaluation</u>...We cannot evaluate what we do not have: only after the proposition gets off the ground can we go on to evaluate <u>it</u>, find its truth value, in various loci of evaluation" (1986, p. 220). Moreover, Almog says concerning "a certain locus where Quine doesn't exist... qua evaluation locus, we take to it propositions involving Quine which we have generated in our generation locus" (p. 240; cf. 219n and Salmon, p. 36n). Why would we need to "take" them there if they didn't have to exist there in order to be true there?

[5]Forbes himself is ambivalent. On the one hand, he goes ahead and gives the argument from analogy between time and modality for postulating Kaplan rigidity (at least for proper names) (pp. 29, 39). On the other hand, he allows that the thesis is "somewhat controversial" (p. 29), and says that "it is merely a technical convenience to be able to speak of an object at a time at which it does not exist, so as to facilitate the evaluation of sentences about it at that time, and the same consideration applies to the modal case" (p. 60). (For lucid explanations of the technical notions presupposed in the paragraph to which this note is attached, see Forbes' book.)

[6]This use of "wholly" and subsequent comparable uses are of course not

to be understood in a temporal sense, i.e., as implying that all the "temporal parts," if there be such, of the proposition exist at a single time.

[7] It might be objected that on a correspondence theory which incorporates "the semantic conception of truth," there is no commitment even to facts or states of affairs, let alone to propositions. The intuitive "idea is that the statement 'Snow is white' is true because and only because snow is white, not because some peculiar fact exists or perhaps subsists" (Aune 1985, p. 137). But whatever merits this approach may have, it is not open to we who subscribe to "the new theory of reference." We need something other than sentence tokenings to stand in place of singular propositions. My point is, let that be states of affairs.

[8] Wettstein also argues for this (1986, pp. 197-99), though he focuses on considerations of cognitive significance. The idea is that if singular propositions were indeed "like those putative entities that have been called propositions, entities constituted by something like concepts," an appeal to them would help explain how, e.g., one may "without being in any way illogical...affirm 'Cicero is an orator', while denying 'Tully is an orator'." But in fact, such an appeal helps not at all, since the same singular proposition is affirmed and denied.

[9] I derive Salmon's view from 1987, pp. 49-50, 95-96, and correspondence.

[10] Consider, for example, that G. E. Moore seems to propose that all verb uses are indexically tensed (Lewy 1962, pp. 404-05). For instance, a mathematical use, as in "two plus two is four," would be analyzed as "two plus two was, is (now), and will be four."

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