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A Practical Understanding: Time Traveling Paradoxes

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Abstract

The possibility for time travel inadvertently brings forth several paradoxes. Yet, despite this fact there are still those who defend its plausibility and claim that time travel remains possible. I, however, stand firm that time travel could not be possible due to the absurdities it would allow. Of the many paradoxes time travel permits, the ones I shall be demonstrating, are the causal-loop paradox, auto-infanticide or grandfather paradox, and the multiverse theory. I will begin with the causal-loop paradox, which insists that my older-self could time travel to my present and teach me how to build a time machine, dismissing the need for me to learn how to build it. Following this, I address the grandfather paradox. This argues that I could go back in time and kill my grandfather, which would entail that I never existed, yet I was still able to kill him. Finally, I address the multiverse theory, which does seem to avoid all the previous paradoxes, but inevitably leads to a deterministic universe. David Lewis and Paul Horwich are among the pioneers of those who believe that these paradoxes pose no threat to the possibility of time travel. Drawing upon their works, I analyze their arguments and demonstrate practically why each of the paradoxes remain immune to their claims.

Introduction

Suppose it took Tim his whole life to learn how to build a time machine, but once he finally learned, he was able to travel back to the past and teach his younger-self how to build the exact same one. By doing so, Tim no longer needs to waste his whole life learning how to build one, since he was taught by his older-self. Now, younger Tim can live a radically different life than that of older Tim's, for he no longer holds the burden of having to learn how to build a time machine. However, this brings forth a very unique predicament: younger and older Tim are still numerically the same person; younger Tim's future is older Tim's past, but older Tim changed his own past by the very action of teaching his younger-self how to build a time machine. There now exist two different timelines of the very same person: older Tim, who spent his whole life learning how to build a time machine, and younger Tim, who already knows how to build one. This is one of the many inconsistencies that time travel inadvertently forges and a paradox I will more thoroughly scrutinize in this paper. Many philosophers, such as David Lewis and Paul Horwich, advocate these paradoxes "are oddities, not impossibilities". I, on the other hand, believe Lewis and its other proponents are mistaken. The vast number of contradictions time travel encompasses exhorts its own unlikeliness. Therefore, it is the purpose of this paper to present the many paradoxes of varying time travel theories and illustrate how their logical defects further bolsters the implausibility of time travel.

Traveling Through Time

Time travel's foundational dilemma is due to its own nature, traveling through time. The immediate problem the time traveler faces is a discrepancy with how far he has traveled and how long it took him to travel; and since this is a matter of time we deal with temporal units of measurement. The disparity lies with how far temporally he travels, whether in to the future or past, and how temporally long was the journey. For example, if Tim travels from 2000 to 1950 and it only takes him a half an hour, the duration of the journey and the destination are temporally unequivocal. It seems to be a logical contradiction to suggest Tim traveled for only 30 minutes but somehow ended up 50 years into the past. This presents another issue as well. Strictly for traveling into the past, the events of departing and arriving are intermittent. Tim departing from the year 2000 and arriving in 1950 implies that he technically arrived before he ever departed.

Multiple Time References

Defenders of this view distinguish between personal time and objective time (or external time) to

dispel the paradox. Objective time is what Lewis refers to as “time itself” (Lewis, 1976, P. 160), whereas Personal time can be defined as “that which occupies a certain role in the pattern of events that comprise the time traveler’s life” (Lewis, 146). The premise of this thought begins with time being one of the four dimensions and that all the dimensions are affected by ‘change’. “Change is qualitative difference between different stages—different temporal parts—of some enduring thing” (Lewis, 1976, P. 145). That is to say anything that endures, or exists over a period of time, will have different qualitative characteristics throughout its existence. Since there is a time dimension, all things that endure also have a temporal aspect that changes. Who you were ten years ago is not the qualitatively same person that you are now (although you are still numerically the same); this represents two different temporal stages of yourself. Therefore, the duration of Tim’s journey, the 30 minutes it took to travel back to 1950, is located in his personal time, and the destination he arrives at is the objective time. There is no longer the discrepancy between the duration and distance of the journey once it is separated into personal and external categories of time. This feature also resolves the sequential issue of traveling into the past, for he no longer arrives before he departs from the standpoint of his personal time. Hence, the sequential order is repaired by addressing Tim’s personal time; he was first in 2000 and then arrived in 1950 in regards to personal time. Furthermore, the separation of the time traveler’s personal time and objective time does seem to solve the previous paradox, but only to replace it with further complications. The new obstacle is an issue of having multiple objective time references. When Tim was in 2000 that moment was currently his personal and objective time. After arriving in 1950, his personal time is still the same, but he now has a different objective time. There cannot be multiple objective time references. If objective time is switched with ‘the present’, the contradiction is more apparent. While Tim was in the year 2000, it was currently the present moment, after he traveled back to 1950; again, he was in the present moment. It is an intrinsic quality of the present that there can only be one present moment, for if there were multiple instances of the present, there would be multiple moments of now. This can only be applied to the A-series, which states that the present has a uniquely privileged ontological status; in other words, the present is the most real. Time travel would completely abandon the ontological presence of the present for the A-series. This inadvertently leads to another inconsistency that there could technically be as many present moments as there are moments.

Avenues of Time Travel: Past, Present & Future

The two prominent variations of the A-theory are presentism and growing block theory. Presentism maintains that only the present is objectively real. Growing block theory acknowledges both the present and past to be objectively real. However, both suggest that the future is not real. Therefore, for Tim to travel from 2000 to 1950 would be virtually impossible for A-theorists. Assuming 1950 is now the present that would advocate that Tim just arrived from the future, but as aforementioned, both presentism and growing block theory claim that future objects do not exist. Therefore, either the A-series is wrong in assuming that future objects exist, or the A-theorists are faced with the paradox of Tim traveling back from a future that technically never existed in the first place. However, in a world where time travel is possible, all avenues of time that could be traveled through must be viable. If time travel in to the past is plausible, it is obligatory that time travel in to the future, as well as, time travel from the future/past to the present be also plausible. Considering you accept the premise (a) time travel to the past is possible, you must also accept that (b) time travel to the future is possible, as well as those (c) time traveling from their future or past moment to our present to be possible. The reason (b) follows from (a) is because traveling in to the past suggests that the future exists because for those who are living in the past moment you are traveling to would have experienced you arriving from the future. Ergo, if you can arrive from the future to a previously present moment, you could also travel from a present moment to a succeeding future moment. From (a) and (b) you could implicitly conclude (c) to be true. If you time travel to the past from the perspective of those who reside in that past moment, it is the present and you arrived from the future. Likewise, if you time travel to the future from their perspective it is the present and you arrived from the past.

This flexible transit through time, in which time travel generates 'bridges' interlocks the past, present and future together, advances another dilemma. That is, time travel ends up breaking the logic of time itself, for time is forever flowing onwards from its most present moment. But if you can time travel into the past or future, that suggests every moment in time is technically the present moment, and would completely disrupt the flow of time. This follows because the past or future moments I am traveling to must exist prior to me arriving to them. This implies that they must be functioning in the same manner as my own present moment is simultaneously along either side of it. This entails that my present moment, a receding past moment, and a succeeding future moment are all presently active at the same time. If this were not the case, the alternative is that once you time travel to the past or future, then it becomes presently active as if it were 'on pause' prior to your arrival.

Furthermore, if we accept the idea that all past, present, and future moments are simultaneously present another impasse transpires. When you time travel to a past moment, for everyone there it is the present. If you return to your own present time, would it not still be the present for those in that past moment you had shortly departed from? It seems logical that they would continue to exist normally; your arrival or departure should not have had any distinguishable effect on their reality. If this is true it seems appropriate that every moment would be the present moment simultaneously. Likewise, if you time travel in to the past does the present moment that you had just left freeze and the past moment you arrive at unfreeze? If certain moments freeze or unfreeze depending on the time traveler's location, then that would commend some unwarranted ontological prestige upon the traveler. Where the time traveler goes should have no impact on reality, for he is no more superior than those from his own present, nor those in the past or future he may visit. Additionally, the present is ontologically superior. Therefore, it seems more convincing that once I arrive at that past moment I should freeze along with it since there exists a more significant present. Again, this sort of logic compliments the notion that every moment should be the present. Consequently, terms such as past, present, and future diminish into subjective reference frames on the virtue that everything becomes relative to where you are temporally located. What is past or future for me could be entirely future for someone in the distant past or entirely past for someone in the distant future.

The B Series: Deterministic Fate

The majority of these paradoxes at first glance seem to apply only to the A series since it acknowledges an ontologically superior present. Some argue that the B series sheds these incongruities. Considering that the B series holds that all events and times are equally real, it therefore has no ontologically privileged present. Events are relocated not as past, present, or future, but as temporal relations of succession and simultaneity. This avoids several of the issues mentioned earlier, which were due to the notion of a superior present. The B series also avoids the idea of past, present and future being, in some manner, separate realms. Hence, traveling to the 'past' or 'future' in the B series is not like traveling to another world so to speak; but metaphorically similar to fast forwarding or rewinding through a movie. The location of each event is fixed and unchanging, and they run earlier or later, then to one another. The events share the same timeline temporally and ontologically; no one event is more significant than another at any given time. Theoretically, the B series does seem to circumvent these paradoxes, but from a practical perspective of time travel a new spectrum of problems emerge. Variant degrees of determinism establish in every modification of a time-traveling B series. All the events in a B series are equally real, therefore, a later or 'future' event is just as real as an earlier or 'past' event. A consequence of this design is that all events appear to be predetermined; in other words, all events already have a fixed truth-value. How else could a succeeding event be as true as an event that preceded it? The succeeding event has not yet occurred; logically its truth-value should be dependent on every event that precedes it. It could not be true until the very moment it becomes simultaneous with the event that immediately precedes it. For when you time travel in to the 'future' in the B series, it is not a contradiction that no future objects exist, as it were for the A series, but why there exists a future

moment in its particular state of affairs is problematic. The B series does permit time travel, but the very fact that it permits future time travel questions its own authenticity. It would appear as though some supernatural phenomenon is determining the condition of the future. For why would 'the future' be the way it is, however it is, as opposed to some alternative state of affairs. Thusly, either our choices mean nothing because the future is destined to be the way it is, or every choice leading up to that particular future has already been predetermined.

Infinite-Loop Paradox

I shall be examining the practical paradoxes of time travel, which affect both the A and B series alike. I believe that illustrating these anomalies, will further illuminate how implausible time travel is, even for the B series. In addition, these next examples will clarify that although the B series eluded those previous paradoxes theoretically, it fails to do so in practical manners of time travel. The first example addresses David Lewis' causal loop conundrum. Lewis suggests that causal loops are just another oddity of a 'most strange world' in which time travel is possible. "Each event on the loop has a causal explanation, being caused by events elsewhere on the loop" (Lewis, 1976, p. 164). The peculiar example he uses is a time traveler going back and teaching his younger-self how to build a time machine:

Recall the time traveler who talked to himself. He talked to himself about time travel, and in the course of the conversation his older self told his younger self how to build a time machine. That information was available in no other way. His older self knew how because his younger-self had been told and the information had been preserved by the causal processes that constitute recording, storage, and retrieval of memory traces. His younger self knew, after the conversation, because his older self had known and the information had been preserved by the causal processes that constitute telling. But where did the information come from in the first place? Why did the whole affair happen? There is simply no answer. The parts of the loop are explicable, the whole of it is not. Strange! But not impossible, and not too different from inexplicabilities we are already inured to. (p. 164)

It is apparent how desperately Lewis is trying to cling to the possibility of time travel through this example. By assuming there is 'simply no answer' for this strangest of paradoxes, Lewis is guilty of taking a huge liberty with the logic of time travel. The time traveler goes back and teaches his younger-self how to build a time machine, but where did the older-self learn how to build a time machine in the first place? According to Lewis, when he too was younger his older-self came back and taught him those very same mechanics. The regress goes on infinitely, and ultimately there is no explanation for how the time traveler knew how to build a time machine, which Lewis admits to, but the problem is he dismisses this as one of the 'quirks' of living in a world where time travel is possible. However, the knowledge of knowing how to build the time machine is crucial for this example because it could not be possible for the time traveler to teach his younger self how to build a time machine without ever knowing how in the first place. If you assume Lewis is correct you are stuck in an infinite regress of older selves teaching their younger selves how to build something they never learned themselves. Are we going to assume that, in a world where time travel is possible, knowledge of how to build a time machine is somehow a priori?

The only possible scenario for Lewis is to say that the time traveler learned how to build a time machine then went back and taught his younger-self how to build one. Despite the alteration, this inadvertently causes another problem. There now exist two different timelines of the same person. The older-self who knows how to build a time machine by learning how to do so, and the younger-self who was taught how to do so by his older-self. This is problematic for the past is being changed. It should have always been the case that the younger-self learned how to build a time machine from his older-self. In this scenario, when the older-self was younger he learned how to build one, as opposed to being taught to do so by his older-self. Furthermore, it was never the case that the older-self who truly learned how to build a time machine was never visited by his older-self when he was

younger. This is because the knowledge of how to build a time machine did not exist until he learned how to do so. This is the extent to how crucial acquiring the knowledge of how to build a time machine in the first place is for Lewis' illustration to merit any validity. With this initial cause, the older-self learning how to build a time machine, then going back and teaching his younger-self, Lewis' example can commence, but this is at the expense of changing the past and creating a new future of events at the precise moment the older-self conveyed the knowledge to his younger-self. This is on the grounds that the older and younger-self are still numerically the same person, the younger-self's future is the older-self's past; however, they no longer share the same timeline. Where the older-self had to learn how to build a time machine his younger-self will not and will never have to; this is where their timeline deviates, considering when the older-self was younger, he did not have the knowledge to build a time machine; whereas now the younger-self does have the knowledge. Therefore, the younger-self is now no longer numerically identical to the younger-self of his older-self; his past has been altered and his future will contrast that of his older-self's past. Now that the younger-self has a logical explanation of where he acquired the knowledge, he learned it from his older-self who in fact learned how to build a time machine himself, Lewis' example has captured some assurance.

However, as the younger-self grows older he will be living his life radically different from his older-self. For one, he will not have to waste time learning how to build a time machine. In some sense, he is extinguishing his older-self's existence and replacing it with his own rendition. Again a paradox, still this is the only procedure that can make Lewis' scenario sound. Once the younger-self becomes old enough, he can time travel and teach his younger-self how to build a time machine even though he never learned how to do so, but was simply taught how to do so. There remains an original explanation of where the knowledge came from and the infinite loop can still proceed. This example is filled to the brim with inconsistencies. The preeminent one being that the original older-self, who learned to build a time machine, no longer exists due to his past being changed, which consequently led to his own obliteration. As the younger-self continues to live his life differently, he is changing the past of his older-self, which is the younger-self's future. By changing the older-self's past, he is erasing his memory and his existence. Therefore, there remains no explanation where the knowledge of how to build a time machine came from, due to the original older-self not existing anymore. In theory, it is possible to trace the origins of where the knowledge of how to build the time machine came from, yet that is only possible for the audience, since we are omniscient and outside the illustration; hence why we are even aware that there once existed an original self.

Nevertheless, the knowledge came from nowhere, since in the 'reality' of this demonstration, the original older-self no longer exists, or, to be more precise, never even existed, for once the infinite loop is created the source of the knowledge vanishes as well. At last we have reached the starting point of Lewis' case. Yet, all of this must occur beforehand for Lewis' causal loop example to develop. For his time travel scenario to be sound, it must violate the structural laws of time itself. Mainly that it is impossible to change the past, for you cannot change that which has already happened. I trust this to be a poetic account of why Lewis' illustration fails; Lewis argues the rationality of causal loops based on the foundation of irrational claims. Causal loops can only emanate when the past is changed, as I have demonstrated; this in and of itself deems causal loops irrational, for it is impossible to change the past. By the same token, this is necessarily why the past cannot be changed for then it would be vulnerable to causal loops, and causal loops are logically incompatible; they function without having any reason to do so.

Grandfather Paradox

The following paradox is known as the auto-infanticide or grandfather paradox, and it too exploits the restraining nature of time travel. If backward time travel is possible, there is nothing preventing the time traveler, Tim, from killing his younger-self or his grandfather; both instances spawn impossibility. If Tim kills his grandfather, it would entail that Tim never existed, yet Tim just killed his

grandfather. This would imply that the assertions, Tim never existed and Tim killed his grandfather, to be both true. Likewise, how could a younger Tim be killed by his older-self if the younger-self died before his older-self's time? There is no causal link explaining how the older Tim came to be; Tim both died young and lived to be old are ontologically incoherent. However, defenders of time travel insist that these types of discrepancies do not hinder its legitimacy. Common objections to this assertion is that Tim would not kill his grandfather; not that he is not able to per say, but that he simply would not. It begins with the foundation that the past is fixed and unchangeable. "The crucial thing here is to recognize the distinction between changing the past and influencing the past. Time travel would allow one to influence the past but not to change it" (Horwich, 1975, p. 435). If the presumption is that Tim's grandfather died in 1990, then that will always be the case. Therefore, it would not be possible for Tim to travel back to 1950 to kill his grandfather because that action would be completely altering the past, which is impossible. Why is this the case, what exactly is preventing Tim from killing his grandfather in 1950? Surely it would be absurd to surmise of some supernatural force of logic that prevents Tim from acting discrepantly. My objection is that Tim cannot kill his grandfather in 1950 because he died in 1990. The past is determined if Tim had killed his grandfather in 1950, then that would be the case timelessly. However, since his grandfather died in 1990, it will always remain so.

In any case, this is an inadequate explanation for why Tim would not be able to kill his grandfather if he desired to do so. The implication is that if Tim traveled back to his grandfather's time and had the desire to kill him, the only thing preventing him from doing so is as I mentioned earlier, some supernatural force. Consequently, this entails that once Tim travels back in time there are some actions he is restrained from doing. More specifically, any action that could reconstruct or destabilize the timeline from its original model would be hindered. For instance, the act of Tim killing his own grandfather would certainly change the entire course of the continuum; not to mention it would also permit the possibility for paradoxes to ensue. Is it simply that the time travelers must, out of their own will, avoid committing such behaviors? Again, this does not mean they are not able to do so. Philosophers such as Paul Horwich and David Lewis advocate otherwise; they suggest that because the past is unchangeable, this alone would prevent these atrocities. I disagree on account that if both are true, the past is unchanging and time travel into the past is possible, then the latter premise contradicts the former. If time travel into the past is possible, it would also be possible to change it. Horwich objects to this argument by making a distinction between influencing and changing the past, "Changing the past is indeed logically impossible. However, no such contradictions are involved in the idea of influencing the past. There is nothing tricky about this" (Horwich, 1975, p. 436). What is the criteria to distinguish acts that may influence the past from those that may change it, if "there is nothing tricky about this"? Moreover, it is impossible to determine the repercussions of an action the instance it was performed. To know whether a particular action may cause any significant change to the timeline would require time to pass. To determine the nature of an action one would need to wait for the succeeding events to unfold after that action, by which time the damage would already be done. Ergo, if it is true these paradoxes cannot occur, Horwich and others who hold this view must agree that the time traveler's freedom becomes constrained by some ethereal power. But what force is this that knows which actions would disrupt the timeline from those that are benign? This ethereal power may just be another 'oddity' Lewis forgot to mention, yet it is the only sufficient explanation for why Tim would not be able to kill his grandfather. It cannot be a matter of relying on the time traveler's responsibility not to commit these actions, for that would still allow the possibility for paradoxes to occur. For the premise that the past is fixed and unchanging to hold any authority it must have some supernatural force behind it policing all actions. Here lies another token for the absurdity of time travel: its possibility allows for paradoxes to occur. This is similar to the causal loop conundrum, in which causal loops are only possible in a time traveling world. Correspondingly, paradoxes like Tim killing his own grandfather also become a potential hazard, but again, only in a time traveling world. Considering the absurdity that the only thing preventing Tim from killing his grandfather is some

ludicrous phenomenon of a metaphysical overseer endorses my argument for why time travel is implausible.

Multiverse Theory

The multiverse theory has been argued to permit time travel without posing any paradoxes. I will demonstrate why this theory is immune to the previously mentioned paradoxes. However, afterwards I shall give my reasons for why I believe it remains implausible and ultimately leads to determinism. First of all, the multiverse theory is hardly a theory of time travel, for the travelers are forever in the present. Rather than traveling through the time dimension, they are traveling to different universes, which all have an earlier or later present moment than their own. Although it sheds nearly all of the former paradoxes, the foundation it relies on is extremely presumptuous. Philosopher John Abbruzzese (2001) describes the multiverse theory as such:

On that theory, rather than having a time traveller, S, journey into the past of his own universe (call it 'A') and thereby court the apparent contradictions, we can instead posit an alternative universe ('B') as his proper destination. The event of S's departing the year 2001 for the year 1001 (say) will therefore be more precisely described as S's leaving his own universe and time, 2001_A, and travelling not to 1001_A, the ancestor of his own time, but rather to 1001_B, i.e., the year 1001 in another universe. (p. 34)

This approach to time travel avoids all the paradoxical contradictions that exposed the other adaptations. By applying this notion to baby and older Tim's example the result is a logically possible variation of time travel. When older Tim travels back to the day he was born, he is no longer within his own universe, rather an alternate universe in which the present moment happens to be the day he was born. His appearance does not conflict with his own past because his past remains in the universe he shortly departed. What his appearance does entitle is an alternate reality for the new universe he traveled to. In Tim's authentic universe, the one he originated from, there was only one Tim; therefore, this new universe will simply have a distinct future from Tim's original universe, and it began with the arrival of older Tim teleporting back to the day he was born. Furthermore, baby Tim can live his life contrary to how older Tim did without having the discrepancy of changing older Tim's past. Likewise, Tim can go to another universe and kill his grandfather without it being a contradiction because the grandfather that is a necessary condition for Tim to exist is intact and safe in the original universe. Therefore, the causal connection between grandfather and Tim is not broken. The only consequence is that there will no longer exist another Tim in the other universe. Comparatively, Tim learning how to build a time machine and teaching his younger-self how to do so in another universe is also void of any paradox. In the multiverse theory the younger and older Tim are not causally connected to one another, since they are from separate universes. Thus, it is not a contradiction that the younger Tim in this universe knows how to build a time machine, while older Tim's numerically identical younger-self does not, again, because they are from separate universes they are not causally connected to one another.

This adaptation of time travel does seem adequate for it dismantles all paradoxes presented. However, the foundation it relies so heavily on is so farfetched it questions its own legitimacy. There must exist multiple universes within the omniverse, but to suggest they are all carbon copies of the same universe of the same timeline and just at different positions of that timeline is absurd. Why is it the case that if another universe comes in to being it not only physically resembles our own, but also mimics all the events that have occurred, along with the people that exist? Moreover, the multiverse theory has a strange and convoluted relationship between determinism and freedom of will. All universes share the same timeline or else it could not be the case that when Tim travels back to the day he was born in another universe that there exists a younger-self. This implies that if that universe is left alone, untampered by the time traveler, its future would play out exactly as the past of the time traveler's original universe up until its present moment. This indicates the predicament that there is another existing universe further along the timeline than the original universe. Would it

not follow the same then, that our universe will eventually experience the same events as the past of that future universe up until its present moment? It would seem so, for what else explains the relationship between these universes in the multiverse theory other than that they share the exact same timeline. It looks as though the multiverse theory has also fallen in to the deterministic dilemma.

I explained how the multiverse theory dispels those previously mentioned paradoxes that seemed to suggest that the time traveler can change the course of each universe he travels to. Therefore, the argument could be made that the instant the time traveler arrives in another universe that event alone would cause the universe's course to deviate from its original timeline; which I would agree with. If the multiverse theory is true and all the universes share a timeline, then the fact that there exist those future universes would indicate determinism. This is the exact same dilemma the baby Tim example was intended to expose. However, in the multiverse theory it seems that any alteration to another universe would then in turn grant true freedom of will. As the argument suggests, once the time traveler arrives in another universe, that event alone changes the course of that universe. In other words, once Tim travels back to the day he was born in another universe, the future of that universe will no longer be the same as the past of the traveler's original universe. In Tim's original universe there did not exist two Tims, baby and older Tim. Ergo, to achieve free-will everyone must travel to another universe, which will alter its course from their original universe, and will allow them to escape their inevitable predetermined fates.

But then another question arises: in the multiverse theory would there not exist another collection of universes that share that new deviated timeline those universes have now embarked upon? I assume so because the alternative would be to suggest that once a time traveler arrives to another universe, which causes it to no longer be a part of the shared timeline, he could no longer travel to another universe, for its timeline is unshared and exclusive. I argue that could not be the case for if there is a collection of universes that share the original timeline, then there must also exist a collection of universes that share every variation of the timeline. It would be foolhardy to suggest that the original timeline is the only timeline that exists amongst the many universes within the multiverse theory. Consequently, this brings back the unwelcomed notion of determinism. If those universes that deviated from the original timeline are a part of different sets of universes that share different timelines, then there must also exist a future version of each of those universes as well.

This theory seems so specifically tailored to permit time travel that it appears fabricated. Its premise alone is an impossible circumstance; multiple universes that just happen to exist exactly the same, only varying in their present moment. Nonetheless, the multiverse theory as well seems inadvertently endangered by determinism.

Conclusion

The possibility of time travel allows for unimaginable anomalies to occur. For instance, the grandfather paradox or infinite causal loops. Our world, or any possible world, seems to be governed by logic; nothing functions without there being an explanation for it. For this reason, along with the many paradoxes presented, I believe time travel to be implausible considering it would disrupt the orderly nature of our harmonious universe.

References

- Abbruzzese, J. (2001). "On using the multiverse to avoid the paradoxes of time travel." *Analysis* 61(1): pp. (36-38). Retrieved from JSTOR.
- Dowe, P. 2000 "The case for time travel." *Philosophy* 75.293: (pp. 441-51). JSTOR.
- Fulmer, G. (1980) "Understanding time travel." *The Southwestern Journal of Philosophy* 11.1: p. 151-56. JSTOR.
- Grey, W. (1999). "Troubles with time travel." *Philosophy* 74.287: 55-70. JSTOR
- Horwich, P. (1975) "On some alleged paradoxes of time travel." *The Journal of Philosophy* 72.14, Time, Cause, and Evidence: (p. 432-44). JSTOR.
- Lewis, D. (1976). "The paradoxes of time travel." *American Philosophical Quarterly* 13.2: 145-52. JSTOR.
- Dwyer, L. (1975). "Time travel and changing the past." *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 27.5: 341-50. JSTOR.
- Goddu, G. (2007) "Banana peels and time travel." *Dialectica* 61.4: 559-72. JSTOR.
- Monton, B. (1950) "Time travel without causal loops." *The Philosophical Quarterly* 59.234: 54-67. JSTOR.
- Smith, N. J. J. (1997) "Bananas enough for time travel?" *The British Journal for the Philosophy of Science* 48.3: (pp. 363-89). JSTOR.