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## **Why Assuming A Time Theory that Allows for the Philosophical Possibility of Backward Time Travel Makes Our Lives Fatalistic**

### **Introduction:**

Backward time travel is a phenomenon in popular culture that we see often, from Terminator and Back to the Future in the 80s, to Harry Potter in the 2000s and Doctor Who across decades. Backward time travel appears to be something our society is fascinated by. However, if we are to adopt a theory of time that allows for backwards time travel, this has interesting implications for the nature of our free will. While a theory of time does not need to allow for philosophical backwards time travel, if we want to account for the philosophical possibility of time travel this has ramifications for the theory of time that we must adopt. Within this paper I explore the compatibility of several theories of time with the philosophical possibility of time travel. Through using a time travel model that does not encounter paradoxes, I will determine the most legitimate theory of time when assuming the necessity of philosophical backwards time travel, and consequently explore the ramifications of this theory of time on our free will.

Successful philosophical models of backward time travel work in accordance with fatalism, and along a singular time line. According to the Stanford Encyclopaedia of Philosophy, fatalism is the inability of people to be able to do anything other than what we actually do, because what we do is fated (Rice). While some fatalist theories allow for some level of free will in relation to smaller events, in general fatalism proposes that large life events are unchangeable (Skow, 3). According to the most severe form of fatalism, we do not

have free will<sup>1</sup>. Additionally, the Stanford Encyclopaedia of Philosophy defines free will as the capacity of rational agents to choose a particular action from multiple options, and society typically works from the basic assumption that everyone has free will (O'Connor).

Backward time travel encounters paradoxes when exploring the nature of the time traveller's abilities and free will when in the past, but when subscribing to a fatalistic system, these paradoxes do not occur. Thus, if people wish to maintain the philosophical possibility of time travel, this philosophical possibility has consequences for their free will.

Furthermore, the philosophical possibility of backward time travel is also only possible within certain time theories. There are three predominant theories of time in metaphysical philosophy currently, each with different conceptions of what parts of time exist and different levels of compatibility with philosophical backward time travel. However, philosophers are divided over which of these theories truly allow for the philosophical possibility of time travel. In this paper I will explore each of these three theories, presentism, the growing universe, and eternalism, along with an additional theory, the dropping branches theory, in order to determine which theory is most compatible with philosophical backward time travel, and draw conclusions about the nature of these theories of time and how our free will functions within them in accordance with philosophical time travel.

The presentist time theory claims that only the present exists (the past and future do not exist), and that only things in the current moment exist (so people and things from the past or in the future do not exist) (Markosian). The growing universe theory of time (also known as the growing block theory) claims that the past and the present exist, but the future does not (Bernstein, 2). The dropping branches theory is very similar to the growing universe theory, but claims that the future exists in a myriad of branches that include all the possible

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<sup>1</sup> There is an important area in the literature surrounding tense statements and fatalism but because of the content of my paper and the way fatalism is established within my paper, these are not truly relevant to my argument, so I will not be dealing with these in my paper.

futures that could happen, and that as time moves forward some of these futures become no longer possible and the branches that represent them drop off the tree of time (Bourne, 30). The theory of eternalism claims that the future exists in a determined state, just as the past and the present do, because all three are simply different locations in time (Bernstein, 2). These theories of time are essential as they have distinct consequences for free will, the most drastic being eternalism, which argues for a fatalistic sense of “free will”.

When we think about backward time travel it follows enough principles of logic that, if we avoid paradoxes, we do not get the feeling that we sometimes have inherently that something isn't right. Instead, we find that, if all goes according to what the laws of logic allow, there is little to prevent (the philosophical possibility at least of) backward time travel. Thus, if individuals want to maintain the philosophical possibility of time travel they can use this philosophical possibility to investigate the legitimacy and compatibility of different theories of time with philosophical time travel. Through using this method I will argue in this paper that the philosophical possibility of backward time travel along a singular time line necessitates eternalism, and thus that adopting a theory of time that maintains this philosophical possibility has significant consequences for our free will as this theory of time necessitates fatalism.

### **Backward Time Travel: Paradoxes and A Functional Model**

That time travel functions along a singular time line is vital for this paper as the arguments for the philosophical possibility of time travel within each of these theories of time also functions on the basis of a singular time line. This is because if we assume multiple time lines, backwards time travel ceases to be an effective investigative tool to determine which theory of time is the most compatible with time travel, as time travel theory ceases to contain paradoxes. It is the paradoxes that stem from backward time travel along a singular time line

that allows backward time travel to be an effective investigative tool, as it is through working through these paradoxes to create a logically consistent time travel model that we can discover necessary elements of time and important aspects of the nature of time that allow for time travel to be philosophically possible. Once we move to looking at the philosophical possibility of time travel along multiple time lines we start looking at potential identical worlds, and these other worlds prevent the vital paradoxes of time travel from being paradoxes (Jones and Flaxman). Thus, unless we look at backward time travel along a singular time line, the philosophical possibility of time travel ceases to be an effective investigative tool through which we can examine theories of time and determine the most compatible theory. This problematic nature of the argument for possible worlds will become clearer when looking at the potential solutions to the grandfather paradox.

To better understand how the philosophical possibility of time travel can be used as an investigative tool through which we can examine the compatibility of differing theories of time with philosophical time travel, first we must look at the philosophical possibility of time travel itself and the potential paradoxes it faces. One of the most commonly referenced and significant paradoxes of backward time travel is the grandfather paradox. This is the theory that an individual could, at age 18, jump into a time machine and travel back 30 years before they were born, before their parents were born, and kill their grandfather. The paradox is this: having killed their grandfather before their parents were born, the individual that travelled back in time will also no longer be born, and if they are never born, how do they travel back in time to kill their grandfather (Skow, 2-3)?

If we do not assume a singular time line for backward time travel then this paradox becomes incredibly easy to solve: when you travel back in time you don't actually travel back to your own past but to the past of an identical copy of earth (a second possible world) and everything you do there affects the future of that possible earth and not your own future

(minutephysics). However, we don't typically conceive of our reality consisting of multiple possible worlds of which we live in just one. Furthermore, the theory of multiple possible worlds becomes quite slippery very fast, as ultimately you can end up with infinite possible worlds, something that is increasingly difficult to conceive of. This also changes the nature of philosophical time travel as you are no longer simply travelling back in time. Now you are also travelling between parallel universes. Ultimately, this solution, while easy, avoids the paradox through a method that, though possible, appears less convincing and logical than simply not being able to solve the paradox at all. Thus, throughout my paper I will investigate the philosophical possibility of time travel only as it functions along a single time line.

Another potential solution to the grandfather paradox is that this paradox actually results in the superposition of two states: one in which the time traveller's grandfather is dead, and one in which he is not. Similarly, there is the superposition of another two states: that the time traveller is alive and able to go back in time, and that the time traveller is not alive (minutephysics). However, this solution sounds very similar to the previous one, only that instead of time travelling to a different possible world, there are two possible worlds superimposed upon each other. This theory also brings in several new problems to deal with and ultimately runs into the same issue that the first solution gives us: this solution to the grandfather paradox is less convincing than if there was no solution to the paradox. The superposition of two states at the same time, while logically conceivable, seems rather farfetched to the average individual who is not a quantum mechanic. This leaves us back with our original problem and no current viable solutions.

Yet we have still not explored the most logically cohesive solution to this paradox. This solution claims that when you travel back in time you have limited ability to act as an agent in the past, and thus you are unable to kill your grandfather (Skow, 3). This solution does, however, argue for significantly limited free will in the past. Yet, the legitimacy of this

argument increases when we think more about the logistics of travelling to the past. If an individual travels to the past, then they are travelling to a period of time that has already happened. When we think about this, and the paradoxical nature of a person's ability to kill their grandfather if they travel to the past, it becomes apparent that if everything in the past has already happened, then surely the time traveller has also always been in the past. If this is true then it follows that they would not be able to change the past when they travel back to it as they have always been there.

This solution to the grandfather paradox functions along a singular time line and is ultimately the only logically convincing theory that still allows for the philosophical possibility of backward time travel without paradox. When we consider the possibility of time travel under these parameters, it seems both intuitive and logically permissible. However, if we can travel to the past, but in the past we have limited agency, that suggests something about the nature of our agency at present. Thus, it is through an understanding of how time travel works along a singular time line that philosophical time travel not only becomes possible but also becomes useful as an investigative tool for time theory.

Given the conceivability and consequent plausibility of backward time travel without paradox, it is possible to adopt a theory of time that allows for this philosophical possibility. Through exploring how backward time travel can function within each theory of time, along a singular time line, I will reveal the flaws in each theory that prevent them from being completely compatible with the philosophical possibility of time travel, consequently revealing the most compatible and convincing theory of time. This theory of time is likely to favour fatalism as a consequence of the functional ability of philosophical time travel. Thus, through exploring the compatibility of philosophical time travel with these differing time theories, I will argue for the requirement of eternalism, and consequently fatalism, when necessitating the philosophical possibility of time travel when adopting a theory of time.

**Presentism: A Theory of Time:**

Presentism is a theory of time that works off the basis that only the present exists, and consequently that the past and future do not exist (Markosian). Additionally, only things in the current moment exist, as all reality, and consequently everything that exists, is confined to the present (Markosian). Scholars, such as Steven Hales, have commonly criticised presentism on the basis of time travel, saying that the two are incompatible. While there are scholars that argue for the possibility of time travel within a presentist framework, these arguments ultimately fall short of successfully outlining how these two philosophical theories are compatible. Thus, backward time travel is not possible within the parameters of presentism.

The nonexistence of the past and the future lead to significant problems in terms of the potential for backward time travel within the theory of presentism. One of the most common arguments that philosophers use to show that time travel is inconsistent with presentism is the Nowhere Argument. Steven Hales, in his article “No Time Travel for Presentists” explains this, claiming, “time travel requires leaving the present, which, under presentism, contains all of reality. Therefore to leave the present moment is to leave reality entirely; i.e. to go out of existence” (353). The key problem here is that you cannot travel to a point in time that does not exist which, according to presentism, is every point in time except the present. The Nowhere Argument also defeats the potential for time travel through a movable objective present in Sara Bernstein’s article “Time Travel and the Moveable Present,” although she does not acknowledge this within the article, instead proposing that her theory avoids the problem. Ultimately, however, the same issue arises, where an individual cannot travel to a point in time that does not exist.

Some presentists attempt to fight the Nowhere Argument by claiming that time travel to a time that does not exist is already incorporated into the theory of presentism, as people travel

from the present to the next present as every second passes by (Daniels, 472-3). Thus, we are all already “traveling” to a time that had not previously existed. However, this is a slightly different argument as they are traveling to a moment that, in the moment that they travel, comes into existence. Traveling into the past, or substantially into the future, is a different story. This requires the time traveller to travel to a point in time in which things were in some way significantly different from the time in which they came from, reinforcing the level to which this time does not exist. Hales supports this, claiming, “to count persistence along the moment-to-moment flow of time itself as time travel is to erase personal [time] [the time experienced by the traveller] vs. external time [time itself, or global time] and so to give a quite idiosyncratic interpretation of traveling through time” (360). Hales sees the separation or differentiation of personal and external time to be the true indicator of time travel. Thus, presentists cannot solve the Nowhere Argument by claiming that travel to a non-existent time is inherent to presentism due to the ever-changing present.

However, were we to assume that the nowhere argument was solvable by these presentist claims, additional investigation into the nature of how backward time travel would work within this theory further emphasises its problematic nature. If backward time travel were possible within presentism, the claims made by presentists to support this make presentism sound very similar to other theories of time. In his article “Back to the Present: Defending Presentist Time Travel,” Paul R. Daniels uses an example of a girl, Jennifer, wanting to travel back in time to see the dinosaurs. He claims that what is required for her backward time travel to see the dinosaurs is “that an appropriate person-stage of Jennifer exists when it was the case that her arrival time is present, and that her existence there is casually downstream from the existence of an appropriate person-stage at her departure time” (481). However, this begins to sound like the growing universe theory as he proposes that Jennifer can travel back in time to see the dinosaurs as long as in the past there was a moment when she arrived to



look at the dinosaurs, and when that moment happened it was the present. The distinction that Presentists hold on to, however, is that the past no longer exists, and thus the past that Jennifer travels to is non-existent from the moment it ceases to be the present in which Jennifer is looking at the dinosaurs.

This similarity to other theories of time leads to another criticism of the compatibility of presentism with backward time travel: the argument that backward time travel within the framework of presentism constitutes committing suicide. As Hales claims, “for presentists, getting into a time machine is suicide – the occupant goes out of existence” as “whatever backward causation the time machine may have effected, the traveller is no longer in the objective present and therefore no longer exists” (357). This is an argument that is only relevant for presentism as it functions on the basis that, should an individual decide to travel to the past in a presentist universe, that person goes out of existence the second they press the button to travel somewhere else. Even if at some point that person had existed in the past that they travelled to when that past was the present, in the present moment that they have left they no longer exist, as that past no longer exists. Thus, the suicide criticism of time travel into the past highlights yet another logical inconsistency within presentism, again questioning the theory’s legitimacy. This also creates questions surrounding the fatalistic nature of time travel within presentism, as a person can only time travel in a presentist universe (if we allow the nowhere argument to be solvable) if they existed in a moment in the past already. This further emphasises the paradoxical nature of presentist backward time travel, as fatalism becomes very difficult to comprehend in a universe in which only the present moment exists.

While presentism can initially appear as a logical theory of time, analysis into the compatibility of this theory with the philosophical possibility of backward time travel reveals that this theory is ultimately too confining. Presentism denies the existence of the past, making this theory of time incompatible with backward time travel, though some scholars

oppose this incompatibility. Through investigating alternative theories of time I will highlight the inferiority of presentism in terms of its compatibility with philosophical time travel, as ultimately presentism creates logical inconsistencies with backward time travel. Thus, presentism falls short of being an acceptable theory of time when requiring the philosophical possibility of backward time travel.

### **Growing Universe Theory of Time:**

The growing universe theory of time, also referred to as the growing block theory, is distinctive from presentism due to one substantial difference; according to the growing universe theory the past exists. This theory argues that the universe is a four-dimensional block, and that every passing second adds a minute three-dimensional sliver to the existing block. Thus, as time progresses the block of the universe grows (Markosian). However, the growing universe theory does not account for the future. Rather, the future does not yet exist according to this theory (Markosian). This theory argues for a very similar form of backward time travel to what we will find in the dropping branches and eternalism theories when assuming an unmoveable objective present. However, unlike eternalism, the growing universe theory can accommodate a moveable objective present, as can the dropping branches theory (van Inwagen). Through allowing for the existence of the past this theory becomes compatible with the philosophical possibility of backward time travel, marking it as a more legitimate theory than presentism. However, the movable objective present results in some logical discontinuities that support the increased legitimacy of an immovable objective present, which creates problems for the growing universe theory given that it does not support the existence of the future.

A movable objective present is part of a conception of time travel in which the time traveller alters the location of the objective present through their movement through time

(Bernstein, 1). Consequently, while it may be the present in 2017, if Jessica jumps into a time machine and travels back to 1984, then the moment Jessica arrives in 1984, 1984 becomes the present. This theory may initially seem incompatible with the growing universe theory given the past is part of the block of the universe. However, as Peter van Inwagen discusses in his article "Changing the Past," this is not necessarily so. Van Inwagen proposes a model in which a time traveller moves the objective present when they travel back in time, erasing the portion of the block that stretches from the time they travelled to to the time they travelled from (in the previous example, the portion of the block spanning 1984-2017 would be erased) (14-24). The block then regrows from the point they travelled to, but not necessarily in the same way as it had previously. This creates a theory of time travel that avoids the grandfather paradox and maintains the time traveller's free will.

However, this may appear logically incompatible with our current conception of time, as how can time be erased entirely? Surely if the period of 1984-2017 existed at one point, the time span of those years cannot simply be erased out of existence. Van Inwagen deals with this potential problem by proposing the notion of hyper-time. He explains this concept by suggesting that there is a time external to our own experience of time, but that encompasses our time, and that this is hyper-time (14-15). To clarify this he proposes the idea that there is an immaterial rational being who exists in hyper-time external to our own time, and that this being experiences (is aware of) the successive events of time in the order that they happen in hyper-time. This means that the immaterial rational being who watched a time traveller travel from 2017 to 1984 would be: aware of those years being formed in the universe, aware of those years being erased by the movement of the time traveller, and aware of these years being reformed in the new time that humans experience (van Inwagen, 15). Thus, if this being had memory as we do they would remember both sets of periods from 1984 to 2017.

Hyper-time, therefore, in the case of time travel, does not necessarily correlate with the time experienced by human beings. Rather, these timelines can deviate if the block is altered by human time travel (van Inwagen, 14-15). This explanation creates new problems for the growing universe theory. If we have hyper-time that is external to the time we experience, then logically this hyper-time would need to be present within the universe, in which case we run into the problem of how hyper-time can continue when the block of human experienced time becomes smaller (thanks to time travel). It is logical, given the theory, that there would be a second “block” recording hyper-time. How can we have one block within another though? This is where van Inwagen’s proposal for a movable objective present begins to fall apart in the growing universe theory.

Sara Bernstein attempts to address this issue by proposing alternative possibilities to the erasure of sections of the block when time travel occurs. She suggests that the sections of the block that continue past the point at which the time traveller travels to are rewritten as a result of the change in location of the objective present, or that the time that occurs after this relocation superimposes itself over the previously recorded time in the block (9-11). However, these theories are even more unreasonable than the problems that van Inwagen’s theory creates, as for all intents and purposes the difference between the block being erased and the block continuing to exist are insignificant. These situations differ only in that a block of time having a new record superimposed, or the block of time continuing to grow with hyper-time while the objective present is relocated to an earlier time are harder for us to conceive of.

Additionally, this theory of a movable objective present within the growing universe theory becomes problematic when we consider the possibility of multiple time travellers. If backward time travel is philosophically conceivable then it is also conceivable that more than one person could travel back in time, possibly at the same time. If two people were to travel

back in time at the exact same moment in 2017, one travelling to 1984 and one to 1996, according to van Inwagen's model it is likely he would argue that the objective present would move to 1984 because this time traveller travelled further back in time. However, if that time traveller had planned to leave one second later than the other time traveller, the objective present would have moved to 1996. Ultimately, with the potential of multiple time travellers, history could be rewritten and sections of the block of our universe erased and reformed countless numbers of times. This theory becomes increasingly difficult to consider without encountering logical discontinuities when we consider the possibility of a time traveller travelling from 2017 to 1984, but then in the new progression of time another time traveller travelling from 1990 to 1979, thus erasing the period of the block that contained the first time traveller. Ultimately, while conceivable this theory becomes increasingly absurd and unreasonable as we work our way down the rabbit hole that is the movable objective present.

However, when we consider time travel in the growing universe theory with an immovable objective present we also run into problems: the time traveller encounters fatalism when they enter the past, which undermines the legitimacy of this theory given it does not allow for the existence of the future. Without the movable objective present, backward time travel within the growing block theory results in the time traveller being relocated within the block while the block continues to grow with the people that are left in the present (the growing end of the block). However, given that moment that the time traveller travels to within the block already exists in the block, for this to be conceivably possible without a paradox the time traveller must have always existed at this point in the block. Here we see a reflection of what was indicated by the theory of time travel within the presentist theory of time. This means that the time traveller was always in that moment in time within the block, and therefore their actions in the past have also always existed.

Consequently, the time traveller no longer has free will as all of their actions are fated to happen. Fatalism is used in philosophy to refer to our inability to do anything other than what we actually do (Rice). However, if the time traveller's actions are fated when they are in the past, this suggests that they would also be fated in the present, as while the time traveller is in the past that past is the present for them and everyone else that is living in that moment. This would mean that everyone in that moment in the past has no free will. This creates an inconsistency in terms of why the growing block theory does not allow for the existence of the future, as surely the future is also fated, as the future for the time traveller living in the past is fated, because it is the past. It is possible to conceive of the times that are a part of the block already being fated if they are the present for someone (such as a time traveller), and the future, which is not a part of the block yet, not being fated, but this would require us to believe in the possibility of two alternative realities of free will dependent upon whether someone time travels or not. While conceivable, this is a more logically incongruous theory than having a consistent position on free will for all time, which, as previously shown through these time travel examples, would result in a belief in fatalism.

The growing block theory of time, while better allowing for the potential of backward time travel than presentism, ultimately still falls short as a satisfying theory of time. The proposal of a movable objective present creates several problems for the possibility of backward time travel within this theory of time when we consider the possibility of multiple time travellers as well as how this affects the block of the universe. However, an unmovable objective present also has problems as it thrusts the time traveller into a fatalist system of free will while in the past, which in turn questions the legitimacy of the growing block theory as it suggests the necessity of the existence of the future. Thus, a successful and convincing theory of time must involve the existence of the past as well as the future.

**Dropping Branches Theory of Time:**

The dropping branches theory, while very similar to the growing block theory, differs with regards to the existence of the future. While the future does not exist in the growing block theory, in the dropping branches theory the future exists as a myriad of possibilities that depend upon the choices made in the present. Thus, as every second passes, the myriad of choices that exist in the future gets smaller as decisions are made in the present that exclude some possible futures (Bourne, 30). Thus, time exists in the form of a tree, with the trunk consisting of the past and the present moment, and the branches representing possible futures. As each second passes, branches drop off as another second is added to the trunk of the past (Bourne, 30). Similar to the growing block theory, this theory can accommodate for a movable objective present. However, as previously shown, the argument for a movable objective present is heavily flawed, and ultimately increases the legitimacy of an immovable objective present theory. Thus, from this point onward all arguments for backward time travel will assume an immovable objective present. While the dropping branches theory may appear to be superior to the growing block theory as it not only acknowledges the existence of the past but also allows for the existence of possible futures, in ultimately runs into similar problems. The philosophical possibility of time travel appears to necessitate fatalism, which in turn requires the existence of the future, but a myriad of possible futures is too expansive and not fatalistic enough to support the type of fatalism present in backward time travel. Thus, while superior to the growing block theory, the dropping braches theory of time still lacks a determined conception of an existent future.

Just as was the case with the growing universe theory of time, the dropping branches theory allows for backwards time travel, as the trunk of the dropping branches theory is equivalent to the block in the growing universe theory. However, this existence of the past leads to the same problem present in the growing block theory, as the only way we can

conceive of a time traveller travelling to a moment in the existent past is if they were always there. Without a movable objective present, the only way for backward time travel to function without paradox is if the time traveller's actions are fated once in the past because they were always there, and everything that they do in the past has already happened, as they have always been a part of the trunk of the past.

While the dropping branches theory allows for the existence of the future in a myriad of possible futures, this does not solve the problem of the growing block theory. The dropping branches theory of the future still allows for agency and choice to be made by those that live in the present. However, if the past is the present for the time traveller that travels to the past, then the most logically cohesive and legitimate theory requires that the rules that determine the agency and capabilities of the time traveller in the past must be the same as those that govern the actions of people in the present. Thus, if the time traveller is subject to fatalism in the past, those that live in the present must also be subject to fatalism. A fatalist present requires a determined and existent future, which is not what the dropping branches theory provides us with (Diekemper, 433). The dropping branches theory provides the possibility for the existence of a future that would be consistent with free will. However, if the philosophical possibility of time travel necessitates fatalism, then people no longer have free will, which undermines the legitimacy of the dropping branches conception of the existent future.

Thus, while the dropping branches theory is an improvement upon the growing block theory, as it allows for the existence of the future in the form of a myriad of possible futures, it is the flexibility of this existent future that ultimately causes this theory to still be an inadequate theory of time. The philosophical possibility of backward time travel requires the existence of the past. However, it also necessitates fatalism, which requires a determined and



existent future, which none of these previous theories have provided. Ultimately, backward time travel is only completely philosophically compatible with the time theory of eternalism.

**Eternalism:**

Eternalism is distinct from the dropping branches and growing block theories of time in its conception of the future. According to the eternalism theory the future is existent and equally real to the past and present: all three are just different locations in time. Eternalism claims that the future exists in the same form as the past, not as a myriad of possibilities but in a determined future (Markosian). Thus, eternalism conforms to a fatalist theory of free will and human agency (Diekemper, 436). Furthermore, eternalism not only accommodates the philosophical possibility of backward time travel; it also allows for the potential of forward time travel. However, that is beyond the extent of this paper, though it should be noted that eternalism is the only time theory that allows for this. This is due to the fatalistic nature of eternalism. Thus, eternalism is the only theory of time that completely accommodates for backward time travel without requiring a change in the level of free will experienced by the time traveller living in the past and the regular individual living in the present. This is important as it means that the time traveller's relocation in time will not impact their free will. They simply never had any.

This may appear as a rather pessimistic view of free will: claiming that we have none. However, as long as we have the illusion of free will and we believe in that illusion, I question whether it matters if our free will is imaginary or existent. Fatalism can result in an apathetic approach to life, for if we have no ability to change what we are going to do, what is the point in caring? However, I think that if we allow ourselves the illusion of free will, then we give our lives a sense of purpose that is important to having a feeling of accomplishment. The reality of fatalism can be a very hard pill to swallow. Free will is

something human society values greatly, and often is something we assume as a given, and thus it becomes incredibly difficult to alter our perception and acknowledge that this is not the case. However, the argument I have outlined above clearly shows not only the legitimacy but the necessity of fatalism. It may be easier to conceptualise fatalism by considering psychology and brain chemistry. Who we are is written in our DNA, and consequently the “choices” we would make would be heavily determined by this (Solomon, 453). Thus, through an extensive understanding of an individual’s brain chemistry it is possible to imagine being able to plan out how that individual’s life would end up according to the decisions they would make (Solomon, 453). When viewed from a biological sense, free will as an illusion becomes less problematic as what is fated would be what you would choose either way, so the reality of free will is negligible.

**Conclusion:**

Ultimately, Eternalism is the only mainstream theory of time that completely accommodates for the philosophical possibility of backward time travel without encountering paradoxes and without relying on a change in the time traveller’s level of free will once they have travelled in time. Thus, if, as a society, we want to maintain the philosophical possibility of time travel within our theory of time, we must adopt eternalism. This time theory, however, condemns us to fatalism, which can be a very difficult reality to accept. While there are many appealing qualities to this theory, society tends to show an aversion to fatalistic ways of thinking due to the implications this has for our free will, agency, and human responsibility, all of which are things our society takes for granted. While we may desire a theory of time that allows for the philosophical possibility of time travel, it is unlikely that we are willing to accept the fatalistic nature of such a theory. Furthermore, while time travel is an interesting philosophical possibility to consider, investigation into the nature of time that

time travel necessitates reveals that these science-fiction stories of people travelling back in time to change and improve the world break boundaries necessary for the philosophical possibility of time travel. While time travel is something our society shows prolonged fascination with, adopting a theory of time that accounts for the philosophical possibility of time travel condemns us to fatalism and a generally undesirable lack of free will which is ultimately unavoidable without the abandonment of such a theory of time. It would be interesting to conduct further research into the significance of living in a fatalistic world, and what exactly that means for us. However, given the inability to avoid fatalism in philosophical backward time travel, perhaps it is time that society reconsider our attachment to the philosophical possibility of time travel, and determine whether, as I suspect, we place more collective value on our free will than on our ability to travel through time.

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