

BIVALENCE: OPEN FUTURE OR LOGICAL FATALISM?

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A Thesis Submitted in
Partial Fulfillment of the
Requirements for the Degree of

Master of Arts

in Philosophy

at

The University of Wisconsin-Milwaukee

May 2021

ABSTRACT

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The University of Wisconsin-Milwaukee, 2021

Under the Supervision of Professor Joshua Spencer

It is highly intuitive that the future is open in the sense that there are multiple possibilities for the future to obtain and we can determine how tomorrow is. For instance, it is possible that I will eat salad for lunch tomorrow, but it is also possible that I will eat food other than salad for lunch tomorrow. Suppose I eat salad finally. However, an argument of fatalism shows that the future is closed in the sense of being determined to be a certain way, and that whatever I do now, my eating salad tomorrow is inevitable. Fatalism calls into question the open future thesis, challenging theories of free will and moral responsibility. As the fatalist argument relies on the principle of bivalence, some proponents of the open future thesis refute fatalism by rejecting bivalence. In this paper, I argue that we need not reject bivalence to defend the open future thesis because bivalence is not sufficient evidence for fatalism, and another premise of the fatalist argument is problematic. I will show that bivalence is a neutral concept applicable to both theories of the future and does not commit us to fatalism. My argument does not privilege one theory over another. Instead, it simply elucidates the relationships between bivalence, the open future thesis, and fatalism. All of my

work is based on the divergence between Markosian and Barnes and Cameron.

In Section 1, I introduce the debate between fatalism and the open future thesis before detailing the traditional bivalence-based fatalist argument and demonstrating the centrality of bivalence to the debate in Section 2. In Section 3, I introduce some responses to fatalism, arguing that they are all flawed, which leads to my proposal, in Section 4, that the fatalist argument looks convincing because theorists do not recognize or understand the multiple significations of the term “future.” I then distinguish two distinct uses of “future” (*real future* and *relative future*) thereby disconnecting fatalism from bivalence and rendering bivalence compatible with the open future thesis. Finally, in Section 5, I take a broad view to conclude my proposal.

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1. Introduction

One traditional argument for fatalism begins with the concept of bivalence, which states that any meaningful proposition is either true or false. In this argument, fatalism derives from applying bivalence to future-directed propositions. If this is taken to be valid, refuting fatalism requires denying bivalence, at least concerning future contingents. Some proponents of the open future thesis go this way.

Before demonstrating how we can defend the open future thesis against fatalism without denying bivalence, I must define certain terms. In this paper, I define fatalism as the thesis that whatever happens in the future is unavoidable (Markosian, 1995) and the open future thesis as the thesis that there are now multiple metaphysically possible ways for our future to unfold ¹ (Barnes & Cameron, 2009, 2011). Although scholars disagree on the definitions of “fatalism” and “open future,”² my argument is built upon the aforementioned definitions, and it is beyond the scope of this paper to settle these debates.

First, let us observe how fatalism and the open future thesis contradict each other. Consider the present-tensed proposition,

P₁: I am hungry.

It is either true or false; either it is the case that I am hungry, or it is not the case that I am

¹ Barnes and Cameron (2009, 2011). The later citations from this source are all from these two papers.

² See Torre (2011) for a discussion of definitions of open future; see van Inwagen (1983) and Cahn (1967) for discussions of definitions of fatalism.

hungry—these are the only options. By comparing P_1 with the present state of the world, we can prove or disprove it. If I do feel hungry, P_1 is true; if I do not, P_1 is false. Clearly, the truth value of a proposition depends upon the corresponding state of the world.

However, applying this mechanism to future contingents creates problems. Consider the future-tensed proposition,

P_2 : I will eat salad for lunch tomorrow.

Supposing it is either true or false, we can suppose it is true for the sake of convenience.

Using t_2 to represent the time I have lunch tomorrow, s_2 to represent the state of the world at t_2 , t_1 to represent the time the proposition appears (which is earlier than t_2), and s_1 to represent the state of world at t_1 , we can interrogate the proposition. First, I eat salad, but might it not be the case that I eat salad, but rather, I eat rice or noodles instead? Open futurists recognize that all of these scenarios are possible and insist that, even if I finally eat salad at t_2 , there is something that if it happens before t_2 , I will eat food other than salad at t_2 ³. For instance, maybe the vegetables spoil and I have to order a pizza at the last minute. Or maybe my mom stops by and brings me noodles, so I eat noodles instead. Open futurists believe we have the power to shape our future; that is, until s_2 has obtained, we can act before t_2 such that a different state of the world is obtains at t_2 . Only after t_2 is it impossible to influence s_2 , which has already become fixed as fact.

³ Note: This is not a counterfactual. In this paper, open future is considered different from the counterfactual possibility. Barnes and Cameron criticize Lewis's modal account of openness (2011), and I do not have space to discuss it. Importantly, in the open future context, neither my eating salad, my eating pizza, or my eating noodles is metaphysically privileged.

In contrast, according to a fatalist, given that I eventually eat salad, my eating salad at t_2 is inevitable, no matter what happens before t_2 ; that is, whatever ultimately happens is inevitable. As such, according to fatalism, determining what to eat in the future is beyond our control. This position is untenable for those who believe in free will and that humans are morally responsible for their actions. Thus, it is necessary to investigate the motivation for endorsing such a counter-intuitive statement.

2. The Traditional Fatalistic Argument

Arguments for fatalism have been based on different formulations of bivalence since the time of Aristotle (*De Interpretatione*, Chapter 9). This version of fatalism is usually called logical fatalism⁴ and can be understood through the following variant of Markosian's fatalist argument (1995, p. 2):

- (1) For every time, t , and proposition, p , either p is true at t or p is false at t ;
- (2) If (1), then there are now true propositions that, taken together, completely characterize Jie's lunch menu for tomorrow;
- (3) If there are now true propositions that, taken together, completely characterize Jie's lunch menu for tomorrow, then whatever will happen concerning Jie's lunch tomorrow is inevitable;

⁴ I will use "fatalism" to refer to logical fatalism for the rest of this paper. Other arguments for fatalism are not considered.

- (4) If whatever will happen concerning Jie's lunch tomorrow is inevitable, then whatever will happen in the future is inevitable;
- (5) Whatever will happen in the future is inevitable.

Premise (1) is a statement of the principle of bivalence. If this argument is valid, such a statement is followed by fatalism; that is, whatever actually happens in the future is the only possible way for the future to unfold. Given that the open future thesis can be roughly understood as indicating multiple possible futures, the fatalist argument reaches a conclusion synonymous with a refutation of the open future thesis.

Premise (1) in the argument implies that bivalence is true. Premise (3) claims a correlation between the future contingent and the state of future world—that is, for P_2 to be true, there is no way for me to avoid eating salad at t_2 ; for P_2 to be false, there is no way for me to eat salad at t_2 , implying that s_2 rather than s_1 makes P_2 true. Furthermore, to derive “inevitable” from “being true now,” premise (3) must assume that the truth value is unchangeable. If not, P_2 can be false at t_2 even if it is true at t_1 . If P_2 is false at t_2 , the corresponding event at s_2 is that I do not eat salad. As such, premise (3) holds and fatalism is right (in claiming that my eating salad is inevitable) only when both are true: s_2 makes P_2 true, the truth value of a proposition does not change over time.

Interrogating the various steps in this argument leads to three important questions:

Q1: Is bivalence true?

Q2: Does s_1 make P_2 true or does s_2 make P_2 true?

Q3: Does the truth value of a proposition change over time?

It seems intuitive to answer “yes” to Q_1 , “ s_2 ” to Q_2 , and “no” to Q_3 . Suggesting that P_2 is either true or false here lays the groundwork for fatalism. According to the line of reasoning here, we have: given that p is true only when p accords with the corresponding state of the world, suggesting that p is true amounts to saying that p accords with the corresponding state of the world, which indicates that the corresponding state of the world is already fixed as fact. Therefore, if P_2 is true at t_1 and s_2 is the truthmaker for P_2 , then s_2 is fixed at t_1 as what is suggested by the proposition. As facts are immutable, there is no way for me to not to eat salad at t_2 . In the same way, if P_2 is false, we have that there is no way for me to eat salad at t_2 . That is, we always arrive at conclusions that challenge the common intuition that it is possible for me to eat another food at t_2 and to determine what to eat in the future. One potential way to avoid this seems to be to deny that P_2 is either true or false, like claiming that P_2 is neither true nor false, or maybe that P_2 has some third truth value. But is that a good way to go for anti-fatalism?

3. Possible Responses to the Fatalist Argument

The perspective described in the previous section can be summarized as follows:

- (A) A future contingent (P_2) is either true or false.
- (B) The truth value of a future contingent (P_2) depends on the state of future world (s_2).
- (C) The truth value of a proposition does not change over time. If it is true, it is true

all the time.

The argument above suggests that anyone who agrees with these three principles must accept fatalism. Opponents of fatalism usually deny one or more of these three principles. For example, Markosian rejects (A) and (B)⁵. He defines the open future thesis as non-bivalence and argues for this thesis, suggesting that this is the only plausible defense against fatalism. Meanwhile, MacFarlane rejects (A) and (C), claiming that truth value is sensitive to the contexts of both the assessment and the utterance. His view is known as “relativism” (2003, 2005).

However, I propose that none of the three principles need to be abandoned to defend the open future thesis against fatalism because I consider premise (3) to be misleading, as it precludes the possibility of our influencing what is going to happen. In other words, if I am correct, premise (1) need not be rejected to defend the open future thesis. My proposal is based upon the account of openness provided by Barnes and Cameron. Although they also defend bivalence through the rejection of premise (3), I believe they have interpreted it incorrectly. The next section details arguments by Markosian and Barnes and Cameron to lay the foundation for my proposal in Section 4.

3.1 Markosian’s Response

3.1.1 Rejecting (A)

Rejecting bivalence appears to be the most direct argument against fatalism.

⁵ Although, in a footnote, he mentions viewing premise (3) as false, he does not challenge it in this paper.

Moreover, it is also intuitive to believe that we have no conclusive reason to regard future contingents as true and no conclusive reason to regard them as false because

if (B) is true, now there are possible states of future world some of which make p true and others which make it false—and there is no way to refute any of them as a possibility;

if (B) is false, we cannot find any state of world to make p true or false.

Either way, it is not the case that p is true and it is not the case that p is false. So, future contingents must be attributed a third truth value, i.e., “neither true nor false.”

Markosian could be interpreted as agreeing; he writes, “It looks as if my best bet, then, will be to reject premise (1)” (p. 3). That is, “To say, with regard to some time, t, that the future is open at t is to say that there are some propositions about the future relative to t that are, at t, neither true nor false” (p. 3). He calls rejecting premise (1) “the open future response” to fatalism (p. 3). However, not everyone agree on this. In response, Barnes and Cameron (2009) write,

We can define terms how we want, of course. Someone can choose to use the term “open future” in such a way that it is analytic, in their mouth, that the future is only open if future contingents are neither true nor false. The principle of bivalence is obviously incompatible with the open future in this sense. That claim, though, is dialectically uninteresting. The open future thesis is meant to capture some pre-theoretic thought we have about the nature of time, and if we define it as the thesis that future contingents lack a truth value then we risk simply changing the subject.

The question we should be asking is how best to understand the pre-theoretic thought about time, and whether our best understanding of this thought commits us to a rejection of bivalence. (p. 293)

Barnes and Cameron are partially right, that is, we are responsible for making sense of our pre-theoretic conception of time and check whether it truly commits us to non-bivalence. However, their criticism of Markosian is rather extreme. Although Markosian does not offer a positive reason for identifying the open future thesis with non-bivalence, this is unnecessary there because he does not intend to prove that bivalence is incompatible with the open future thesis. Markosian's paper just presupposes such a definition of the open future, which can be recognized when Markosian demonstrates that the best argument against fatalism involves using "openness" in a certain way. That such a definition might be problematic is another discussion, and his argument is not undermined by replacing his term "openness" with another term. Additionally, since Markosian argues his point meticulously, step by step, it does not make sense to accuse him of "changing the subject."

Still, we need not go as far as Markosian thinks we have to go to respond to fatalism, as demonstrated in Section 4.

3.1.2 Rejecting (B)

Defining the open future thesis in terms of non-bivalence, Markosian suggests that "if a proposition is about a matter both future and contingent, then the proposition is neither true

nor false; it has some other truth-value, or else it has no truth-value at all” (p. 3). For Markosian, plausibly responding to this argument requires appeals to the claims (a) that the laws of nature are indeterministic concerning the future, and (b) that, according to the Tensed Version of the Correspondence Theory of Truth (TCT), “for any time, t , and proposition, p , p is true at t just in case p corresponds to the world at t ” (p. 5). For Markosian, TCT is a radical departure from the standard conception of the semantics (SS) for future-tensed sentences:

Consider the future-tensed sentence “It will be the case one hour hence that it is raining in Boston”. According to the standard conception of the semantics for future-tensed sentences, this sentence is true at a time, t , just in case the present-tensed sentence “It is raining in Boston” is true at the time one hour later than t .

According to TCT, however, the proposition that it will be raining in Boston one hour hence (and so, consequently, any sentence that expresses that proposition) is true now just in case it corresponds to the world now. The truth of the proposition, according to TCT, is not determined by the truth of some other proposition at some other time. (p. 5)

Given that SS and TCT are both semantics for tensed sentences, it is worth considering why we should adopt TCT for determining the truth values of future-tensed propositions. In the previously cited paper, Markosian declines to respond to this question, suggesting that he is only concerned with showing that TCT and the indeterminism of natural law confirm non-bivalence. However, I find that SS provides a better framework for the semantics of future-tensed propositions. Given that future-tensed propositions describe the

state of the future world rather than the state of the current world, judging the truth value of such propositions requires comparing them with the state of the future world. That is, if it is now 9 a.m., and I suggest that, one hour hence, it will be raining in Boston, then, to check the truth of the statement, it is necessary to wait until 10 a.m. to observe if it is raining in Boston. If it is, then the proposition is true; if not, it is false. There is no reason to compare the proposition with the state of the current world because it does not concern the state of the current world.

3.2 Barnes and Cameron's Response

To defend the open future thesis, it is necessary to understand the pre-theoretic thought it aims to describe. For Barnes and Cameron, this pre-theoretic thought is that the future is as yet unsettled. They refer to “unsettled” as metaphysical indeterminacy; that is, sometimes the world does not settle things one way or another—it is certain that either a proposition or its negation is the case, but it is not certain which is the case. For example, the open future thesis holds that it is not, at present, settled whether or not there will be a sea battle tomorrow. It is presently settled that either there will be a sea battle tomorrow or there will not be a sea battle tomorrow; however, it remains unsettled which is the true future state. That is to say, determinately, it is true that p or it is true that $\text{not-}p$, but it is neither determinate that p is true, nor is it determinate that $\text{not-}p$ is true. The truth value of the proposition will be settled tomorrow. Barnes and Cameron call this the “metaphysical indeterminacy account” of the open future thesis.

Elsewhere, the authors respond to the objection that such an account does not respond to the fatalistic argument⁶. Barnes and Cameron insist that it is a challenge to resist the fatalist argument while granting its premise (i.e., bivalence):

The fatalist needs to say that there is some way the future is fated to be. The most that we can be charged with is that on our view the future is fated to be some way or other. That is, there is determinately some way the future is going to be. But there's no way for the future to be such that the future is determinately going to be that way. (p. 23)

Thus, by rejecting a fatalist statement, their account precludes fatalism. While this account is incompatible with fatalism, it is insufficient as a response to fatalism. Problematically, given their adoption of bivalence, fatalism's underlying principle, we lack a reason to accept their theory over fatalism. Significantly, while fatalism provides an argument that appeals almost exclusively to that principle, Barnes and Cameron do not have an independent argument for their theory, and, ultimately, they do not disprove the fatalist argument.

Therefore, it is necessary to consider the flaws in the fatalist argument. In this regard, Barnes and Cameron do provide some insight, claiming that premise (3) relies on the following thought:

(SE): If a proposition has a truth value, then it is settled that it has that truth value.

⁶ Their formulation of the fatalist argument differs somewhat from Markosian's, but these differences do not affect this discussion, so I will consider the formulations to be effectively the same.

Asking, “What else could justify the move from ‘it’s now true that p’ to ‘it’s now settled that p’?,” (p. 23) Barnes and Cameron reject SE by claiming that anyone who wanted to retain bivalence and consider the future unsettled would do so. This response is, at best, incomplete. Claiming that fatalism is unacceptable according to their theory, Barnes and Cameron do not provide a reason to disprove SE apart from their understanding of openness.

Moreover, premise (3) cannot rely on SE. According to Barnes and Cameron, “unsettled” describes metaphysical indeterminacy, and “it is settled that it has that truth value” means that it is determinate that p is true (if p is true); or it is determinate that p is false (if p is false). That is, the truth value of p is pre-determined before the corresponding future unfolds. However, this statement is already fatalistic. If premise (3) relies on it, then the whole fatalistic argument is begging the question.

Fortunately and unfortunately, premise (3) does not need this assumption. Instead, the move is justified by our inability to render a true proposition false: we are unable to change facts. That is, when we say p is true, it implies that the “future” has unfolded and is no longer a real “future”. Therefore, given that p is true at t_1 , what we do during t_1 and t_2 does not influence how tomorrow (t_2) is, a fatalistic conclusion that renders tomorrow pre-determined. As such, SE is not an assumption that the fatalist argument appeals to but is instead a result of that argument. Barnes and Cameron have misinterpreted their target.

The theory proposed by Barnes and Cameron can be usefully reframed by understanding “settled” as “unchangeable,” which means recognizing that the truth value of p will not change once p has a truth value, thus bringing us back to principle (C) of fatalism.

4. My Proposal

Objection to Premise (3)

Following Barnes and Cameron, I understand openness as metaphysical indeterminacy⁷, utilizing their argument that the open future thesis is compatible with bivalence⁸ while taking their ideas a step further to disprove the fatalist argument. To do so, it is necessary to consider the apparent undeniability of the pre-determined nature of tomorrow and ask what determines it. According to the analysis in the previous section, s_2 is settled because p is true at t_1 , and p is true at t_1 because s_2 is characterized by p . That is, tomorrow's world will be in a certain state because it is in that state. This odd statement can be problematized by the statement "s₂ is settled because p is true at t_1 ." Aristotle helpfully illustrates the point:

It is not because we think truly that you are white that you are white, but because you are white that we who say this have the truth. (*Metaphysics* Θ1051b)

When applying this logic to the fatalist argument, a contradiction is apparent. According to fatalism, s_2 is settled before the future unfolds. However, the argument begins with the notion that the future has unfolded (in the way p depicts). This amounts to suggesting that the future is pre-determined only when it is not the future, which is inherently

⁷ Another paper would be required to explain why this is the best approach, and Barnes and Cameron have already provided a convincing argument.

⁸ They even argue that the open future thesis does not support non-bivalence. However, discussing this is outside the scope of the paper. Importantly, this account of the open future allows its defense without rejecting bivalence.

flawed.

To disentangle this puzzle, a distinction must be made when discussing the future. There are two common significations of the term “future”: the *real future* and the *relative future*. When we talk about the future in daily life, we are usually referring to a point in time later than the time when we are speaking. Notably, the moment that we call “the present” is always changing. Accordingly, the time later than the present has its reference always changing too. I call this future the *real future* because it pertains to reality. For example, now, as I am writing this paper, it is the year 2020. This is the reality. So now the present time is 2020. Therefore, in 2020, when we describe 2015 as the past but not the future, the term “future” refers to the real future. But ten years ago, the present time was 2010. In 2010, 2015 constituted a time in the future. Compared to 2010, 2015 always constitutes the future. That is, 2015 is the future for any moment in time before 2015, no matter the current year. I describe this future as the *relative future*.

Real Future: For the present time, t_0 , in reality, any time later than t_0 is the future.

Relative Future: For all times, t_1 and t_2 , such that t_2 is later than t_1 , t_2 is the future from the perspective of t_1 .

Applying this distinction to an analysis of fatalism, it becomes apparent that the argument problematically moves from a claim about the real future to a claim about the relative future. To claim that p has a certain truth value, one of the possible states of the world at t_2 must have been actualized; however, given that the state of the world at t_2 has been

actualized, t_2 is no longer a real future. As such, in an argument claiming that the nature of tomorrow is settled according to the nature of the present, t_2 (tomorrow) is not a real future. But t_2 is still a relative future to t_1 (the present).

Moreover, given the state of the world at t_2 has been actualized, s_2 is fixed. However, this simply means that the nature of the world in a relative future (not a *real* future) has been established. This only proves that, sometimes, a relative future is closed. However, by claiming that whatever happens in the future is unavoidable, fatalism indicates that some certain possible state of the world at t_2 is unavoidable, i.e., *that* possible state of the world is the only possibility for s_2 to obtain, which means that s_2 is fixed before t_2 arrives. As discussed, t_2 is a real future before t_2 arrives. As such, fatalism concludes that the real future is closed. Furthermore, it could reasonably be assumed that the argument aims to prove that the real future is determined because, if the fatalistic argument only concerned the relative future, the claim that “whatever will happen in the future is inevitable” is the same as the claim that “whatever has happened is not open to change after it happens,” which would be self-evident.

Notably, even the statement “the relative future is not open” is conditional upon t_2 's not being a real future, which influences our understanding of the open future thesis. The open future thesis is only concerned with the real future: when 2015 was still a real future, the state of the world in 2015 was indeterminate; that is, there were various possibilities, none of which were metaphysically privileged over others. For open futurists, the real future is open because it remains unsettled which possibility will be actualized; that is, which proposition is true is unsettled. While 2015 is always a relative future for 2010, upon 2015's arrival, it is no

longer a real future. For example, in 2016, the state of the world of 2015 has been fixed and is, thus, always the past (in reality). Although the state of the world in 2015 is now fixed (by “now” I mean in 2020), it does not follow that, when 2015 was the real future, its state of the world was fixed.

Thus, 2015 experienced two stages: (1) it was both a real future and a relative future when it was open to various possibilities; (2) it was a relative future but not a real future when it was no longer open to various possibilities. Proponents of the open future thesis are only concerned with the first stage; that is, so long as 2015 has not arrived, there are various possibilities for the consequent state of the world. Fatalism requires of open futurists that 2015 must have other possibilities regarding the state of the world. Such a requirement can be satisfied when 2015 is a real future. However, 2015 cannot be a real future forever. Upon arriving at the second stage, this requirement is not satisfied because 2015 is no longer a real future. Nonetheless, 2015 being fixed does not disprove the open future thesis, which only concerns the real future. That is, premise (3), “If there are now true propositions that, taken together, completely characterize Jie’s lunch menu for tomorrow, then whatever will happen concerning Jie’s lunch tomorrow is inevitable”, must presuppose that t_2 is no longer a real future for a state of tomorrow to be described as “inevitable”; that is, for a state of tomorrow to be described as “inevitable,” it must already be a fact, which means t_2 must be the present or the past. Accordingly, the fatalistic argument does not undermine the claim that the real future is open.

Critics may suggest that premise (3) does not require t_2 to become the real past because, whether t_2 is the real future or not, there are always propositions at t_1 that correctly

characterize s_2 , given bivalence. However, because it is as yet unsettled which propositions will correctly characterize s_2 , the unsettledness that supports the open future thesis indicates that the future is open in the sense that the content of such propositions is unsettled when they concern the real future.

Finally, the open future thesis is not disproven simply because 2015 cannot attain a different state of the world at stage (2), given that 2015 is fixed as fact when the present time is 2016 or later.

One upshot of my proposal is that we are free to hold (C). I won't discuss it here.

5. Conclusion

The debate between fatalism and the open future thesis centers around inevitability. Fatalism claims that there is a certain way that future is fated to be. Its proponents argue that whatever happens is inevitable based on our inability to do anything other than what we actually do. In contrast, the open future thesis claims that there is no such a way that future is determinately to be because the nature of the future is indeterminate until the moment it happens, meaning that all possible eventualities are equally metaphysically possible. Although fatalism builds its argument on bivalence, the concept of bivalence is equally applicable to both theories because it does not assume anything about time. The future can be considered open based on the uncertainty regarding a future contingent until the future moment, and, given that this does not indicate a third choice (beyond being true or being false), bivalence is compatible with the open future thesis.

Defending one of these contrasting theories against the other requires neutral arguments. Open futurists should disprove fatalism without appealing to its principles. To accomplish this, I have argued that premise (3) of the fatalist argument is incorrect because it mixes the two significations of “future,” unlike the open future thesis, which is concerned strictly with the real future.

Regarding the metaphysical indeterminacy account of openness, joining (A), (B), and (C) can offer a plausible explanation for the open future thesis, with (B) and (C) constituting two aspects of the problem of creating truths concerning future contingents. Although there is no consensus on these matters—with Markosian and others suggesting a tensed version of the correspondence theory of truth instead of (B) and Macfarlane claiming we should relativize an utterance’s truth to a particular context of assessment rather than adopting (C)—my aim has simply been to demonstrate that we can hold (A) while defending the open future thesis.

Beyond this, my proposal demonstrates that there is no need to abandon intuitive principles such as (A), (B), and (C). Although we could defend the open future thesis against fatalism by rejecting one or more of these principles, it would require altering aspects of the open future thesis, which would be a wasted effort.

6. References

- Barnes, J. (1991). *The complete works of Aristotle, volumes I and II*. Princeton: Princeton University Press.
- Barnes, E., & Cameron, R. (2009). The Open Future: Bivalence, Determinism and Ontology. *Philosophical Studies*, 146(2): 291-309.
- Barnes, E., & Cameron, R. (2011). Back to the Open Future, *Philosophical Perspectives*, 25(1): 1-26.
- Brogaard, B. (2008). Sea Battle Semantics. *The Philosophical Quarterly*, 58(231), 326-335.
- Cahn, S. M. (1967). *Fate, logic and time*. New Haven: Yale University Press.
- Grandjean, V. (2019). How Is the Asymmetry between the Open Future and the Fixed Past to be Characterized?. *Synthese*, 1-24.
- MacFarlane, J. (2003). Future Contingents and Relative Truth. *The Philosophical Quarterly*, 53(212), 321-336.
- MacFarlane, J. (2005). Making Sense of Relative Truth. *Proceedings of the Aristotelian Society*, 105(3): 321-339.
- Markosian, N. (1995). The Open Past. *Philosophical Studies*, 79(1): 95-105
- Markosian, N. (2013). The Truth about the Past and the Future. In F. Correia., & A. Iacona. (Eds.), *Around the tree: Semantic and metaphysical issues concerning branching time and the open future* (pp. 127-141). Springer Netherlands.
- Schoubye, A. J., & Rabern, B. (2017). Against the Russellian Open Future. *Mind*, 126 (504): 1217-1237.
- Todd, P. (2016). Future Contingents Are All False! On behalf of A Russellian Open Future. *Mind*, 125(499): 775-798.
- Torre, S. (2011). The Open Future. *Philosophy Compass*, 6(5), 360-373.
- van Inwagen, P. (1983). *An essay on free will*. Oxford: Clarendon Press.