Time Travel and Paradox

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Introduction.

In this essay, I will explain the argument for the impossibility of time travel and whether or not I agree with its premises and respective conclusion. Firstly, I will succinctly explain the argument by defining each premise and how the conclusion follows from the premises themselves. Next, I will evaluate each individual premise, with regards to the reasoning for advancing them and possible reasons to doubt them. Following this, I will weigh each premise by the significance of the evidence provided. Finally, with respect to the previous sections, I will evaluate the argument against time travel as an aggregate by stating that although it may be impossible to kill one’s grandfather, the concept of time travel is still perfectly consistent.

Part 1.

The argument of the possibility of time travel has long been disputed, over thousands of years. The basic tenets of this argument is that time travel is not possible because it is not possible to bring about that one does not exist because it is impossible to kill one’s grandfather. This argument is sometimes referred to as the Grandfather Paradox. The first premise is that backwards causation is possible, assuming time travel is possible. This means that if one can travel through time, you can bring about changes that have an effect before their cause. The second premise claims that it is possible to kill one’s grandfather, assuming backwards causation is possible. This refers to how one can create an effect before the cause, a similar scenario can occur when killing one’s own grandfather (the killing of your grandfather was an effect that came before your decision that would cause you to kill your grandfather). The third premise argues that it is possible to bring about that one never existed, assuming you are able to kill your
grandfather. If one had killed their own grandfather (assuming this was before he was able to have children), you grandfather would’ve been unable to have children which would have led to creating you; essentially, you cannot exist because your grandfather was unable to start the chain of events that led to you being born. Premise four states that, in general, it is not possible to bring about that one never existed. In order to cause yourself to not exist, you could not have not been born in the first place. Premise 5 follows from all of these, concluding that time travel is an impossibility.

Part 2.

(a) Premise 1 states that “If time travel is possible, then backwards causation is possible.”.

The phenomenon of backwards causality (or retro-causation) refers to the fact that an effect will take place before its cause. One way of advancing the premise is to imagine if Paul were to put a bomb in a time machine today, send it back in time, and then the bomb kills a dinosaur. If one is to trace back the causal chain of the dinosaur blowing up, it will eventually lead back to Paul putting the bomb in the time machine. However, the fact that Paul put the bomb in the time machine happened much later than the dinosaur dying (60 million years difference). Therefore, this cause came after the effect.

(b) Although there may be reasons for advancing this premise, there are also some that cast doubt upon it as well. One such doubt is that to alter the past should alter your own present state. By this, I refer to when Paul changes the past, it changes the causal chain of events from that dinosaur dying to when Paul is about to put a bomb in a time machine to kill a dinosaur. Prior to Paul putting a bomb in a time machine for the first time, we assume that he has not done this before. We’ll call the the timeline where Paul has not
killed the dinosaur Timeline 1. However, after Paul kills the dinosaur, this changes the causal timeline of Timeline 1, creating a completely new timeline, wherein Paul has killed a dinosaur. We’ll call this Timeline 2. If the previous timeline (Timeline 1) has been changed to another, completely different timeline (Timeline 2), we cannot know with certainty that Paul will put a bomb into a time machine and kill a dinosaur. Therefore, Timeline 2 is significantly different from Timeline 1 and backwards causality could not have occurred.

(c) Though there is evidence in support of backwards causality, I believe it to be illogical. It cannot follow that Paul will put a bomb into a time machine again and kill a dinosaur, after he killed a dinosaur beforehand, if the timeline (and it’s causal chain of events) is now completely different! We cannot know with certainty that this will occur again and therefore, backwards causality cannot occur.

Part 3.

(a) Premise 2 states that “If backwards causation is possible, then it is possible for one to kill one's grandfather.” While we have already proved backwards causation as illogical, we will analyze this premise, under the assumption that backwards causation is possible. One reason for advancing this premise is that one can affect time by manipulating causal chains of events, one should be able to affect time by manipulating one’s own chain of causal events. For example, if one is seemingly able to do anything they want in their present time, or that they have free will, they should be able to do so even in the past.

(b) Although reasons for advancing may seem quite clear, there are equally clear reasons for doubting this premise too. One reason is that there is a notable difference in the usage of
the word “can”. If an individual named Sean travels back in time, he can kill his grandfather in the sense that he has a gun, the training, and the desire to kill him but he cannot kill him in the sense that his grandfather did not die at that time because he lived long enough to cause Sean to be born. There would be a logical inconsistency if Sean actually killed his grandfather at that point in time. If he actually killed his grandfather, we would not be able to say with certainty that the grandfather that died was actually Sean’s grandfather. Therefore, it is logically inconsistent to suggest one can kill their own grandfather.

(c) Though it does seem to follow that one could kill their own grandfather, it is logically impossible. If Sean killed his grandfather, we could not say that grandfather is his grandfather nor that he lived long enough to have children. It is logically incorrect to say that even if backwards causation was to be possible, it is possible to kill your grandfather.

Part 4.

(a) Premise 3 states that, “If it is possible for one to kill one’s grandfather, then it is possible for one to bring it about that one never existed.” While we have already shown that it is impossible to kill one’s own grandfather, we will examine this premise under the assumption that it is possible, for the sake of argument. A reason for advancing this is that by killing your own grandfather, you directly cause the chain of events that lead to your birth to cease out of existence. If you kill your grandfather before he has any children, then he would not have been able to continue the causal chain of events that lead to your own birth. Therefore, you have caused yourself to never have existed at all.
(b) Though this may seem to follow logically, I will show that this premise is inconsistent and would not follow from killing your own grandfather. For one to cause something to happen, one must have existed for it to happen. This is true for anything, in any case. For example, if you eat an apple and it rots afterwards, you had to exist to eat that apple in the first place. Such is in terms of causing oneself to not exist. You had to exist in the first place to cause yourself to not exist. This, by very simple principles, is not possible. Additionally, even if you caused yourself to stop existing, you would not have been able to travel back in time to cause yourself to do that. If you never existed in the first place, it is not consistent that you can travel back in time, let alone cause yourself to not exist. Logically, it does not result from existing that you can cause yourself to not exist. Even the very phrase sounds logically unreasoned.

(c) Even though there is one singular reason for advancing this premise, it is still the case that it is still not logically conclusive. To bring about that one cannot exist truly requires one to exist and is therefore impossible.

Part 5.

(a) Premise 4 states that, “It is not possible to bring it about that one never existed.” As discussed in the previous premise, this seems to follow logically. To bring about that one never existed requires one to exist prior to the act, therefore giving this premise some ground, since it logically is reasoned.

(b) One reason to doubt this premise as true is because perhaps another individual could bring about that someone existed. Nowhere in this premise does it list that as impossible and it seems to follow logically that one could do this. Additionally, some might say that taking part in an
abortion would bring about that someone never existed. Stopping their own life would therefore stop their own existence as an aggregate.

(c) While it may be possible to bring about that no one existed, there is room to doubt it. Overall, bringing about nonexistence may lead to some contradictions but there are definitely some loopholes to that logic.

**Part 6.**

Overall, the argument against time travel makes a good case for itself. However it is definitely flawed in many ways, such as the fact that neither backwards causality nor killing one’s grandfather can occur. With these points in mind, I do not accept its conclusions. Though it may appear that, due to the argument itself time travel is impossible. I believe that there are impeccably consistent ways of viewing time travel.