A NEW MODEL FOR LIBERTARIAN FREE WILL IN AN

ETERNALIST THEORY OF TIME

by

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ABSTRACT

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Thesis directed by Associate Professor Bradley Monton

It is commonly thought that libertarian free will is incompatible with an eternalist theory of time. One promising response to this alleged incompatibility is offered by Nathan Oaklander and Michael Tooley; this response rests upon a distinction between truths and truth conditions. I argue that though their response offers a general solution, it is susceptible given certain popular views on causation. Furthermore, abandoning causation altogether is not a viable option in the context of the discussion since free will requires a type of agent causation. I offer a new solution to the problem that relies upon simultaneous causation of the will and claim that under my proposed model, there can be libertarian free will in an eternalist theory of time.

CONTENTS

CHAPTER 1

1.1 Overview

In this thesis, I defend the compatibility of eternalism and libertarian free will. I intend to

leave open the question of whether or not it is actually the case that this world is eternalistic and

contains libertarian free will; instead, I will argue that holding such a view about this world, or

any possible world, would not be internally incoherent. In this preliminary chapter, I begin by

discussing the difficulties involved in holding both positions. Chapter 2 discusses a type of

solution to the problem advanced by Oaklander and Tooley; I will argue that this type of solution

ultimately fails. I then present in Chapter 3 my own model that demonstrates how there can be

libertarian free will within an eternalist structure of time.

Before delving into my own model, it will be helpful to provide a brief overview of

eternalism and libertarian free will. The next two sections of this chapter are dedicated to

articulating precisely what is meant by these two concepts. The final section of this chapter will

focus upon why eternalism and libertarian free will have often been taken as incompatible with

each other.

1.2 Eternalism

Eternalism is a thesis about the nature of time that characterizes time as tenseless and as a

dimension like the dimensions of space. Both of these conceptions are best understood through

comparison to their competing conceptions of time. Thus, tenseless theories are contrasted with

tensed theories, and theories treating time as a dimension are contrasted with presentism.

Explaining these distinctions will provide a more informative description of the nature of eternalism, which is the overall goal of this section.

Eternalism, in virtue of its treatment of time as a dimension like the dimensions of space, falls into the class of "four-dimensional" theories of time. As characterized by Michael Rea, four-dimensionalism "is a view about the ontological status of non-present objects."[1] Unlike presentists who only attribute existence to present objects (which include events), four-dimensionalists acknowledge the existence of non-present objects—past, future, or both—in addition to present ones. Thus, for preliminary purposes, four-dimensionalism can be defined roughly as "the view that non-present objects exist." Eternalism is a four-dimensionalist view that acknowledges the existence of past, present, and future objects.[2]

In order to account for the existence of more than one time, eternalists (and other types of four-dimensionalists) hold that time is a dimension analogous to the three dimensions of space. Similarly to the way objects can be represented in space on a graph with three axes, objects can be represented on a graph with a fourth axis representing time. With this basic picture in mind, time becomes one dimension in a four-dimensional space-time manifold. Just as objects are located in space and can be separated spatially in the manifold, they are also located in time and can be temporally distant. For example, I, presently located in Boulder in the year 2011, am spatially located 1,500 miles from the place of my birth (Houston) and temporally located 24 years from that event. My existence, and the existence of any object, can be conceptualized as occupying a stretch across a portion of the space-time manifold. In addition, just as spatially

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[1] Michael Rea, "Four Dimensionalism", forthcoming in *The Oxford Handbook for Metaphysics*.

[2] The moving spotlight view is another four-dimensionalist view that acknowledges the existence of past, present, and future objects. It is distinct from eternalism because the two views differ on the issue of tense; eternalism is a tenseless view while the moving spotlight view is a tensed one. Other four-dimensionalist views include the growing block view (the view that past and present times exist) and the shrinking block view (the view that present and future times exist), both of which are tensed.

distant objects exist in the same way that near objects do, temporally distant times are as existent as present ones. 2011 and 1986 are ontologically on par in the same way that Boulder and Houston are.[3] It is in this way that we may understand the existence of non-present objects.

Before moving on to the issue of temporal passage, I want to note that there is at least one case in which presentism and eternalism both could be true. Consider a world in which only one time exists (perhaps an evil demon destroys the world the instant God creates it). Further, allow that time to be characterized as present. Presentism is trivially true in this world since the present, the only time, exists. However, because there are no past or future events, there are no non-present events being classified as non-existent. If there were non-present events in this world, it could be the case that they exist in the same way the present time does. If this is indeed the case, then this world may qualify as an eternalistic world. Thus, we may prefer to characterize eternalism as, in part, a view that says all times exist (and leave open the question of whether "all" happens to involve past or future times). Indeed, this characterization of eternalism may be more natural given what is about to be said in regards to tensed and tenseless times.

Eternalism is a tenseless theory of time. Tensed and tenseless theories differ on whether or not there is an objective flow of time; tensed theories claim that there is, while tenseless theories reject this claim. For a tensed theory, past, present, and future capture some fact about fundamental reality. Tenseless theories, on the other hand, hold that there is no objective way in which a particular time is past, present, or future. Instead, times are past, present, or future in relation to a reference point such as another time or our location in the space-time manifold. Temporal relations are more appropriately analyzed in terms of "earlier than," "simultaneous

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[3] We are now setting aside four-dimensionalist views other than eternalism. This claim would not be true for all four-dimensionalist views, such as the shrinking block.

with," and "later than." The most significant consequence of this analysis is that no times are privileged over any others.

The absence of privilege affects language, which is the area in which the differences between tensed and tenseless theories are most obvious. With the exception of propositions that are indexed to the past, present, and future, propositions are said to be tenselessly true or false. For preliminary purposes, we can understand tenseless truths (or falsities) to be true (or false) independently of any temporal considerations. For example, the proposition "that I am (tenselessly) writing this paper on Saturday, March 5, 2011" is true regardless of whether I am located at an earlier place in the space-time manifold when I utter or consider it. Tensed theorists reject this sort of "tenseless" locution and analyze the truth or falsity of the statement in accordance with when it was uttered; they read "am" is presently tensed, so the statement is true is and only if it is uttered on Saturday, March 5, 2011.

Having noted the way in which the tensed-tenseless debate manifests itself in language, I want to note one further complication before setting it aside until Chapter 2. Tenselessness applies to reality as well as language. Some have argued that the tenselessness of language is reducible to the tenselessness of reality or vice versa. However, others have claimed that the application of tenselessness to language and the application of it to reality are distinct and can be made independently of each other.[4] The consequences of these positions have significant bearing upon the potential resolution to logical fatalism, and will be taken up in the following chapter.

For now, it will suffice to sum up the previous considerations and define eternalism as follows:

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[4] Oaklander, for example, argues that tenselessness can apply to language and reality, and that these two applications are really distinct. We shall soon see the significance of the consequences of this position. *See* Oaklander (1998).

Eternalism: Time is tenseless and is a dimension analogous to the dimensions of space such that all times, present and non-present (i.e. all past, present, and future times), exist.

Before concluding this section I would like to note that because the past, present, and future all exist and differences between them are purely relational, eternalism is often characterized as "static" as opposed to "dynamic" since there is no real metaphysical change involved in perceived passages of time. This static nature of eternalism motivates the claim that eternalism is incompatible with libertarian free will.

1.3 Libertarian free will

Libertarian free will is a thesis involving two central claims: (1) there are states of affairs containing free acts, and (2) free acts cannot be "determined." A world is free if and only if it contains a state of affairs that contains free acts. The domain of things that can be determined includes states of affairs, actions, and events. For preliminary purposes, we will say that for some x to be determined will be for that x to be necessitated given some antecedent condition, y. Also, I shall use the term "incompatibilist free will" interchangeably with "libertarian free will, " and the term "libertarianism" to refer to thesis of libertarian free will.

In order for a state of affairs to contain a free act, the following jointly necessary and sufficient conditions must obtain:

a. There is an agent A who has more than one live option, and
b. A's will is the cause of willing one of these options.[5]

By "live option," I intend something much stronger than logical, metaphysical, and even physical possibility.[6] For example, there is a physical, or at least metaphysical, sense in which I "can"

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[5] This is a standard, but not completely uncontroversial definition. Other formulations will be discussed later in the section.

[6] William James uses "live" to characterize hypotheses that a person could actually consent to given their personal history. (For instance, someone raised in an extremely orthodox Christian culture with little exposure to other

drink a bucket of paint, but in the course of my ordinary life, I cannot imagine a scenario in which I would be able to bring myself to do so. This difficulty does not arise from a lack of physical ability or from logical or metaphysical impossibility, but rather from my psychological states that include strong beliefs about how horrible drinking paint would be (and how potential benefits would not come close to making up for this bad). Drinking paint simply is not salient for me. Subjective psychological states are thus highly relevant, and if a person's internal states are such that they cannot will an action, they have not freely chosen to do otherwise. Thus, I follow Roderick Chisholm in asserting that internal states, like external states, can be such that a person's will is not free with regard to particular options.[7]

At this point, it should be clear that the origin or cause of a choice is essential to whether or not an agent has acted freely. It is not enough for the choice to originate with the agent since internal factors can render the will unfree. Instead, the choice must originate with the will itself. Chisholm offers two distinctions I will adopt that are helpful in understanding what it means for the will to be free.[8]

First, we might distinguish between immanent and transuent causes. The latter occurs when an event or state of affairs causes another, while the former occurs when an agent acts as the cause. The quintessential example of this distinction comes from Aristotle when he writes in his *Physics* that "a staff moves a stone, and is moved by a hand, which is moved by a man."[9] The

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religions might consider adopting Christian or atheistic positions, but not Hinduism or Islam. The first two would be "live" while the second two would not be.) In the context of free will, choices, and thus opportunities to make choices, do not arise unless there are multiple live options. Thus, because libertarian free will requires at least one instance of free choice, the existence of multiple live options is a necessary condition.
William James (1986).

[7] *See* Chisholm (1966).

[8] *Ibid*.

[9] Chisholm quoting Aristotle, *Physics* 256a.

movement of the staff the movement of the hand are transuent causes while the man is an immanent cause. Only immanent causes have the potential to be free.

Second, a distinction can be made between the *actus imperatus* and *actus elicitus*. The *actus imperatus* relates to the question of whether we are *free to accomplish* what we set out to do. The *actus elicitus* relates to the question of whether we are *free to will* the things that we do in fact will. Though the two questions are closely related (for instance, it may be impossible to will to do something that one does not believe is possible to accomplish), freedom with regards to will can obtain independently of freedom with regards to accomplishment. Frankfurt cases, for example, illustrate how one can be free to will an act without being free to accomplish that act.[10] Conversely, cases of non-live options, such as drinking the bucket of paint, illustrate how one might not be free to will an act though one might be free to accomplish it. Libertarian free will requires us to ask the *actus elicitus* question. So long as this question is answered affirmatively, there is libertarian free will.

We can now sum up the previous points to precisely articulate what is required for a state of affairs to contain a free act:

> A state of affairs contains a free act if and only if there is an agent A who has more than one live option, is the immanent cause of wiling one of those options, and is free to will the option he does in fact will as well as the alternative option.

This conception of libertarian free will has implications in terms of possible worlds. Suppose X and ~X are the two live options. If the agent freely wills some act X in one possible world, there must then be a second, distinct possible world in which, given the same situation, he wills ~X. In Lewisian terms, one might think that the second possible world must also be a close possible

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[10] Frankfurt's example of Jones and Black is supposed to demonstrate that there can be free will without possible alternatives. It is essential in these cases, however, to note that the possible alternatives relate to whether Jones is free to accomplish the performance of an act as opposed to whether he is free to will that he perform the act. *See* Frankfurt (1969).

world since it has been stipulated that the background situation is the same.[11] If there is no possible world in which the agent wills ~X, then it is not possible for him to will ~X, and ~X is not a live option. Without the multiplicity of live options, the agent is not free. Thus, if an agent freely wills X, it must also be the case that there is a possible world in which he wills ~X.

It is worth quickly noting that in the wake of Frankfurt's "Alternate Possibilities and Moral Responsibility," some libertarians have argued that alternative possibilities are not required for incompatibilist free will. For instance, Eleonore Stump thinks that the act having an internal, uncaused origin is sufficient for free will.[12] We might think of these types of "libertarian" views as "weak" versions of libertarianism while ones requiring alternative possibilities are "strong" versions. I take it that the strong version, at least as I have formulated it, entails the weak version, so should it, *per improbable*, turn out that libertarianism does not require alternative possibilities, what I say with regards to the compatibility of strong libertarianism and eternalism will still apply to the weaker form.

Having discussed the first central claim of the libertarian thesis, I will now turn to the second claim, that free acts cannot be determined. Proponents of compatibilist free will have claimed that free acts can also be determined. Libertarians (and hard determinists) reject this claim.[13] Given the above discussion of what is required for an act to be free, compatibilism seems highly implausible and likely impossible. However, discussing the coherence of

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[11] There is also a further issue of what external and internal states to the agent must be held fixed in the two possible worlds. I will take up this issue in Chapters 2 and 3.
See Lewis (1986) and (1979).

[12] *See* Stump (2003), especially Chapter 9 Freedom: Action, Intellect and Will, pp. 277-305.

[13] Libertarian free will, as I define it, maintains that there is free will, and that free acts are not determined. Hard determinists accept that free acts are not determined, but deny that there are any free acts.

compatibilism would be too involved for the purposes of this master's thesis, so I shall defer to Van Inwagen's consequence argument in defending this point.[14]

Furthermore, for the purposes of my thesis, it shall be enough that compatibilism is not incompatible with there being a world with libertarian free will. My thesis is only concerned with worlds that are free and non-determined. Given the presence of compatibilist eternalists and the scarcity of libertarian eternalists, defending the consistency of a libertarian and eternalist world seems to be the more arduous endeavor. So long as compatibilism is not construed as a thesis that claims that all possible worlds are both deterministic and free, the truth of compatibilism does not affect this thesis.

With this overview of libertarianism in mind, I will now turn to the problem of how libertarianism and eternalism are purportedly incompatible.

1.4 Logical fatalism

Fatalism encompasses a broad range of positions rejecting libertarian free will including, amongst others, logical fatalism, metaphysical fatalism, and theistic fatalism. The basic argument begins by establishing the existence of a future contingent fact through some consideration such as logical necessity, metaphysical necessity, or divine omniscience. For example, metaphysical fatalism might start with premises based upon a metaphysical claim, such as causal determinism, and use these premises to establish the truth or falsity of a future proposition. Theological fatalism uses God's omniscience to establish that a future proposition is true or false. Given this fact about the future, it seems that the future cannot be otherwise, and is thus determined and not

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[14] Van Inwagen's Consequence Argument supposedly demonstrates why compatibilist free will is impossible. Huemer offers a revised version of the Consequence Argument that corrects a controversial—and purportedly invalid—inference rule the Consequence Argument depends upon.
See Van Inwagen (1983), especially chapter 3, and Huemer (2000).

free. The particular brand of fatalism my thesis will address is logical fatalism. I take it to be the strongest version of fatalism because it relies upon relatively uncontroversial grounds (i.e. logical ones). Furthermore, a satisfactory response to logical fatalism will provide the bases to respond to other versions.

In this chapter's final section, I will take what has been said about the eternalist and libertarian theses and explain why the conjunction of the two purportedly gives rise to inconsistency. I start in 1.4.1 by offering an overview of the general concern motivating various brands of fatalism and various solutions one might advance. I then conclude in 1.4.2 with Cahn's account of logical fatalism, which I think advances the strongest argument against the compatibility of eternalism and libertarian free will.

1.4.1 Logical fatalism

Logical fatalism is a position against libertarian free will that can be traced back historically to Aristotle's sea battle.[15] Roughly, the argument can be stated as follows:

> (i) For any future contingent proposition P, P or ~P.
> (ii) If P, then P is true and ~P is false.
> (iii) If ~P, then ~P is true and P is false.
> (iv) If P is true, there is nothing an agent A can do to make P false, or ~P true.
> (v) If ~P is true, then there is nothing A can do to make ~P false, or P true.
> (vi) If there is nothing A can do to make ~P true, then A is not free with respect to P and ~P.
> (vii) If there is nothing A can do to make P true, then A is not free with respect to P and ~P.
> (viii) Therefore, A is not free with respect P and ~P.

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[15] Aristotle gives the example of a sea battle that, necessarily, takes place or does not take place. He argues that the disjunction of the contradictories is a necessary truth, but that the individual disjuncts are true (or false) contingently. This stance allows him to avoid fatalism, but commits him to holding that "one [of the contradictories] be true *rather* than the other, yet not *already* true or false" (19a39). The "already" plays a crucial role when tense is considered, and is discussed in depth by Cahn.
See Aristotle's *De Interpretatione*, Chapter 9 (18b25-19b4), and Cahn (1967), especially Chapter 3 Aristotle and the Problem of Future Contingencies.

Proponents of libertarian free will are committed to (vi) and (vii), which follow from the necessity of possible alternatives.[16] Based on the previous analysis of libertarian free will, where P is a proposition of the form "that A will X," A must be able to make it the case that A will X and must be able to not make it the case that A will X if A is to have free will. Thus, the libertarian committed to (vi) and (vii) must deny one of (i)-(v) in order to reject the conclusion.

Unlike arguments against free will grounded upon metaphysical claims, logical fatalism is particularly compelling because it rests upon logical claims; (i) follows from the law of excluded middle, and (ii) and (iii) follow from the principle of bivalence. Thus, combating the argument potentially involves rejecting logical claims, which is far more unappealing than rejecting metaphysical ones. Some do in fact deny either (i) or (ii) and (iii), but this is an option unavailable to eternalists, and will be discussed in 1.4.2. The other alternative available to one attempting to avoid the fatalistic conclusion is the denial of (iv) and (v). This approach is the only one available to libertarian eternalists, and I shall discuss these premises might be denied in Chapter 2.

1.4.2 Logical fatalism and eternalism

One response to logical fatalism involves denying (ii) and (iii) by appealing to a three-valued logic. On this response, it is possible for propositions to be neither true nor false; they can be indeterminate. Allowing for propositions to be indeterminate is particularly appealing in the case of future contingents since it preserves the possibility of an open future, which seems to be requisite for free will. However, appealing to indeterminacy requires the truth values of

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[16] I would like to remind reader to recall that we are setting aside versions of libertarian free will that do not require alternative possibilities, such as Stump's view.

propositions to change over time, and this possibility may or may not be consistent with particular theories of time.

In his *Fate, Logic, and Time*, Steven Cahn addresses precisely this point and observes that changes in truth value over time requires a change in "modality."[17] Such a change would seemingly require an underlying ontological change. Certain theories of time, such as presentism and the growing block view, deny the existence of the future. But as the future becomes the present, it comes into existence. This change in ontological status provides the deep metaphysical change that may be able to support changes in modality.

However, theories of time that endorse the existence of the future, such as eternalism, cannot appeal to changes in the ontological status of the future since they hold that the future exists in the same way as the present. For these theories, appealing to three-valued logic does not appear to be a viable option. The situation is even more pressing for eternalism, since, as a static theory of time, it denies an objective flow of time. Because of this denial, propositions are said to be "tenselessly" true or false.[18] Propositions that are tenselessly true or false are not only immune to changes in truth value over time, but are also true or false *independently* of temporal considerations in the same way mathematical truths such as "2+2=4" are; we might even think that these claims are true or false in cases where there are no times. This notion of tenseless truth,

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[17] *See* Cahn (1967), especially Chapter 8.

[18] There has been some ambiguity about how tenseless truths are to be understood. Some have taken tenseless truths to be "timeless," or outside of time, while others have taken them to be "omnitensed," or true at all times. I have chosen to analyze tenseless truths as those that are true "independently of temporal considerations" to remain neutral between these two analyses of tenseless truth because the distinction between these two understandings is not ultimately significant. Both the timeless and omnitensed understandings unnecessarily risk conflating linguistic claims with claims about reality, and contribute to a confusion that works to the advantage of logical fatalism. If tenseless truths are timeless, and the language is confused with timeless reality, then it seems that nothing changes and everything is fixed; truth at all times is misleading if understood as claiming that truth conditions for the truth exist at all times. This issue is discussed further in the next chapter.
See Tooley (1997) and Oaklander (1998) for more on tenseless truths.

according to eternalists, is the correct approach to truth, and can also be characterized as truth *simpliciter*.

Equipped with the notion of truth *simpliciter*, the logical fatalist can now restate the argument for the eternalist in an even stronger form:

(ix) For any proposition P, either P or ~P.
(x) If P, then P is true *simpliciter*, and ~P is false *simpliciter*.
(xi) If ~P, then ~P is true *simpliciter*, and P is false *simpliciter*.
(xii) If P is true *simpliciter*, there is nothing an agent A at time t can do to make P false, or ~P true.
(xiii) If ~P is true *simpliciter*, then there is nothing A at t can do to make ~P false, or P true.
(xiv) If there is nothing A at t can do to make ~P true, then A at t is not free with respect to P and ~P.
(xv) If there is nothing A at t can do to make P true, then A at t is not free with respect to P and ~P.
(xvi) Therefore, A at t is not free with respect P and ~P.

Presumably, one will not want to deny (ix) since denying it would require denying the law of excluded middle. Premises (x) and (xi) are now unavailable for the eternalist to reject since they follow straightforwardly from the eternalist account of truth simpliciter. Premises (xiv) and (xv) are standardly held by proponents of libertarian free will. Thus, one who wants to maintain both eternalism and libertarian free will must reject (xii) and (xiii).[19] The task, then, for the rest of my thesis, will be to investigate on what grounds libertarian eternalists can reject (xii) and (xiii).

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[19] Technically, only one of (xii) and (xiii) need to be denied in order to reject the argument. However, since they mirror each other in following from opposite sides of the disjunct in (ix), there seems to be no reason to reject only one and not the other.

I want to start this chapter with an observation that will move the discussion towards a way for the libertarian eternalist to reject (xii) and (xiii). I—and, I suspect, most others—have the strong intuition that I, at March 2011, am not free with regards to past decisions. For instance, there is "now" a fact that in November 2010, I (errantly) bet on the Rangers to win the 2010 World Series. I, at March 2011, am not free to change the fact that I bet on the Rangers to win the 2010 World Series. However, it does and did seem to me that I, at November 2010, was free with regards to my decision to bet on the Rangers despite the fact that there is a fact about it and that I, at 2011, do not have causal efficacy with respect to that decision.

If eternalism is true, there are facts about the future, just as there are facts about the past. For instance, there may be a fact about what team, if any, I bet on to win the 2011 World Series. However, unlike the case with the past, knowing that there is "now" a fact about what I do in November 2011 makes me doubtful with regards to whether I in November 2011 am free. Furthermore, in the November 2010 case, it seemed highly intuitive that I, at March 2011 am not free with respect to the past decision, though I seemed free at the time; in the November 2011 case, it is not as obvious that I, in March 2011, have no freedom with respect to November 2011. I could, for instance, implant a computer chip in my brain that would force me to bet on the Rockies in November 2011 (though this might render the November 2011 me unfree with respect to this action).

Finally, the difference in intuitions between past and future decisions is not the product of mere epistemic opaqueness of future facts that the past lacks, but of some deeper metaphysical fact about how we are related to the future. We saw in Chapter 1 that while tensed theories of

time have tools to account for these differences, eternalism lacks them because of the commitment to the existence of past, present, and future times as well as tenseless time. Given the ontological symmetry between past and future times under eternalism, it seems that intuitions about past and future decisions occurring during those times should display similar symmetry.

In this chapter, I begin by exploring why intuitions about future decisions are different from intuitions about past ones, and how this reveals a potential worry for libertarian eternalists. First, in 2.1, I begin with a discussion about why facts about the future are disturbing to the appearance of freedom while facts about the past are not. I focus upon a solution endorsed by Nathan Oaklander and Michael Tooley that rests upon a distinction between truth at a time and truth *simpliciter*. Though this solution allows one to reject (xii) and (xiii), a second potential worry for the proponent of eternalism and libertarianism may still be lurking. This worry, which I discuss in 2.2, relates to the observation that while we, at the present, are obviously not free with regards to past decisions, we seem free with regards to future ones. I will argue that this observation stems from a perceived flow of time and underlying assumptions about causation. This worry creates room for my solution, which is proposed in Chapter 3.

2.1 Facts and truth conditions

Recall the pair of propositions the proponent of both libertarianism and eternalism must reject:

> (xii) If P is true *simpliciter*, there is nothing an agent A at time t can do to make P false, or ~P true.
> (xiii) If ~P is true *simpliciter*, then there is nothing A at t can do to make ~P false, or P true.

What might the libertarian eternalist say against these two propositions? One pervasive response to logical fatalism involves rejecting this claim on the basis of the qualification "at t." Defenders

of the possibility of eternalism and free will claim that the phrase is either misapplied or misleading. Tooley, for instance, notes that "given a static or tenseless approach to the nature of time… the notion of truth at a time is either incoherent, or, at least, has no application to the world."[20] Essentially, "at t" carries linguistic and metaphysical implications, and propositions like (xii) and (xiii) run the risk of conflating these two. Keeping these implications distinct purportedly reveals why (xii) and (xiii) initially seem tempting. In this section, I will discuss what the distinction is, the work it allegedly does, and how it bears upon logical fatalism.

2.1.1 Truth *simpliciter* vs. truth at a time

There are at least three ways of understanding truth at t. The first interprets "at t" as a non-trivial linguistic claim such that "at t" roughly means "as of t." For example, we might say "that it is true at 2009 that the Giants win the World Series in 2010." If "at 2009" operates similarly to "as of t," tensed implications seem to have been presupposed. "At 2009" is functioning as a temporal index that needs to be considered in determining the truth value of the proposition; on this reading, "p is true at 2009" means "truth conditions for p exist as of 2009." This way of speaking makes sense under tensed theories such as presentism and the growing block view since future times like 2010 do not exist as of 2009. "Truth at t" then carries the implication of "true in accordance with temporally indexed considerations." Clearly, this implication cannot be endorsed by eternalism since it does not endorse an ontological difference between present and future times. For the eternalist, truth conditions must be tenseless, so interpreting "at t" as "as of t" is incoherent.

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[20] Tooley (2010), 152.

"Truth at t" can also be interpreted as a trivial consequence of truth *simpliciter* since truth *simpliciter* implies truth for all times. So long as "truth at t" is taken as a trivial token of the type "true regardless of temporal indexes," "at t" is coherent and unproblematic for eternalists. Thus, if the Giants winning the World Series in 2010 is true *simpliciter*, it is trivially true at 2009. Similarly, because time is analogous to space, it also would be trivially true at Paris that the Giants win the World Series in 2010. While this way of speaking runs the initial risk of misleading people into believing that the truth conditions exist in Paris in 2009, once people are clear that "at t" is a trivial consequence of truth *simpliciter*, it becomes rather superfluous qualification.

However, problems arise when the trivial reading of "at t" is equivocated with a third interpretation that imparts metaphysical significance. Arguably, the most natural reading of "at t" refers to truth conditions. For instance, Tooley makes this point when he says:

> If one says that the proposition in question is now true, that is naturally interpreted as saying that the state of affairs now exists that makes the proposition true. But the latter is not the case.[21]

For instance, the claim that "it is true at 2009 that he Giants win the World Series in 2010" is best understood as claiming that "some condition at 2009 makes it true that the Giants win the World Series in 2010." If this interpretation were accurate, then future contingent propositions would indeed be determined since the conditions for their truth would exist at earlier times.[22] However, eternalists are free to deny this reading since the truth conditions for the Giants winning in 2010 exist at the 2010 and not the 2009 portion of the space-time manifold. Similarly,

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[21] The propositions in question here are future ones.
Ibid.
[22] Presumably, the notion of determinism in the philosophy of physics—where the history of the universe up to some time, plus the laws of nature, is compatible with only a single future—is committed to truth conditions for future times existing at present ones. But, as Bradley Monton has pointed out to me, how exactly to characterize the concept of determinism is contentious, especially given the variety of spacetime models allowed by general relativity. For more on this topic, it may be helpful to see John Earman's *A Primer on Determinism* (1986).

"at Paris," or at any other place besides Arlington, Texas, is misleading since "at" seems to indicate truth conditions.

Problems arise when the metaphysical interpretation is conflated with the trivial linguistic one. Oaklander identifies this problem, noting that "the existence of grammatical tense as represented in ordinary language and thought is not to be confused with ontological tense, as represented in a tensed theory of time."[23] If we take "at t" to be a coherent notion for a tenseless theorist—perhaps because we recognize it is trivial given truth *simpliciter*—then (xii) and (xiii) are coherent. But when "at t" is then equivocated with ontological tense, or the existence of truth conditions "at t," the fatalistic conclusion follows since only a single future is compatible with the truth conditions at t. Thus, if we think it is coherent to say that "it is true at 2009 that the Giants win in 2010," and then make the further metaphysical assumption that the truth conditions for the Giants winning in 2010 exist in 2009, the fatalistic conclusion—that agents are not free at t with respect to some future proposition—follows. Hence, we must keep the linguistic and metaphysical interpretations distinct and not make the metaphysical assumption that a proposition being true at t means that the truth conditions for the proposition exist at t.

2.1.2 Freedom "at t"

So far, we have seen that adding "at t" to "p is true" either adds nothing under the trivial linguistic interpretation or misleads us into thinking that the truth conditions for p being true exist at t under the metaphysical interpretation. If Tooley and Oaklander are correct about the way "at t" is being used, has the fatalistic worry been assuaged? I claim that *prima facie* it does

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[23] Oaklander (1998), 187.

not, but that closer investigation shows us that focusing upon truth conditions is essential to solving the problem.

The notion of truth *simpliciter* demonstrates that "at t" is misleading because it suggests that truth conditions for a proposition exist at t. Instead, on the eternalist view, truth *simpliciter* means that a proposition is true independently of considerations of tense. Some have argued that instead of alleviating fatalistic concerns, appealing to truth *simpliciter* exacerbates them. For instance, Linda Zagzebski points out that "surely the timeless realm is as ontologically determinate and fixed as the past."[24] Initial reflection upon this sort of view does result in troubling concerns. Recall the asymmetric intuitions about past and future decision that were noted at the outset of this chapter. I, in March 2011, am initially unconcerned about the fact that I had freely made a past bet in November 2010 but doubtful about the fact regarding whether I freely make a bet in November 2011. As Zagzebski point out, the eternalist should not be caught up in relation of these facts to the time at which they are being reflected upon (in this case, March 2011). Instead, these facts, in virtue of being true *simpliciter*, have always existed.

If this point is taken seriously, it seems that the rational eternalist should revise his intuitions. He can go one of two ways. First, the eternalist might consider that the fact that I make the November 2010 bet has always been true; it was a fact in 1985, before I was even born. The eternalist then might the same doubts about future facts govern intuitions about past facts. Is it not strange that there was a fact about what I would do in 2010 before I was even born? How can one think that I am free in 2010 when there are facts about what I do before I even exist? Taking this approach requires foregoing the appearance of freedom in 2010, but may be reasonable given considerations regarding causation that will be discussed in 2.2.

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[24] Zagzebski (2002), 52.

On the other hand, we might revise doubts about future freedom in accordance with intuitions about past freedom. Though there is and has always been a fact about my 2010 bet, it still seemed to me, at the time of my decision to bet, that I was making a free choice. With regards to future decisions, I might then think that though it is peculiar that facts about the decision always exist, I will be as free at the future time as I was at the past time. What matters is not that there are tenseless facts about decisions, but that at the time of these decisions, I am free.

This second route reveals a problem that arises when tenseless truths are understood as timeless. Just as truth at t ran the risk of implying that truth conditions exist at t, timeless truth runs the risk of implying that truth conditions are also timeless, and thus fixed. But truth conditions are all that matter for freedom. If we want to know whether I am free with regards to my 2010 bet, we need to look at the truth conditions for the fact that I place a bet in 2010, not the fact itself or when we think the fact is true. Facts are signs of truth conditions, not the cause of them. It is true that if there is a fact, there must be a truth condition that corresponds to it, but this point is only one half of a biconditional, and fails to capture the correct explanatory direction, for it is also true that if there is a particular truth condition, there are facts that correspond to it. Since the facts depend upon the truth conditions, we need to investigate the truth conditions, and the only thing that matters is that the truth conditions involve free agents. Agents need to be free with regard to their decisions at the time of the decision. Thus, one can be free with regards a future act even if there is a fact concerning it.

However, even if in principle, facts about a decision do not render it unfree, there will only be facts if there are truth conditions such that a particular decision occurs. In the next section, we will investigate whether the existence of future truth conditions poses a similar fatalistic worry as the existence of fact does.

2.2 A persisting fatalistic worry

We have now seen that facts are separable from truth conditions, and that the truth conditions are all that matter with respect to whether or not the acts are performed freely. We also noted general approaches as to how one might resolve asymmetric intuitions about past and future acts. In this section, I want to discuss one final source for the asymmetry of intuitions: the asymmetric direction of causation. It seems that the present is the way it is because of way the past is. For instance, because the past is such that I have not slept in twenty hours, I now feel tired. However, it does not seem that the present is the way it is because of the way the future is. Suppose that I do not sleep tomorrow either; that future state of affairs seems to have nothing to do with the my being tired at the present and seems compatible with my not being tired at the present. Thus, it seems that earlier times have causal influence over later ones. But if earlier conditions cause later ones, it seems that later conditions are determined, and fatalistic worries resurface.

Thus, we can see that there is a *prima facie* problem for a proponent of libertarian free will, eternalism, and this extremely preliminary picture of causation. When confronted with this problem, one might be initially tempted to sacrifice causation. This temptation may be particularly attractive since eternalism is a characterized as static due to the lack of metaphysical change involved in perceived passages of time. If there is no underlying metaphysical change, it may not make sense to say that the conditions at one time causes the conditions at another.[25] I think, however, that to dispense of causation altogether is a mistake, especially if one wants to maintain that there is libertarian free will. After all, in order for an agent to act freely, he must be the cause of what he wills. But before we can provide an account of causation that avoids the

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[25] Indeed, some philosophers have argued that there can only be causation in tensed or dynamic theories of time. *See* Tooley (1997).

prima facie worry surrounding the dependence of later times upon earlier ones, we must

understand specifically what the problem posed is. Thus, the remainder of this chapter explores

the problem for libertarian eternalists involved in holding a view of causation that allows

conditions at one time to have causal influence over conditions at another time.

There is a multitude of views on causation, but the predominant view, put very generally,

seems to be that in typical cases, antecedent events cause consequent ones. Furthermore, in

ordinary cases, antecedent events are prior to, or earlier than, their effects.[26] What counts as an

antecedent condition is the source of considerable debate. For example, we might think that a bat

swung with a particular amount of force hitting a ball traveling at a particular velocity and

direction is the cause of a home run. But further reflection reveals that other factors such as wind

or the stadium this event occurs in matter as well; a home run over the left field wall in Yankee

Stadium is a ricochet off the Green Monster in Fenway Park that stays in play.[27] This example

demonstrates that analyses of causes require either holding other factors fixed, or adding them as

causes. Though it would sound stranger to say that the architecture of a stadium is a cause of a

home run than to say given that one is in a particular stadium, the bat hitting the ball a certain

way causes a home run, either approach results an analysis that is generally correct. Thus, we can

say either that holding everything else (i.e. venue, weather conditions, etc.) fixed the bat hitting

the ball causes the home run if and only if the bat hitting the ball necessitates the home run, or

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[26] In the special case of backwards causation, antecedent causes occur after their effects. There is lively debate about whther such cases are possible. Some philosophers rule them out because they open up the possibility of causal loops or undercutting causal events, which are taken to be impossible. Others argue either that these scenarios are not entailed by backwards causation, or that if they are such scenarios do make backwards causation incoherent. To simplify things, I will only discuss cases of earlier events causing later ones, but the broader point—that causation across time is problematic for libertarian eternalists—applies to backwards causation as well.

[27] For those who may be unfamiliar with the architecture of these ballparks, the left field fence at Yankee Stadium is approximately 320 feet away from home plate and about 8.5 feet tall, while Fenway Park boasts a looming, 37-foot tall left field wall roughly 315 feet away from home plate. Thus, a ball that easily clears the left field fence in Yankee Stadium may very well remain in play at Fenway.

that the event involving all factors including the bat hitting the ball causes the event of the home run if and only if the former even necessitates the latter.

These two alternative analyses generalize into the following two claims:

(xvii) Holding everything in state of affairs S fixed, A causes B iff given A and S, B must result.[28]
(xviii) Event A, which includes state of affairs S, causes event B iff if A occurs, then B occurs.

Using conditional claims to analyze causation is generally controversial, but this controversy usually results from debate about what factors are held fixed, or which causes are most proximate. Neither of these points are at issue with (xvii) or (xviii), and neither claim is meant to be particularly controversial. I prefer the locution of (xviii) and will use A and B to refer to events, but if (xvii) is preferable to the reader, the reader should feel free to substitute the language of (xvii) instead.

Adding eternalism to the picture causes complications. As alluded to at the outset of this section, some have suggested that eternalism, in virtue of its characterization of time as static, may not be compatible with robust accounts of causation where causes literally generate effects. However, even if there is no objective flow of time, there might be a direction of time that can be accounted for through a counterfactual view of causation.[29] In the case of physical causes, I think it is plausible that at least counterfactual causation might be compatible with eternalism. It seems coherent to say that in all possible worlds with event A and similar nomological laws, event B, the effect, must occur later. Furthermore, holding that physical events are determined does not overtly run the risk of sacrificing other metaphysical commitments, such as the commitment to free will.

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[28] For the purposes of my thesis, I am setting aside probablistic causation.
[29] Lewis, for instance, offers a counterfactual account of causation.
See Lewis (1979).

However, further reflection reveals that adding free decisions as causes adds further complications. Suppose that there is a chain of causes such that A causes B, and B is not overdetermined.[30] This means that given A and B is entailed. Furthermore, since eternalism is assumed, the truth conditions for A and B are assumed to exist. A happens to be an event that involves a free decision; some agent decides X as opposed to ~X. Plausibly, if the agent had decided ~X, then B would not have occurred. Of course, B occurring is not ruled out, since it might be the case that A', where the agent decides ~X, could entail B as well. But to think that in general, effects are brought about regardless of what agents will seems peculiar. The picture would be one of a free, but inefficacious will. Thus, if we think that there is at least one instance in which the will would be both free and efficacious, and the truth condition for the effect exists, then the appropriate cause must occur. If the cause, which involves a particular decision of the will, must occur, it seems that the will must have opted for a particular decision, and is thus not free.

In this chapter, we have seen that the presence of facts about the future does not entail fatalism because truth conditions are what matter for freedom. We have also seen that turning solely to truth conditions does not alleviate fatalistic concerns either for if one also holds causation of the type discussed, fatalistic concerns resurface. The next chapter attempts to revanquish these fatalistic concerns.

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[30] I set aside cases of overdetermination since unless one thinks all cases of causation are also cases of overdetermination, there will be a case of causation that does not involve overdetermination that will give rise to this problem.

CHAPTER 3

In Chapter 2, we saw that attempts to resolve the tension between eternalism and libertarian free remain unsuccessful. Specifically, causation across time reinforces fatalistic concerns. However, causation cannot be dispensed with altogether; at least agent causation must be retained if there are to be free acts. In this chapter, I shall offer my own model for demonstrating how a world can be eternalistic and libertarian that relies upon the simultaneity of direct causation. I will develop the model in stages. First, I shall propose that there is a possible world, W_1, that has only one time, and is one in which the doctrines of eternalism and libertarian free will are true. If W_1 is possible, I argue, then W_2, a world with multiple times and eternalist and libertarian characteristics, will also be possible. From the possibility of W_2, we will be able to arrive at a third possible world, W_3, that resembles our actual world.

3.1 W_1, a world with one time

Imagine a possible world, W_1, that contains one time, t_1. This world might contain physical features similar to the actual world; it could contain a planet with oceans, mountains, and live organisms. Amongst these organisms, there might even be people, or agents with the ability to will freely. Though these agents have no experiences because they exist only at t_1, they might still have mental states similar to ours. For example, they might have apparent memories, desires, and dispositions. Furthermore, given the occurrent mental and physical states, S, one of these agents might have a choice before him such that he can will X or ~X. Though he may not be able to carry out X or ~X because there is no subsequent t_2 in this world, he can nevertheless,

I claim, instantaneously will X or will ~X.[31] W_1, I will argue, is both eternalistic and free. Though it is quite different than our actual world, it is a world in which eternalism and libertarianism are compatible, and moves us in the direction of explaining how a world like ours can be eternalistic and free.

3.1.1 W_1 as eternalistic

Recall that eternalism is a theory of time with two criteria: first, there is no objective flow of time, and second, all times have the same ontological status. Under this definition, W_1 should qualify as an eternalistic world. First, tenseless theories deny that there is an objective flow of time, and a world with only one time cannot possibly exhibit a flow of time, much less an objective one. Second, all times, or t_1, exist.

While W_1 meets the first criterion relatively uncontroversially, its satisfaction of the second criterion may be less obvious. But recall from Chapter 1 the discussion of a world destroyed the instant it is created. This world, like W_1, has only one time that we might think of as the present, and the issue was whether it was better characterized as an eternalist world, a presentist world, or both. As I argued for before, it might be fair to characterize these worlds as eternalistic so long as it is true that if there were non-present events in this world, they would exist in the same way the present time does. But even if one is not inclined to accept this argument, nothing essential rests upon it, for W_2 and W_3, worlds that more closely resemble ours, contain more than one time, so the worry that W_1 is not eternal is not devastating.

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[31] Precisely how libertarian free will works is another controversial topic, but I will claim that there is nothing incoherent about it working in such a way that the will acts instantaneously.

3.1.2 W_1 as free

While W_1 being eternalistic is not essential to the scheme of the chapter, it is crucial to the chapter, and the entire project, that W_1 be free. In order to be free, W_1 must contain at least one instance of a free act. Thus, given our earlier definition, there must be an agent who has more than one live option, is the immanent cause of willing one of those options, and is free to will the option he does in fact will as well as the alternative option. Furthermore, all of this must occur in an instant since W_1 only has one time. Given the way W_1 has been described, there could certainly be an agent, with mental states such that there is a choice involving more than one live option, who wills one of those options. However, whether the agent's will, as the immanent cause, could have caused that willing simultaneously with the willing may be open for debate. I will now argue that it could have, and appeal to accounts of simultaneous causation in defending this point.

In Chapter 2, we briefly discussed standard accounts of causation where causes were prior to their effects. There is an alternative to these types of accounts that relies instead upon causes being explanatorily sufficient for their effects. This alternative allows for causes to be simultaneous with their effects, and thus does not require cause and effect to be temporally distinct events.

Huemer and Kovitz defend an account of simultaneous causation in which direct causes occur simultaneously with their effects.[32] Take, for instance, Aristotle's example of the stone moved by a staff moved by a hand. The cause of the stone's movement is the staff's movement, and the movements of both occur simultaneously with each other. Similarly, the staff's movement, caused by the hand's movement, moves simultaneously with the hand. It is not the

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[32] *See* Huemer and Kovitz (2003).

case in this example that the hand moves and then the staff moves, and then the stone does; rather, all three move at once.[33]

There are two objections commonly raised against the simultaneity of cause and effect. First, it seems that given events e_1, e_2, and e_3, if e_1 causes e_2, and e_2 causes e_3, e_1 will be simultaneous with e_2, and with e_3 via the transitivity of the *simultaneous with* relation. It seems then, that all events bearing a causal relationship with each other will be simultaneous. However, we often think of causes and effects being extended in time. Extension in time should not pose a problem so long as causes are extended along with their effects. The hand, staff, and stone might move for more than one moment, but the direct cause of the staff's movement at t_1 is the hand's movement at t_1, not the hand's movement at t_0 or t_2.

Second, if cause and effect are simultaneous, an alleged difficulty in telling which is the cause and which is the effect arises. But this difficulty can be avoided so long as dependence is analyzed in terms of something other than a temporal relation such as *prior to* or *earlier than*. Analyzing dependence in terms of explanatory sufficiency does not rely upon temporal relations and offers an intuitively correct account. The hand's movement is a sufficient explanation for the staff's movement, while the staff's movement does not serve as a sufficient explanation for the hand's movement. These responses to the two common examples show us that direct causes are cotemporaneous with their effects even in temporally extended events, and that direct causes are explanatorily sufficient for their effects.

Given the discussion thus far, it seems that simultaneous causation is at least a coherent, if not plausible account of causation. Technically, its coherence is all that is required for W_1 to be a possible world with free will, but I think that this account has a great deal of plausibility as

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[33] Additional examples include a ball resting on a cushion such that the presence of the ball causes an indent on a pillow, or the lowering of one end of a seesaw causing the other end to go up. *Ibid*, 557.

well, particularly in the case of the will. Indeed, Aristotle, whose example of the man and staff

we have been using, understands agent causation as a type of efficient cause. This is significant

because in the case of efficient causes, the cause must be present with its effect. The sculptor

cannot cease to exist the moment before the statue is completed; rather, he, as the efficient cause

of the statue, must be present at the moment of completion in order to bring about the completion

of the statue.[34] Aquinas, who also holds Aristotle's view on causation, similarly notes that "the

mover and the thing moved must exist simultaneously."[35] In addition to having historical

credence, simultaneous causation, especially in the case of the will, seems incredibly plausible. It

is strange, and somewhat unsatisfying, to appeal to non-present things to explain present events.

    If what has been said so far is correct, it seems likely—and at least coherent—that the

will operates simultaneously with what it wills. One might worry that even if the hand moves

simultaneously with the staff, the willing of the hand's movement cannot occur simultaneously

with the hand's movement since it takes time for signals to travel from the brain to the hand.

However, it is important to keep in mind that in the case of the will we are primarily concerned

with the *actus elicitus* question, the one of willing itself as opposed to the ability to bring about

the intended result. The event of the will's causing itself to will that the hand move only needs to

be simultaneous with the event of the willing of the hand to move, and it certainly seems that

these events are simultaneous since for the will to cause itself to will something is simply for it to

will that thing. Furthermore, with respect to the *actus elicitus* question, the will's act is the

sufficient explanation for what it wills; the explanatory direction, and thus the direction of

causation, is clear. Thus, if one accepts simultaneous causation, understanding the will as a

simultaneous cause is quite natural, and one can understand how W_1 can be a free world.

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[34] *See* Aristotle's *Physics* at Book II Chapter 3 for his discussion of efficient causation and his example of the sculptor and sculpture.

[35] Aquinas, *Summa Contra Gentiles* I.13.13.

3.2 W_2 and W_3, worlds with multiple times

If W_1 is a possible world that is both eternalistic and libertarian, then another world, W_2, with two causally unconnected temporally distinct events, e_1 and e_2, also seems possible. W_2, unlike W_1, is uncontroversially eternalistic since it contains multiple times with the same ontological status; we might even index one of the times as present and the others as non-present so that we can say that present and non-present times exist. Furthermore, if W_1 contains free acts in one time, then W_2 can certainly contain free acts as well. Since the will's causing what it wills is not a temporally extended event, e_1 can contain instances of free acts that do not depend upon anything that happens in e_2, and vice versa. Because these acts are completely independent of other times, there no worries regarding whether any of these acts might be causally necessitated by something that occurs at another time. Thus, W_2 is a world that is eternalistic, contains free acts, and avoids worries about causally determined acts.

After considering W_2, we might imagine other possible worlds with multiple times that are causally unconnected. These worlds might even have as many temporally distinct events as our actual world does. Amongst these worlds, there might be a third world, W_3, whose events can be ordered in a way that gives the appearance of physical and even psychological continuity. For instance, a baseball might leave a pitcher's hand and travel towards a batter such that its path and velocity exhibit some sort of regularity consistent with what we take to be physical "laws." The batter's mental states may be similarly continuous as he perceives the approaching ball. Free acts occurring at one event, like the decision to swing the bat, might line up with previous events such that there is a continuity between deliberation between live options and choosing one of those options. The decision made might then be an apparent memory in following events.

Phenomenologically, this world would be quite similar to our actual world. In fact, it could very well be the actual world; the only difference between them would be the possible and imperceptible one of whether events are causally connected. W$_3$ would be eternalistic, free, and possibly our actual world. All times, present and non-present, exist, and there is no objective flow of time. Each temporally distinct event could contain free acts, provided that there are agents with live options who are the immanent causes of willing one of those options. Thus, there is a possible world that is eternalistic and libertarian that not only resembles our world, but also, based on empirically available evidence, could be our actual world.

3.3 Addressing some final worries

In this chapter, I have demonstrated how a world phenomenologically similar to ours can be eternalistic and libertarian. Direct causation in this eternalistic, libertarian world must be simultaneous rather than sequential. However, if temporal events are causally unconnected, a couple worries may arise. First, one might wonder what the status of nomological laws are, and whether such laws exist in this type of world. Second, if events are causally unconnected, it seems that agents in these events are also causally unconnected. If this is the case, one might also wonder whether there can be diachronic personal identity. In this section, I will address each of these concerns.

3.3.1 Nomological necessity

W$_3$ has been presented as a world whose temporal events are causally unconnected but happen to line up such that the world exhibits physical and psychological continuity across time. Because events are causally unconnected, it seems that events just as easily could have been such

that they did not align in a way that gives the appearance of continuity. That libertarian free will requires that agents choose alternate live options in other possible worlds makes the concern especially salient. While a possible world with events that lack any sort of continuity with each other might seem strange, there is certainly nothing incoherent about such a world. There do not seem to be strong reasons to suppose such a world is not possible. But the presence of these possible worlds is perfectly compatible with there also being worlds that exhibit continuity, and worlds like ours or W_3 are just more like the latter sort.

As discussed in this chapter and at the end of the previous one, in worlds with causally unconnected events, it will not be the case that given a state of affairs and set of laws at t_1, a particular state of affairs at t_2 will result. For instance, a ball falling from a certain height in a certain direction in addition to the fact that all objects fall in accordance with the gravitational constant will not necessitate that the ball be at a particular height and vector at t_2. If one thinks that laws of nature are laws that necessitate subsequent states of affairs, then there will not be laws of nature of this sort in eternalistic free worlds.

However, laws of nature and nomological necessity are controversial, and there are numerous accounts of what it is to be a law of nature. One might think that laws only need to apply synchronically; perhaps all objects have the gravitational constant acting upon them, but this fact has no bearing upon where objects are or what velocity they have at any given time. Alternatively, one might be a Humean about laws of nature and think that they merely express observed regularities, but do not function as any sort of necessary feature of the world. Laws would be descriptive rather than prescriptive, and simply identify patterns that happen to arise. On this view, the way objects in the world are would be more fundamental than laws of nature. This sort of view may be attractive given the static nature of time in an eternalist world. Thus,

possible worlds like W_3 do not require eliminating laws of nature all together, though laws would have to be understood in a similar way to one of the latter, general accounts discussed.

3.3.2 Diachronic identity

A second worry related to diachronic personal identity may also arise in light of what has been said about W_3. If there is no causal connection between me in March 2011 and "me" in November 2011, there may be no reason to think that I, in March 2011, am identical to the agent in November 2011 who closely resembles me. This worry may have the unintended benefit of alleviating the original concern of how "I" can be free at a future time since I do not exist at the future time if there is no identity relation; of course, this benefit would be a bit perverse, since, presumably, the diachronic identity relation holds in the actual world and W_3 ought to be like the actual world in this respect. Like laws of nature, personal identity is another area of philosophy that is extremely controversial and contains a multiplicity of accounts. However, W_3, and worlds like it, are compatible with most of the major accounts of personal identity.

Simple physical and psychological views of personal identity require that there be continuity of body or continuity of psychology (e.g. central desires and apparent memories).[36] Since all the events and objects in the events of W_3 exhibit physical and psychological continuity, the criteria for what it takes for an agent at t_1 to be the same agent at t_2 is met, and there is diachronic identity under the conditions of the physical and psychological views. There are numerous convincing objections to these simple continuity views. The standard type of objection notes that the continuity view is consistent with a scenario where an evil demon destroys an agent every second, but at that instant a good deity substitutes in another agent that is

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[36] Physical accounts such as animalism or brain theory utilize the continuity of body criterion while psychological theories utilize the psychological continuity criterion. The "or" is meant to be inclusive since there are also hybrid physical-psychological continuity views.

physically and psychologically continuous with the destroyed one. This type of objection has given rise to a more sophisticated continuity account that adds in a criterion requiring the continuity to arise in a particular way; for instance, genuine rather than apparent memories might be required. This additional criterion is troublesome for worlds like W_3 since they usually require some sort of causal connectedness between the psychological states of an agent at t_1 and t_2, and W_3 probably does not allow for this type of causal connectedness over time.

I suspect that many of these more sophisticated accounts ultimately end up analyzing causal connectedness in terms of connection to an underlying subject of experience.[37] For example, instead of requiring continuity of apparent memories, one might require continuity of appropriately connected apparent memories, where apparent memories are appropriately connected if they stem from actual memories. For a memory to be an actual memory then depends upon it belonging to the subject who had the experience. One then faces the difficulty of explaining what it is to be the same underlying subject of experience. Identity of the underlying subject usually becomes irreducible, simple, or unanalyzable. Soul theory—the theory of identity that holds that person A is identical to person B if and only if A and B have the same soul—is one of the more prominent versions of this type of account. Under this sort of account, it is also possible for agents in W_3 to have diachronic identity. All that is required for me at March 2011 to be identical to "me" at November 2011 is that I have the same soul at both times, and this requirement is not reducible to any other fact about the world.

If what I have said thus far is correct, W_3 is compatible with many of the predominant accounts of personal identity, namely, "simple" accounts and psychological and physical continuity accounts. Even if W_3 is not compatible with holding a causal continuity type of

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[37] Even if there is a physical or psychological causal continuity view that precludes diachronic identity in W_3, we still have the option of deciding there is no diachronic identity or rejecting the view on which there would be no diachronic identity.

account, one could still deny that such an account was the correct accoung of personal identity in that world. In any case, worries about personal identity should not dissuade one from accepting the solution presented in this chapter to the alleged incompatibility of eternalism and libertarian free will.

3.4 Conclusion

In Chapters 1 and 2, I explained the general position of logical fatalism, and how eternalism and libertarian free will are allegedly incompatible. I then in 2.2 explained how holding causal connectedness across time allows fatalistic worries to persist. In this chapter, we have seen that relying instead on simultaneous causation removes the fatalistic worries attached to causal connections over time. Furthermore, W_3, and thus the solution presented, can withstand worries relating to laws of nature and diachronic identity. It is also worth noting that even if one is still hesitant about the solution due to commitments about laws of nature or identity, these commitments are metaphysical. The most significant virtue of logical fatalism was that its foundational premises—(ix) through (xi)—were logical claims that very few would be wiling to deny. If the main drawback to my solution is that some might have to reconsider other metaphysical commitments, then progress has been made on behalf of the eternalist libertarian against logical fatalism.

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