

THISNESS AND TIME TRAVEL

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Professor Craig's use of the example of time travel in his paper, "Adams on Actualism and Presentism" (pp. 517-521 above) raises interesting issues that I would like to discuss here. First, however, I need to say a bit about his claim that, corresponding to everything that will occur in the future, there are "future-tense states of affairs which obtain right now" and which are intrinsic features of the *present* period of the world's history, just as much as the present existence of any substance is. For if I grant that claim, then I must give up a key assumption of those arguments of mine that Craig is discussing: the assumption, namely, that there are alternative possible *continuations* of the present period of the world's history, alternative continuations in the sense that they differ in future periods but contain the present period exactly as it is, with all the intrinsic features that it actually has. But I see no reason to accept Craig's claim on this point.

Let us grant, at least for the sake of argument, that there are future-tense *propositions*; and of each of them, let us grant that either it or its contradictory is true. Let us not worry about whether there are also future-tense *states of affairs*; the crucial question here is more general: whether the present truth of a future-tense proposition requires some intrinsic feature of the present period of the world's history to which the proposition may correspond. Craig implies that it does; I think it does not. Here I think the comparison of the future with the past is instructive. The present truth of past-tense propositions is relatively uncontroversial; and, to take an example I have used before, it seems to me overwhelmingly plausible that past-tense propositions about the battle of Waterloo are true by virtue of correspondence with something that happened in 1815, "something that was a battle and that does not

exist now and is not occurring now," and that that past event is "the ontological basis" of the present truth of those past-tense propositions.² I don't see that we need an additional intrinsic feature of the present period of the world's history for them to correspond to. Likewise, if future-tense propositions are true now, it is by virtue of correspondence with things that will occur in the future, not with things that are occurring now. The ontological basis of the present truth of a future-tense proposition will be something that will occur but that is not occurring now.

Why does Craig think otherwise? He seems prepared to grant, for the sake of argument, that the present truth of future-tense propositions "is ultimately grounded in the future truth of their respective present-tense versions," but insists that "they do not correspond to those present-tense states of affairs," and that "a view of truth as correspondence requires that they correspond to future-tense states of affairs which obtain right now" (p. 000). Is he suggesting that because the future event, when it happens, will be present rather than future, it does not have the right structure to correspond to a future-tense proposition, which therefore requires an ontological correlate prior to the future event? This argument (whether or not it is Craig's) seems to me to embody a misunderstanding of futurity. Surely the future-tense aspect of any true future-tense proposition is adequately grounded, as to truth, by the futurity of the reality to which the proposition corresponds; it does not need a future-tense structure internal to that reality.

Perhaps Craig's concern is different. I want to allow that the future may be, in some important way, metaphysically "open." Perhaps Craig fears that if the correspondence that grounds the present truth of future-tense propositions is only with something occurring in a metaphysically open future, their present truth will not be metaphysically robust, but rather metaphysically feeble. Quite so, I respond; feeble indeed it is. That's not a problem for me.

So I continue to assume that there are alternative possible continuations of the present period of the world's history, in the sense indicated above, and I turn to Craig's argument about time travel. He thinks I am in error in assuming "that at any time t in a world W , all metaphysically possible histories later than t have the same history

earlier than t'' and thus are *continuations* (in my sense) of the actual history of W to t (p. 000). He invites us to consider a history in which a time traveler "departs" from a time after b and arrives prior to a time t prior to b . At t , he argues, future histories of the world are still *possible* in which the time traveler would never have departed, though he grants that, given the actual arrival of the time traveler at t , it is *certain* that she will in fact depart in the (actual) future. If an alternative future were actual in which the time traveler never leaves, then, Craig argues, "the time traveler would not have appeared prior to t and so the history [prior to t] would have been different" (p. 000). Thus this alternative future, on Craig's view, would not be a continuation (in my sense) of the actual history of the world to t .

I am tempted to offer a short rebuttal of Craig's argument. What can it mean to say that an alternative future inconsistent with things that have already happened before t is still possible *at* t ? Timelessly, there are doubtless indefinitely many possible histories of the world in which the time traveler never departs and never arrives. (Probably most of us believe that the actual world is one of them.) But what can it mean to say that such a history is still possible *at* t when the time traveler has already arrived? I am tempted to say that it is only in terms of alternative possible continuations (in my sense) of some period of history that I can make any plausible sense of such tensed possibility claims. But this rebuttal is too short. Craig's counterexample has something to teach us.

My starting point for thinking about time travel is David Lewis's classic paper, "The Paradoxes of Time Travel"¹⁸ and I will borrow (and slightly adapt) one of Lewis's examples. Can time traveler Tim, who was born in 1950 and whose parents were born in 1925, travel back to 1920 and "there" (or in 1921) murder his (politically incorrect, and perhaps amoral) grandfather, whom he hates? Lewis explains a sense, or framework of modal evaluation, in which Tim "can," but of course won't, succeed in murdering Grandfather. But what if he had succeeded? Lewis discusses, more briefly, several alternatives that "might" have been true in that case.

Perhaps Tim might have been the time-traveling grandson of someone else. Perhaps he might have been the grandson of a man killed in 1921 and miraculously resurrected. Perhaps he might have

been not a time traveller at all, but rather someone created out of nothing in 1920 equipped with false memories of a personal past that never was.⁴

Note that none of these alternatives is a history in which Tim simply does not show up in 1920. I do not see any reason why Lewis must agree that Tim *would* not have appeared in 1920 if Grandfather had been murdered in 1921. (Indeed no such alternative will do for him, because he is asking what would have happened if *Tim* had murdered Grandfather in 1921.) Why then should I accept Craig's assumption that in envisaging, as still possible at *t*, a history of the world in which the time traveler will never "depart," we must think of it as a history in which the time traveler does not show up before *t*?

I can't simply ride on Lewis's coattails, however. There are relevant differences between his views about modality and mine. Most obviously, I believe in transworld, or counterfactual, identity of individuals, and am talking about individual thisnesses against the background of that belief, which Lewis, famously, doesn't hold. What he means, strictly speaking, when he says that Tim might have killed Grandfather and that "Tim might have been the time-traveling grandson of someone else," is that there are possible worlds in which those things are true, not of Tim himself, but of Tim's "counterpart." And I believe the counterfactual identity of individuals is subject to much more stringent necessary conditions than Lewis would impose on the counterpart relation.

In particular, I think it is at least plausible to suppose that a necessary condition of the counterfactual identity of a human individual is the identity of the causal conditions and causal processes involved in the individual's coming into existence. So if Grandfather's begetting one of Tim's parents in 1924 is among the causal processes actually involved in Tim's coming into existence, it would seem to follow that Tim would not have existed at all (and therefore not as a time traveler in 1921) if a 1921 murder had prevented Grandfather from begetting Tim's parent. How then should I answer the question, what would have happened if Tim had murdered Grandfather in 1921?

(1) If the question is what would have happened if *Tim* had murdered Grandfather, I cannot consistently answer that Tim would never have existed. It's analytic that if Tim had murdered Grandfather in

1921, Tim would have existed then; and on my view of counterfactual identity, that means Tim himself, not just a counterpart of Tim.

(2) There would be no problem if human individuals, including Tim, have existed from the dawn of time, or if enough of us has to establish our identity (our souls, perhaps, pre-existing our bodies). But this is not relevant to the larger debate, since I have no problem about admitting that our thisnesses have existed from the dawn of time *if* we ourselves have.

(3) The answer that Grandfather would have been resurrected in time to beget Tim's parent in 1924 is less plausible than the more cautious claim that that *might* have happened. Moreover, it would not clearly meet my need, for Grandfather's actual continued life between 1921 and 1924, without death and resurrection, is arguably among the causal processes involved in Tim's coming into existence.

(4) Time travel is odd. It seems natural to assume that a human person's existence begins at conception or birth or some time between those two; and that still seems natural with regard to what Lewis calls a time traveler's "personal time." But with regard to "external time," the time order of the world as a whole, the *first* appearance of Tim in the history of our hypothesized world is in 1920, arriving in his time machine. Should I then say that Tim came into existence then and his identity is established in that arrival, so that it could have been Tim himself murdering Grandfather in 1921, even though he would thereby have wiped out stages of his own life that come later in external time but earlier in personal time? This answer has some initial attractiveness, but is not clearly consistent with the view that counterfactual identity of a human person depends on identity of the causal processes involved in that person's coming into existence. For we are working, I take it, with a conception of time travel in which departure from the future in a time machine is a causal process involved in one's arrival in the past in that machine. So if Tim's arrival in 1920 in the time machine is his coming into existence, his murdering Grandfather in 1921 and thus wiping out his own future time launch would wipe out a causal process involved in his own coming into existence, and would thus destroy his own identity.

(5) I could give up the thesis that identity of the causal processes involved in a human person's coming into existence is necessary for

the counterfactual identity of the person. It is not an uncontroversial thesis, but I don't think the considerations discussed here tell strongly in favor of giving it up; I think we can find a more attractive alternative.

(6) It can be argued that if s is a time traveler at any time t , it is not metaphysically possible for s to do anything at t that would result in the future nonoccurrence of any future event that bears causal responsibility for s 's coming into existence, or indeed for s 's existing at t . Certainly it is not metaphysically possible *de dicto* for a *time traveler* to do such a thing. There is no possible world in which anyone, having reached an earlier time from a later time by time travel, succeeds in doing at the earlier time anything that prevents the later time launch from occurring; there would be an obvious contradiction in any such history. It does not follow directly, but I am inclined to think it is also true, that it is impossible *de re* for s , who in fact is a time traveler, to do anything that would prevent s 's later time launch. There may well be a pair of possible worlds that are just as similar as the following fact allows them to be: namely, that in one of them s travels from time t_2 to an earlier time t_1 , whereas in the other s^* does something at t_1 that prevents the time launch from happening at t_2 . If there is such a pair of possible worlds, then whether it is possible *de re* for s to prevent s 's own later time launch depends on whether s can be identical with s^* . Intuitions about the dependence of identity on originating causality tell strongly against the possibility of this identity.

Can a strong argument *for* the *de re* thesis of identity be derived from Lewis's reasons for saying that "Tim can kill Grandfather"? Lewis imagines conditions "perfect in every way: the best rifle money could buy, Grandfather an easy target only twenty yards away, ... Tim a good shot ..." etc., and concludes, "By any ordinary standards of ability, Tim can kill Grandfather." Let us grant that Tim has, in some ordinary sense, the ability to kill Grandfather. But Lewis's reasons for this thesis are not relevant (and not meant to be relevant) to the *de re* question of (strict) identity, whether anyone who exercised that ability in 1921 could be Tim. (Lewis, of course, does not believe in such strict counterfactual identity at all.)

(7) Perhaps Craig will claim, however, that Tim's ability (in an ordinary sense) to kill Grandfather is sufficient to establish that a future in which Grandfather is murdered in 1921 is still a possible future at t , when Tim takes aim at Grandfather, even though it is no part of any possible world in which *Tim* exists, and is therefore not a continuation of the actual past at t . This would provide him with the counterexample that he wants to my assumption that futures possible at t must be continuations of the actual past at t . Must I grant him this counterexample?

I put myself in Tim's situation at t and ask, "Is it *still* possible for me never to have existed?" It would seem very odd to answer that question in the affirmative, provided we distinguish it from the questions, "Would it have been possible (timelessly) for me never to have existed?" and "Are there possible worlds in which I never exist?" But perhaps I have not asked the right question.

Perhaps Tim should ask, "Is it *still* possible for me to be a different possible individual from the one I in fact am?" Here Tim imagines two distinct possible individuals, both perfectly like him at t : s who is Grandfather's time-traveling grandson, who therefore does not succeed in killing him; and s^* who kills Grandfather immediately after t , who therefore is not his time-traveling grandson. Tim is asking whether it is still possible for him to be s^* even though he in fact is s . It seems the answer must be No, since identity is always necessary. Or is the problem still one of inadequate formulation of the question?

Suppose Tim says, "Whoever I am, I am necessarily myself, as far as modalities *de re* are concerned. But is it *still* metaphysically possible (though false) that this question is being asked by someone other than Grandfather's time-traveling grandson, and thus by someone other than me?" Part of what Tim is asking this time is whether the complete determination of the identity of the speaker of the question must wait (at least) until Grandfather has lived (or not lived) to beget Tim's parent. I think it is not obvious how *these* questions should be answered. Suppose we answer them in the affirmative; what follows?

It follows, I think, that Tim's existence at t will be a "soft" rather than a "hard" fact about t . That is, it will be a fact that is not wholly about t and times prior to t , because it has strictly necessary conditions that don't occur until after t . As a soft fact about t , it will not be an

intrinsic feature of the past or present at *t*. Then I think I could admit, without damage to my argument, that even though this is a fact about *t*, it is still *possible* at *t* for it to turn out not to be a fact at all, because it is only a *soft* fact about about *t*. This would not imply that a future is possible at *t* that would not be a continuation of the actual past at *t*, because continuations of the actual past at *t* need only include all the *hard* facts about *t* and about earlier times.

How do I know that that's true about continuations? Well the concept of a continuation is my concept here; so I get to decide what it implies on such matters. I think I am drawing out here something that was implicit in my argument in "Time and Thisness" (pp. 317-19 and note 4). Requiring continuations to include all the *soft* facts about the times they continue would undermine the very idea of alternative continuations. For if continuations from *t* had to include all the soft facts about *t*, there could not be more than one possible continuation from *t*, since, for every event *e* that actually happens after *t*, there is a soft fact about *t*, that *e* happens after *t*, and thus the soft facts about *t*, taken together, completely determine the future.

This may be seen as opening the way for a concession to Craig. If possible continuations from *t* need not include all the soft facts about *t*, then it would seem there may be a way for thisnesses of future individuals to exist at *t*--namely, as *soft* facts about *t*--even if there are possible continuations from *t* that would not include them. This asks a larger concession from Craig than it makes to him, however. For soft facts are ontologically thin as long as they are soft, as long as they are not intrinsic features of the past or present. I do not see a big difference, ontologically, between saying that thisnesses of future individuals do not yet exist, and saying that their existence is no more than a soft fact about the present.

I have been pursuing a thought experiment here, and I would not claim to be sure of the result. I am not certain, for example, whether it is really correct (or even intelligible, at bottom) to say that it might *still* be metaphysically possible (though false) for the speaker of what is in fact *my* present utterance to be someone other than me, by virtue of some dependence of my identity on the future. More fundamentally, the metaphysical possibility of time travel is sufficiently controversial (and reasonably so) that we may well be reluctant to rest large

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conclusions in modal metaphysics on examples drawn from the fiction of time travel, helpfully mind-stretching as it may be to think about them.

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NOTES

- ¹ Parenthetical page references in the text are to this paper of Craig's, unless otherwise indicated.
- ² Robert Merrihew Adams, "Time and Thisness," *Midwest Studies in Philosophy*, 11 (1986): 322.
- ³ First published in the *American Philosophical Quarterly*, 13 (1976): 145-52. I cite the reprinted version in David Lewis, *Philosophical Papers*, vol. 2, pp. 67-80.
- ⁴ Lewis, *Philosophical Papers*, vol. 2, p. 80
- ⁵ Lewis, *Philosophical Papers*, vol. 2, p. 75