I. Introduction

Just when we thought it safe to ignore the problem of the time of a killing, either because we thought the problem already solved or because we thought that all the potential solutions had already been proposed, along comes a new solution — the Cambridge Solution — advocated in a recent paper by David-Hillel Ruben.¹

For those who may have been in a philosophical coma for the past thirty-one years,² the problem of the time of a killing is an issue concerning the identity of actions and events, and arises from cases of the following form. Suppose that x Φs by Ψing; and suppose that x Ψ[s at a time t, and that y becomes Φed at a later time t'. The problem is to determine when x Φed y. So, suppose that Jones killed Smith by shooting him, where Jones’s shooting of Smith took place on Monday and Smith’s dying (his becoming killed) occurred the following Friday. When did Jones kill Smith? When did the killing of Smith by Jones take place?

The problem has a spatial analogue. If Jones’s shooting of Smith occurred in Chicago and Smith’s dying of his wounds occurred in Detroit, one may also wonder about where Jones killed Smith.

Theories called “austere” by Ruben hold that the killing was performed on Monday in Chicago, for they hold that it is identical with the shooting (and identical actions must have the same time and place of performance).³ Some (but not all) theories called “prolific” hold that the killing was not the shooting, for, though the shooting was performed on Monday, the killing was performed on Friday in Detroit, when and where the victim died. Now, some prolific theorists (like Kim) deny the
identity of the shooting and the killing, but for reasons that are independent of any temporal considerations. Still other prolific theorists, like Thomson, hold that the killing began with the shooting and ended with the dying. In what follows, I shall ignore these other prolific theorists, and focus on Ruben’s view that the time and place of the killing is the time and place of the dying.

In Ruben’s view, austere theorists must be wrong, since their view implies, falsely (according to Ruben), that killers can kill before their victims die. Against the prolific view, Ruben argues that it suggests that, after Jones has shot Smith, there is something further that Smith must do, since the killing occurs only when Smith dies. But there is nothing further to be done; indeed, the killer might have died before the victim died. And how could Smith perform this action after he himself has died?

Ruben’s sympathies lie with the prolific theorist. He thinks the austere theory hopeless, though correct in its insistence that there is nothing for the killer to do after he shoots. But he also thinks the prolific theory correct in its insistence that the killing is not performed until the victim dies. Despite the fact that these two points appear inconsistent, Ruben thinks it possible to combine them; he develops a view that allows it to be possible (i) that Jones shot Smith on Monday in Chicago, (ii) that Smith died on Friday in Detroit, (iii) that Jones did nothing (relevant) after Monday and was never in Detroit, and yet (iv) that Jones killed Smith on Friday in Detroit.

II. Cambridge Change

Ruben’s reconciliation begins with the idea that there is a difference between cases in which a thing undergoes a real change – an alteration – from cases in which a thing undergoes, it is said, a mere Cambridge change. When Socrates died, he really changed; however, Xantippe then became a widow. In becoming a widow, Xantippe did not really change, but underwent a Cambridge change. Cambridge change is dependent change; a thing undergoes a Cambridge change only if it bears some relation to a thing that really alters; according to Ruben (and others), “[t]here must be some real change that permits or underlies the change
in the Cambridge changer". Xantippe could not have become a widow unless, given the marital facts, Socrates died. According to Ruben, the date and location of a Cambridge event are the date and location of the underlying real change on whose occurrence the Cambridge change depends. Thus, while Xantippe was, perhaps, sipping ouzo in a café while Socrates was sipping hemlock in prison, the Cambridge change in her took place where Socrates was when he died, in the prison across town from the café. Similarly, Aristotle's acquiring of one more admirer, which he undergoes by dint of my coming to appreciate the *Categories* cannot have occurred some time before 322 BCE, since my coming to admire him did not occur until 1978. Rather, this Cambridge change took place where I was at the time I came to appreciate that work. Thus, this change in Aristotle occurred over two thousand years after his death at a place he never visited.

III. Cambridge Acts

As mentioned, one standard objection to the prolific theory of the time of a killing is that it implies that agents can perform actions even after those agents have ceased to exist. But how can it be the case, after all, both that Jones did not kill Smith until Smith has died and that Jones himself died before Smith did? This objection, Ruben notes, assumes (for both the temporal and spatial versions of the problem) the following principle:

(1) if O changes in place p at time t, then O exists in p at t.

that changing things must be located at the places and times at which the changes they undergo occur; thus, given (1), Aristotle could not have changed, even Cambridge-ly, in 1978 in Detroit. Now while this assumption does have about it an aura of obviousness – indeed, it strikes me as virtually trivial – Ruben insists that it is nevertheless false in cases of Cambridge change.

When I came to admire Aristotle, he changed, not at any time or place in which he lived, but when and where I was when my attitude changed. For the temporal and spatial locations of a Cambridge change are the temporal and spatial locations of the thing whose real change,
whose alteration, underlies the Cambridge change.\textsuperscript{10} Ruben applies this distinction between Cambridge and real change to the acts that agents perform to show how the standard objection to the prolific theory can be overcome. According to Ruben, Jones's killing of Smith is "presupposes a change in [Jones] and a change in [Smith]."\textsuperscript{11} The change in Smith is real, an alteration; after all, he dies. However, the change in Jones, his killing of Smith, according to Ruben, must be of the Cambridge variety, since Jones might already be dead when Smith died, and, in any case, Jones by then will have stopped doing anything relevant to Smith's death. Since the time and place of a Cambridge change are the time and place of the real change that underlies it, and since actions are, for Ruben, a kind of change, the killing of Smith by Jones, though it is Jones's action, has the time and place of Smith's death (Friday in Detroit). Therefore, it is not identical with any real change in Jones, for real changes, that is, alterations, occur at times and places at which their subjects exist (in accordance with (1)). And, of course, Cambridge actions require no further effort by their agents; the real work is done by their patients. That is, a Cambridge action or event occurs just because the action or event on which it depends occurs; nothing further needs to happen. Thus, a prolific theory can solve the problem of the time and place of a killing, so long as it acknowledges that killings are really Cambridge actions, actions which are dependent on, and hence have the spatial and temporal location of, dyings.

By the way, Ruben will have to say, and indeed does say,\textsuperscript{12} that the shooting itself is a Cambridge action and is not identical with Jones's moving of his finger (or his pulling of the trigger), for it too takes place at the time the gun goes off, and that is after Jones moves his finger (or pulls the trigger). Indeed, in all cases in which, as some might say, an action is described in terms of (one of) its effects, as in 'x's φing of y', when 'φ' is a verb that means something like 'caused y to be Φed', Ruben will insist that that action is a Cambridge action; for x's φing of y takes place when and where y is when y becomes Φed, and not where x was when he did whatever he did that caused that result.\textsuperscript{13} I think that it then follows from Ruben's view that all of one's actions are Cambridge actions except for willings or tryings.\textsuperscript{14}
IV. Discussion

I have three main problems with this Cambridge solution to the problem of the time and place of a killing.

(a) First, Ruben’s argument against the austere theory seems to me to be flawed. It rests on the claim that Jones doesn’t kill Smith until Smith dies; without it, he cannot show that the shooting and the killing have different times of performance. But that claim is asserted either without argument or is derived from the fact that Jones cannot kill Smith unless Smith dies. But if it is asserted without argument, the view is unmotivated; and if it is inferred from the ‘unless’-statement, the argument is fallacious, for the inference from ‘p unless q’ to ‘p until q’ trades on a scope ambiguity involving a temporal quantifier.

Perhaps the inclination to draw this fallacious inference can be explained. To kill is (more or less) to cause to die; it is to do something that causes a death. Thus, killings are actions that have deaths as effects. Since causes come before their effects, it’s not surprising that a killing should come before the death it causes. However, the fact that a single verb appears in ‘Jones killed Smith’ masks the fact that two things must happen in order for the sentence to be true: an action performed by Jones and an event (a dying) undergone by Smith. The past tense of ‘killed’ might lead one to believe that both action and effect must already have occurred. But this belief is unnecessary and unwarranted given the fact that the verb ‘killed’ is a verb of action and its subject is the agent. That suggests that what must be past is only Jones’s action (that is, what he did that had the death as an effect); that the death be past is not required.

So, one motive for preferring some sort of prolific theory — that it is somehow absurd to think that killings come before the deaths they produce — is undercut.

(b) Second, it might have been noticed that my discussion in Section II above was slightly garbled, since any discussion of Cambridge change must deal with two issues not kept apart in that section. One issue involves distinguishing cases in which a thing really changes (that is, alters) from cases in which a thing changes (merely) Cambridge-ly. Consider cases of the latter sort: Xantippe changed her marital status when Socrates
died; Aristotle changed by dint of my coming to admire him. There is, to be sure, a sense in which it is true that Xantippe and Aristotle changed; they both had and then lacked an attribute. But, just as surely there is a sense in which Aristotle, by dint of my coming to admire him, simply does not change; after all, he is no different from the way he was. The "classical" account of change, according to which a thing changes just in case it has and then lacks an attribute, fails to distinguish these two sorts of case.

This much is obvious, though it may not be obvious just how to make this distinction. Perhaps, given the "dependence" of mere Cambridge change on alteration, the following would do: a thing changes Cambridge-ly just in case (i) it has and then lacks an attribute, and (ii) it is not possible for it so to change unless some other object changes.

Matters are less clear, however, when we move from speaking of the conditions under which an object changes to speaking of the conditions under which an object is the subject of a change, that is, the subject of some event; and this is the second issue.

Ruben holds that if an object really changes, there occurs a "real" event, an alteration, and that if an object changes only Cambridge-ly, there occurs a Cambridge event. The principle at work here might be this:

(2) For any object, x, x changes if and only if there is an event of which x is the subject;

however, Ruben notes, one must not assume that an event that is a change in an object, x, must occur where x is when it changes. For Ruben insists that, in the case of a Cambridge event (or action), its place and time is the place and time of the alteration on which it depends. But this principle is, if not clearly false, at least highly dubious.

The usual Davidsonian arguments for the claim that there are events (and actions) are ones whose premises have to do with the fact that some object has altered or some agent acted; thus, since leaves turn yellow, there are yellowings. Such arguments are claimed to be valid on the grounds that the best semantic theory for their premises is one that shows such premises to contain variables whose values are events and actions,
THE CAMBRIDGE SOLUTION TO THE TIME OF A KILLING

and predicates that are true of such entities. However, it seems clear
that, because of the dependent character of Cambridge change, there is
no comparable argument for the claim that there are Cambridge events
and actions as parts of a best explanation of the semantic facts.

Ruben would have us treat

(3) Xantippe became a widow

as something like

(4) (\exists e)(e is a widowing & e's subject is Xantippe),

which implies that there are Cambridge events, namely widowings. But,
there is no need for this, if we already have a semantic theory for the
alteration-reporting sentences that imply that there are events. So, if

(5) (\exists e)(\exists x)(e is a dying & x is e's subject)

is the analysis of 'someone died', then (3) can be rendered as

(6) (\exists e)(\exists x)(e is a dying & x is e's subject & Xantippe

was married to x at the time of e);

that is, Xantippe became a widow just in case there was a death of an
individual to whom she was married at the time of that death. And in
(6), there is no variable whose value might be thought to be a Cambridge
change and no predicate that might be thought true of such an event.

Precisely because things change Cambridge-ly only if they are related
in some way to things which alter, we can always express the idea that a
thing changed Cambridge-ly in terms of the underlying real alteration
and the relation between the subject of that alteration and the thing that
changed Cambridge-ly. There is no semantic need to suppose that the
things which change Cambridge-ly undergo Cambridge changes.

Things alter, and there are the alterations that those things undergo
when they so change. Things also change Cambridge-ly; but there is no
reason to suppose that, in addition, there are Cambridge events that those
things undergo when they so change. After all, things do not really
undergo anything by dint of changing Cambridge-ly; there are no
undergoings they suffer. The only events we need to suppose there to be
are the alterations.
(c) The third point I wish to make about the Cambridge solution to the problem of the time (and place) of a killing stems from this just mentioned conclusion that there only events there are are the alterations: it obviates the embarrassing need to find dates and locations for Cambridge events and actions, and it obviates the need to deny that things change where and when the events they undergo occur.

Just when and where did Aristotle change when he acquired a new admirer by dint of my coming to appreciate the *Categories*? It hardly seems right to think that he changed somewhere in the eastern Mediterranean over 2200 years ago; after all, nothing happened there and then which would amount to his changing in that way. Ruben is perhaps right to think that Aristotle changed with respect to the property of having exactly n admirers sometime in the late twentieth century in Detroit, because that is when and where I began to admire him.

But it is for precisely that reason that it is wrong to think that there occurred some posthumous event whose subject was Aristotle. Yes, perhaps Aristotle did change posthumously in Detroit; but it also seems clear that Aristotle did not undergo any change then or there. How could he have, since he had already ceased to exist? In some important sense, absolutely nothing happened and nothing could happen to him then and there.

If we are content to speak only of the conditions under which a thing changes, then, as long as we can in fact distinguish cases where something changes really from those in which something changes merely Cambridge-ly, we make no error and cause no confusion. And it may make sense, if we are prepared to accept posthumous predications, to answer questions of the form, Where and when did x change?, when x changed Cambridge-ly, by citing the place and time of the alteration whose occurrence made it possible for x to change Cambridge-ly. In this, Ruben may be right.

But, to suppose that objects are the subjects of Cambridge events and the agents of Cambridge actions, and then to inquire as to the place and time of their occurrence and performance is simply to invite confusion and trouble.
In the case of Jones’s killing of Smith, according to Ruben, the real change is in the victim, and the (shadowy) Cambridge change is in the killer. Ruben suggests that we might be reluctant to accept this, “because we associate the idea of control with our idea of action”. But I think that the source of our reluctance lies elsewhere – with the idea that, in acting, we do something. I know we should not ask the word ‘do’ to do too much work when trying to get clear on the concept of action; after all, among the things I did yesterday was sneeze. Nevertheless, we should not ignore its force entirely. What that word captures, however imperfectly, is not the idea of control, but rather, I think, the idea of effort. The correctness of descriptions of our actions in terms of their effects has less to do with what we can control than with what nature does to ensure that things come out as intended. My lighting of the match was, I confess, my action; I did it. But not without the help of nature: the match must not have gotten wet, for instance.

Ruben, I think, takes such facts as these to indicate that, in order to light the match, I must be related in various ways to the match and to events involving it (as well, perhaps, as other things and events). And in this Ruben is surely right. But he concludes from this that the changes in me which constitute my action of lighting the match depend on the match and its changes; he infers that my lighting of the match, being dependent of the occurrence of other events, must therefore be a Cambridge event, in this case a Cambridge action.

I have two complaints to make about this reasoning. The first concerns the very idea of a Cambridge action. In becoming a widow, Xantippe does not really change, she does not alter. Rather she changes only in that she has and then lacks a property (that of being married to a certain individual) by dint of the fact that some other thing alters; nothing happens to her. But if in changing Cambridge-ly by becoming a widow Xantippe does not really change, then in killing Smith Jones does not really do anything either, if killing Smith is a Cambridge action. To act is to expend some effort in order to achieve some outcome; the very idea of Cambridge action seems to be an oxymoron. The only effort expended by Jones was expended in doing whatever he did that resulted in his finger’s moving, the trigger’s being pulled, the gun’s going off, etc.
killing Smith was an action of Jones’s distinct from his shooting, etc., why was there no further effort involved? Well, says Ruben, because the killing was a Cambridge action. But if so, it was an action performed by Jones at a place where he never was and at a time at which he did not exist (he himself had already died). No wonder there was no further effort involved! But then, in what sense then was this Jones’s action? It was Jones’s action, Ruben must say, because it is appropriately related to Jones and his real actions. Why should we take such a desperate step just to avoid the allegedly awful consequences of the austere view?

Ruben must analyze ‘Jones killed Smith’, not as ‘Jones did something that caused Smith’s death’, but as ‘Jones performed a Cambridge action by dint of performing a non-Cambridge action that caused Smith’s death’. This postulation of an additional entity seems wholly unnecessary. Should we really regard these consequences of the Cambridge theory as less counterintuitive, as less obnoxious, than the allegedly awful consequence of the austere view?

My second complaint is that the reasoning seems fallacious. To light a match is (more or less) to cause a match to light. In order for any action of mine to count as a lighting of the match, the match must, of course, light. But it does not follow from this that, in order for my action, which in fact caused the match to light, to be performed, the match must light. Causes do have the effects they in fact have; but, since the causal relation is contingent, they need not.

It is surely necessary that the cause of e caused e; but it does not follow from this, nor is it true, that the cause of e necessarily caused e. To think that it follows is just to commit a modal scope fallacy. Since the causal relation is contingent, any event that in fact caused a certain effect could have failed to cause it. But any event that in fact causes a certain effect can be described as a cause of that effect. So, even if ‘necessarily (if a cause of e occurs, then e occurs)’ is true, ‘if a cause of e occurs, then necessarily (e occurs)’ need not be. And, given that no cause of an event is necessarily a cause of that event, the latter is likely to be false.

My action is correctly describable as a lighting of the match only if the match lights. But it does not follow that, if the match does not light,
then my lighting of it does not occur; all that follows is that my action is not correctly describable in that way.23

Ruben's view, that certain actions (those described in terms of their effects, like 'Jones's killing of Smith') are Cambridge actions, on the grounds that their occurrence (performance) is dependent on that of other events, in effect rests on the claim that the property of having the effects it in fact has is an essential property of an action. If so, then, in addition to its being that case that, necessarily every killing must result in a death, it must also be the case that every action that is in fact a killing necessarily results in a death, with the result that a killing could not occur if a death does not; and hence, a killing is a dependent, that is, a Cambridge, action.34

But if this reasoning is correct, then we should be able to refute not only claims of action identity, like the shooting = the killing, but also certain ordinary claims certain event causation; and, we should be able, in addition, to classify certain events as Cambridge events which should not be so classified.25: Let c be any event that in fact causes an event e; for simplicity's sake, let c be e's sole cause. We can then describe c as 'the cause of e'. But, surely, it might be argued, the cause of e cannot occur unless e does. But, since the causal relation is contingent, we would be forced to conclude that 'the cause of e caused e' is false (since its truth is not contingent). And we would have to conclude that 'c = the cause of e' is false, since c caused e but the cause of e did not. And, since the occurrence of the cause of e is dependent on the occurrence of e, we would have to rule the cause of e to be a Cambridge event. But all this is surely wrong.

We must distinguish between events and actions, on the one hand, and the descriptions we use to describe them, on the other. Some descriptions are such that they would not hold unless their referents are related in certain ways to other entities; but that can hardly make such things "Cambridge" entities, dependent for their existence (or occurrence) on others. After all, Bill Clinton was the 42nd President of the United States. But his being so entails that forty-one presidents preceded him. Should we then conclude that the 42nd President of the United States could not have existed unless the previous forty-one existed, and thus conclude that the 42nd President of the United States, despite having
gone to Oxford, is really a dependent, Cambridge entity? And should we also conclude that, since Bill Clinton would (I assume) have existed even if the first forty-one Presidents hadn’t, Bill Clinton ≠ the 42nd President of the United States?

The correctness of our description of Jones’s action as a killing of Smith requires that Smith die. But, unless the property ascribed to that action by that description is essential to that action (and it isn’t), there is no particularly good reason to think that Jones’s action, the one that in fact is describable as a killing of Smith, is essentially a killing of Smith. And if not, there is no particularly good reason to think that Jones’s action is one whose occurrence is dependent on Jones’s death, and no particularly good reason to think that any action of Jones’s should count as a Cambridge action.

And so, I do not regard the Cambridge solution as a plausible addition to the array of solutions to the problem of the time (and place) of a killing.

NOTES


4 Ruben typically uses imperfect nominals, like ‘my killing the Queen’, instead of perfect nominals like ‘my killing of the Queen’, and insists that it is odd, and indeed false, to assert that its referent should occur before the Queen dies. But, since imperfect nominals, if they refer at all, refer to facts, and not
to actions or events, it is odd is that it should be thought that such terms refer to things that have times of occurrence at all. See Jonathan Bennett, *Events and their Names* (Indianapolis: Hackett Publishing Company, 1988).

See Bennett, *Events and their Names*, pp. 194ff.

Let us ignore, as irrelevant to present purposes, the fact that when Socrates died he ceased to exist. To me, that indicates that he did not really change, since to alter, a thing must survive the alteration (but Socrates’s matter did undergo changes).


Ruben, p. 280.

Ruben, p. 279.

Ruben, p. 277.

Ruben, p. 281.

Ruben, p. 282.

However, Ruben says (on p. 282) that Jones’s moving of his finger, and other “basic actions”, are not Cambridge actions, but, I presume, real ones. He does so, I think, because he confuses Jones’s moving of his finger and his finger’s moving.

Is this an objection to Ruben’s view? Some may find it so, but I am not certain that I do. See Jennifer Hornsby’s *Actions* (London: Routledge & Kegan Paul, 1980).

Note that Ruben does not hold that the killing begins with the shooting and ends with the dying; that’s Thomson’s view.


See Davidson’s “The Logical Form of Action Sentences”, reprinted in his *Essays on Actions and Events*, pp. 105-122.

Here and elsewhere I am ignoring questions of tense.

Of course, he wrote the *Categories* then and there; but while Aristotle’s doing that was perhaps a necessary condition of my coming to admire him, it was clearly not what his coming to be admired by me could consist in.

Of course, for a thing to change posthumously requires that it have properties at times at which it doesn’t exist. And that may give philosophers some pause. But I am willing to forego discussion of this issue here.

Ruben, p. 281.
It is indeed true that, in every (relevant) possible world, if I light the match, then the match lights. But it does not follow from this that, if I light the match, then in every (relevant) possible world the match lights.

But if this is so, then the property of being a killing must be essential to every action that has it at all.

This paragraph is inspired by Davidson's remarks concerning 'the cause of e caused e' in "Actions, Reasons, and Causes", reprinted in his Essays on Actions and Events, p. 14.