

NO SUICIDE FOR PRESENTISTS: A RESPONSE TO HALES

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ABSTRACT: Steven Hales constructs a novel argument against the possibility of presentist time travel called the *suicide machine argument*. Hales argues that if presentism were true, then time travel would result in the annihilation of the time traveler. But such a consequence is not time travel, therefore presentism cannot allow for the possibility of time travel. This paper argues that in order for the suicide machine argument to succeed, it must make (at least) one of two assumptions, each of which beg the question. The argument must either assume that the sequence of moments is invariant, or that time travel through time requires distinct, co-instantiated moments. Because the former disjunct assumes that presentist time travel is impossible and the latter assumes that presentism is impossible, the suicide machine argument fails.

KEYWORDS: presentism, suicide machine argument, time travel, Steven Hales

1. Introduction

Presentism is a theory of time that holds that only the present moment and those things that inhabit the present moment exist.¹ It is widely held that restricting the inventory of moments to the present moment creates a problem for the possibility of presentist time travel, since time travel seems to require moments other than the present and presentism denies such a possibility.² Appealing to the apparent tension between time travel and the presentist theory of time, Steven Hales³ presents a novel argument against the possibility of presentist time travel called *the suicide machine argument*. The suicide machine argument holds that (i) time travel just is the process of an individual traveling between distinct, co-instantiated moments, and (ii) presentism denies that there are any moments other than the present to which an individual could travel. Thus given (i) and (ii), presentist time travel is a kind of suicide for the time traveler. I argue that the suicide machine argument

¹ See Ned Markosian, "A Defense of Presentism," in *Oxford Studies in Metaphysics*, vol. 1, ed. Dean Zimmerman (Oxford: Oxford University Press, 2003).

² Simon Keller and Michael Nelson, "Presentists Should Believe in Time-Travel," *Australasian Journal of Philosophy* 79 (2001): 333-45.

³ Steven Hales, "No Time Travel for Presentists," *Logos & Episteme* 1, 2 (2010): 353-360.

must either assume that the sequence of moments is invariant or that time travel presupposes the existence of two distinct, co-instantiated moments in order to succeed. Since both assumptions beg the question either against presentism or presentist time travel, the presentist is within her rights to reject the suicide machine argument outright. Furthermore, I provide a rough argument to demonstrate that presentist time travel is possible.

2. Proper Reconstruction

Hales maintains that presentist time travel would result in annihilation of the time traveler, rather than time traveling: “For presentists, getting into a time machine is suicide – the occupant goes out of existence. Recall that presentists are committed to a purely objective present; the events and objects at this objective present alone are real, even if other things have been or will be.”⁴ Hales thinks that presentism is committed to the suicide of time travelers because it is committed to the existence and objectivity constraints on the present moment. The *existence constraint* (EC) holds that concrete objects exist only if (i) they are capable of persisting through time and (ii) they are capable of occupying a particular moment. The *objectivity constraint* (OC) holds that the present moment just is the moment that exists to the exclusion of all other moments.

Hales supposes that the (OC) and (EC) constraints force the presentist to admit that her theory of time cannot account for time travel since there is no other moment besides the present for the time traveler to occupy, and as a result leaving the present would be equivalent to the suicide. Hales states: “Either presentists must identify the objective present with the present of external time or the present of Dr. Who’s personal time. Suppose they [presentists] *identify the present of external time as the objective present* ... In this case, by the Suicide Machine argument, Dr. Who leaves the objective present and thus goes out of existence.”⁵ One of the assumptions that results in a successful version of the suicide machine argument can explicated as: (PS) *the ordering of moments is invariant*.

Given the (PS) constraint, it would follow that although the passage of time is allowed under presentism, moments cannot occur out of sequence. There is a particular ordering imposed on a sequence of moments such that the ordering of moments is invariant. As such, constrain (PS) blocks the possibility of presentist time travel.

Hales continues: “Suppose instead presentists identify Dr. Who’s personal time as the objective present. In this scenario, after he gets into the time machine

⁴ Hales, “No Time Travel,” 357.

⁵ Hales, “No Time Travel,” 358-9; *emphasis mine*.

everything else in the world is separated from the objective present, and hence the universe minus Dr. Who goes out of existence.”⁶ Hales holds that if the presentist rejects the objectivity of the present, then she is forced to accept either that the time traveler remains in existence to the exclusion of the rest of the universe, or posit a multiplicity of time lines.

The suicide machine argument can be formulated as,

S1: All objects O capable of persisting through time must occupy a particular moment (From [EC]).

S2: The present moment exists to the exclusion of all other moments (From [OC]).

So,

S3: O must occupy the present moment (From [S1] and [S2]).

S4: It is either the case that: (i) the ordering of moments is invariant, or (ii) there must be a moment that is distinct from the present moment to serve as an arrival moment for O.

S5: But (i) prevents the possibility of presentist time travel and (ii) blocks the possibility of presentism.

So,

SC: O is not capable of presentist time travel (From [S3], [S4] and [S5]).

The disjunction (S4) applies specifically to presentist theories of time. It is constraints (EC), (OC) combined with disjunction (S4) that blocks the possibility of presentist time travel. The presentist cannot appeal to subjective considerations to save the possibility of presentist time travel given that she maintains the property of *being the present moment* holds of a moment subject independently. Appealing to subjective considerations is a viable move in an eternalist universe, rather than a presentist one.

3. Critical Comments

In spite of the initial plausibility of the suicide machine argument, the presentist need not forgo the possibility of time travel. The constraints upon which the suicide machine argument depends for its success beg the question either by assuming the impossibility of presentism generally, or presentist time travel specifically. Before exploring the ways in which the suicide machine argument begs the question, we must distinguish between presentism and eternalism as conflicting

⁶ Hales, “No Time Travel,” 359.

theories about the nature of time. Specifically, how it is that eternalism and presentism differ in their conception of the present.

Eternalism holds that all moments are metaphysically on par: past and future moments are just as real as present moments.⁷ Eternalism explains the appearance of temporal privilege by appealing to the perspective of a given individual at a particular time, rather than an intrinsic property of the moment itself. Although eternalists are committed to objective temporal properties, (e.g. Event E_1 <occurred earlier than> E_2), they maintain that the present is privileged only perspectively. For example, some eternalists might explain the apparent privilege of the present in epistemic terms. Those individuals that occupy moment M have this impression because of their unique epistemic access to the components of M . From the subject's point of view, the present moment appears privileged, but rather it is that the subject is epistemically privileged. Metaphysically, eternalism holds that no temporal moment is privileged above any other moment.

In contrast, presentism locates the difference-making properties of the present from the non-present moments in the moment itself. For example, some presentists might explain the difference-making properties of present moments in terms of actualization. The present moment and those objects and properties that inhabit the present moment are metaphysically privileged because they are actualized, while those objects that occupied past moments and will occupy the future moments are not privileged because they are not actualized. It is because presentism holds that the difference-making properties that differentiate the present moment from non-present moment are intrinsic to the moments themselves that they hold that the present is objectively privileged.⁸

Further, all presentists accept a weak constraint on the objectivity of the present,

(Exclusive Objectivity): T is the present moment *only if* T is the moment that exists to the exclusion of all other moments.

But the exclusive conception of the present alone is not sufficient to establish the suicide machine argument. It could be that the (objective) present moment changes, with the help of a time machine, to accommodate the time traveler. In such a scenario, a time machine would have the capacity to rearrange all of the matter and energy in the universe, such that it is indistinguishable from a past or future moment and the moment brought about by the time machine exists to the exclusion of all other moments. For example, it could be the case that a moment

⁷ Hales, "No Time Travel," 358.

⁸ Dean Zimmerman, "The A-theory of Time, the B-theory of Time, and 'Taking Tense Seriously'," *Dialectica* 59 (2005): 401-57.

from the Jurassic period is instantiated after a moment from the age of hovercrafts, *with the help of a presentist time machine*. To block such a move, Hales needs to appeal to a much stricter variety of temporal objectivity such as,

(Fixed Objectivity): T is the present moment *only if* (i) T is the moment that exists to the exclusion of all other moments, and (ii) moments cannot occur out of sequence.

Presentists generally must endorse the exclusive objectivity of the present if they are to remain consistent presentists. In contrast, fixed objectivity is a far more stringent conception of the present. Even though appealing to the fixed conception of the present would result in a successful suicide machine argument, Hales has other options. It might be that Hales holds a disjunction akin to (S4): it is either the case that (i) the ordering of moments is invariant, or (ii) there must be a moment that is distinct from the present moment to serve as an arrival moment for O.

The problem with the suicide machine argument is that conclusion (SC) only follows from premises (S1) through (S5), if premise (S4) succeeds. Although a presentist can consistently affirm premise (S4) by affirming disjunct (i), there is no reason that the presentist must accept premise (S4) without further argumentation. In order for the suicide machine argument to succeed, it must appeal to (at least) one of the following constraints (each constraint serves as a disjunct that forms [S4]),

- i. Temporal passage is fixed such that the ordering of moments is invariant.
- ii. There must be distinct, co-instantiated moments to allow for the possibility of time travel.

It is not clear why the presentist would accept either conditions (i) or (ii) without further motivation. Presentism simpliciter is inconsistent with (ii), as such a condition rules out the persistence of objects from one moment to another, and thus begs the question against presentism. If distinct and co-instantiated moments were required to allow for the possibility of presentist time travel, then such a requirement would require distinct and co-instantiated moments to allow for the possibility of object persistence. Furthermore, disjunct (i) begs the question against the possibility of presentist time travel. If moments can only occur in an invariant ordering, and time travel allows for moments to occur in a different ordering, then time travel is not possible in a presentist universe. But this is a serious problem for the suicide machine argument, as it was supposed to provide justification for the claim that present time travel results in the suicide of the time travel. Since either condition (i) or (ii) is necessary for the success of the suicide machine argument,

then the suicide machine argument is guilty of begging the question against either presentism or presentist time travel.

A counter to the suicide machine argument can be formalized as follows,

CA1: If the suicide machine argument succeeds, then the presentist ought to hold either disjunct (i) or (ii).

CA2: Disjunct (i) begs the question against presentist time travel.

CA3: Disjunct (ii) begs the question against presentism.

CA4: But the presentist ought not to hold either disjunct (i) or (ii) (From [CA2] and [CA3]).

So,

CA': The suicide machine argument does not succeed (From [CA1] and [CA4]).

The possibility of presentist time travel does not entail that the time traveler ceases to exist, but rather that it is possible for the present moment to accommodate the time traveler. Of course such a process must preserve the objective temporal exclusivity of the present.

For example, consider a fighter jet *F* that is confined to taking off from and landing on a particular aircraft carrier *C*. It does not follow that if *F* leaves *C*, then *F* will have no place to land. It just means that *F* must take off from and land on *C*. Suppose that *F* needs to travel several miles away from its current position. The landing constraint does not entail that *F* cannot land, but rather that: *if F can land in a location other than the location that F took off from, then C must have moved from the departure to the arrival location.*

4. Positive Proposal

Given the failures of the suicide machine argument, we are in a position to construct an argument for the possibility of presentist time travel. Indeed, given a few stipulations presentist time travel is possible.

Consider the following argument,

E1: If it is possible that: (a) object *O* can persist from moment M_1 to moment M_2 , (b) it need not be the case that M_1 and M_2 are distinct and co-instantiated, and (c) the moment occupied by *O* just is the moment that exists to the exclusion of all other moments.

Then presentist time travel is possible.

E2: It is possible that (a), (b) and (c).

So,

EC: Presentist time travel is possible.

Of course, one might wonder how the presentist could explain time travel, given that the present moment must transform to provide an arrival moment for the time traveler. All the presentist needs is the possibility of a time machine capable of operating in a presentist universe, transforming the present moment by annihilating the components of the departure moment and instantiating components of the arrival moment. The time machine constraint can be stated roughly,

(Time Machine Constraint):⁹ Time machine B is capable of an instance of presentist time travel only if B is capable of annihilating the departure moment and instantiating the arrival moment such that both the departure and arrival moments exist to the exclusion of all other moments.

The time machine constraint provides the presentist a rough response to the problem of presentist time travel mentioned by Hales: “Not only does presentist ‘time travel’ merely require the would-be traveler to go out of existence *in nihilum*, but it also requires that objects come into existence *ex nihilo*.”¹⁰ Hales claims that presentists must deal both with the conclusion of the suicide machine argument and account for the *ex nihilo* genesis of objects in the moment to which an individual traveled.

However, Hales’ point is subject to a dilemma:

For any given instance of presentist time travel, it cannot *both* be the case that: (a) the time traveler goes out of existence; and, (b) the arrival moment comes into existence *ex nihilo*.

If option (a) were the case, and the time traveler ceased to exist for lack of an arrival moment, then the *ex nihilo* genesis of an arrival moment would not be a problem. However, if we suppose there *were* an arrival moment for the time traveler to occupy, then the time traveler would not cease to exist for want of an arrival moment. Hales cannot consistently maintain that a particular instance of presentist time travel is subject to both problems (a) and (b), because both horns of the dilemma cannot be the case for any single instance of attempted time travel. Hales might respond that he only meant that either option (a) or (b) would be a problem for present time travel. But this response fails for another reason. Even individually, options (a) and (b) are only problematic for the presentist *if* she cannot account for the possibility of time travel or a possible mechanism for annihilating the departure moment and instantiating the arrival moment.

⁹ For the purposes of this paper, I will assume toy physics.

¹⁰ Hales, “No Time Travel,” 358.

The primary purpose of proposing a possible presentist friendly time machine is to provide a rough response to problem (b), since we already have a response to problem (a). The arrival moment is not an instance of *ex nihilo* genesis, but rather the arrival moment is brought about by the time machine. It is plausible to think that presentist time travel is possible *only if* it is possible that there could be time machines capable of annihilating the departure moment and instantiating the arrival moment. A presupposition of something originating *ex nihilo* is that there is no causal mechanism capable of bringing that something about, but rather that it simply *comes from nothing*. However, a time machine capable of annihilating the departure moment and instantiating the arrival moment would block the charge that the arrival moment did come into existence *ex nihilo*.

A time machine could accomplish the annihilation the departure moment and the instantiation the arrival moment simply by rearranging all the matter and energy in the universe, so as to make it indistinguishable from a past or future moment. The possibility of a time machine can be easily generated,

(ME)¹¹ If machine F is capable of rearranging all of the matter and energy in the universe, such that it is indistinguishable from a past or future moment, and the identity of indiscernibles¹² holds between the instantiated moment and the past or future moment, then F is a time machine.

The presentist is entitled to stipulate the possibility of a machine that meets the antecedent of conditional (ME), and as such she is entitled to postulate the possibility of a presentist time machine. Since we are only concerned with bare possibilities, it is the advocate of the suicide machine argument that must provide the argument deriving a contradiction from the assumptions made on behalf of presentist time travel.

Now that have disposed of condition (i)¹³ via the possibility of a presentist-friendly time machine, is there a compelling reason for the presentist to take condition (ii)¹⁴ seriously? It might be argued that in order for a time machine to annihilate the departure moment while instantiating the arrival moment would require *both the destruction and construction of the same moment*. But then how could it be the case that the time machine is *both* annihilating and instantiating the present moment? The presentist is subject to following *prima facie* trilemma,

¹¹ I am indebted to Bernard Molyneux (Philosophy Department, U.C. Davis) for this insight.

¹² If, for every property F, object x has F *if and only if* object y has F, then x is identical to y.

¹³ i. Time is fixed such that the ordering of moments is invariant.

¹⁴ ii. There must be distinct, co-instantiated moments so as to allow for the possibility of presentist time travel.

Either (i') a time machine can both annihilate and instantiate the same moment, (ii') temporal moments can be indeterminate, or (iii') there can be distinct, co-instantiated moments.

The presentist must outright reject (iii') as it conflict with presentism. But how might the presentist evaluate options (i') and (ii')? She cannot accept option (ii') for fear of inconsistency. If she accepts the possibility of indeterminate moments (i.e. moments that lack facts of the matter), then she must explain how it is possible for a time machine to occupy an indeterminate moment. This is difficult since 'a time machine occupying moment M' would be a fact of the matter. The presentist is committed to the claim that every existent that is capable of persisting through time must inhabit the present moment. But if the present moment were indeterminate, then it is unclear how a time machine could occupy the present moment.

The critic holds that the presentist is not in any better position with regard to option (i'). If the presentist accepted option (i'), then she is forced to admit that the same moment can be in the process of being annihilated and instantiated. Since such a claim cannot be parsed in temporal terms, the critic might argue that an individual moment must possess both annihilation and instantiation processes. Why should the presentist accept option (i')? It would seem that option (i') presupposes a principle that the presentist is free to reject: an individual moment cannot co-possess annihilation and instantiation processes. But such a presupposition requires a further presupposition to block the presentists rejection of option (i'): *there cannot be transitional moments*.

A transitional moment can be defined as,

(TM) Moment M is a transitional moment only if (a') M exists to the exclusion of all other moments, and (b') M contains components of both a departure moment and an arrival moment.

A transitional moment just is a moment that exists to the exclusion of all other moments in the process of having all of its matter and energy rearranged by a time machine. Transitional moments allow the presentist to explain how it can be the case that a time machine can annihilate the departure moment and instantiate the arrival moment without postulating distinct, co-instantiated moments. Any time machine capable of traveling through time in a presentist universe must be capable of generating transitional moments.

5. Conclusion

The suicide machine argument holds that if presentism were true, then an individual attempting to travel through time would cease to exist. This is because

presentism holds that the present moment exists to the exclusion of all other moments and time travel seems to require moments that are distinct from the present. Hales holds that such constraints force the presentist to admit that time travel in a presentist universe is equivalent to going out of existence.

I have argued that this conclusion is hasty. There is no reason for the presentist to deny that a time machine could simply accommodate the time traveling of an individual by rearranging all the matter and energy in the universe at particular moment such that it is indistinguishable from a past or future moment. It is possible for an inhabitant of a presentist universe to travel through time if there is a time machine capable of accommodating her time traveling. A critic might object that time travel is possible only if there are two distinct, co-instantiated moments such that a time machine can annihilate aspects of the departure moment and instantiate aspects of the arrival moment. But such a response presupposes that transitional moments are not possible.

The considerations offered in favor of the possibility of presentist time travel are modest at best. I simply maintain that the suicide machine argument fails to block the possibility of presentist time travel, and a modest conditional: *If the suicide machine argument is the only argument against the possibility of presentist time travel, then presentist time travel is possible.*