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Theistic Open Futurism: A Critical Philosophical Investigation

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Theistic Open Futurism: A Critical Philosophical Investigation

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Philosophy

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Abstract

In this dissertation I critically evaluate and develop a model of God I dub "theistic open futurism"—the view that an omniscient, omnipotent, and omnibenevolent being exists but fails to know future contingent statements because such statements are not true. Contrary to what their free will critics have supposed, I argue that theistic open futurists do not subscribe to a metaphysical vision of the future that is logically or religiously incoherent. With respect to the latter, I suggest that while some open theists have overstated their case concerning the amount of providential control God could have given the reality of an open future, at least one rival model of divine providence that is often advertised as providing *more* control than the openness position may not have the clear advantage that some initially believed. In any case, I argue that if one holds to an incompatibilist account of free will and believes we occasionally act freely, then that person ought to think the future is open.

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Chapter 3 (published): "Is an Open Infinite Future Impossible? A Reply to Pruss" (with Alan Rhoda), *Faith and Philosophy* 37 (2020): 363-369.

Chapter 4 (published): "Some Remarks on Neo-Molinism, Infinite Intelligence, and Providence," *Evangelical Philosophical Society* web article series: https://www.epsociety.org/userfiles/ElijahHess-SomeRemarksonNeo-Molinism%20(final).pdf

Chapter 5 (published): "Contra Tooley: Divine Foreknowledge is Possible," *International Journal for Philosophy of Religion* 87 (2020): 165-172.

INTRODUCTION

You're reading a sentence right now. And now you're reading another sentence. Suppose for the sake of argument that you're doing so *freely*, with the sort of freedom that is incompatible with determinism. Was it true, say, a thousand years ago that you would eventually read these sentences?

According to most philosophers, the answer is yes. The reason most philosophers believe this is because they regard the future to be a fully determinate or *settled* reality. Despite our epistemic limitations that often hinder us from knowing what shall come to pass, they contend, there is nevertheless a fact of the matter concerning what will be. Hence, most theorists take what we might call the truth-settledness of the future for granted. Formally defined, the future is settled with respect to truth at time *t* if and only if for any event or state of affairs X and future time *t**, either the statement "X will obtain at *t**" or the statement "X will not obtain at *t**" is true at *t*.[1]

For those philosophers who believe that God exists and has given human agents incompatibilist or libertarian freedom, such a view of the future is what undergirds the idea that the divine mind, being omniscient, would know so-called "future contingents"—that is, statements about future events or states of affairs that are neither determined by God nor by the world's causal history or its laws of nature. Within the Christian tradition, theistic philosophers who believe that God knows future contingents divide roughly into two camps. In the first camp, there are those who simply think that God knew, a thousand years ago, that you were *going* to read this sentence right now. Whether God exists timelessly or everlastingly through time, such thinkers hold that God simply "sees"—or, rather, is conceptually aware of—what obtains (or will

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[1] Or, either of their tense-neutral counterparts, "X does obtain at *t**" or "X does not obtain at *t**," is true *simpliciter*.

obtain) at each moment of time. This position is often referred to as the *simple foreknowledge* view.[2] In the second camp, there are those who not only believe that God knew a thousand years ago what you were going to read today, but also that God knew, prior to creating the world, everything you *would* do in every situation you *could have possibly been in*. This position is called *Molinism*, named after the sixteenth-century Spanish Jesuit theologian, Luis de Molina (1535-1600). According to Molina and his followers, between God's pre-creational knowledge of what *could* be, and his subsequent knowledge of what *will* be, God possesses "middle knowledge"—counterfactual knowledge of what any person in any conceivable circumstance would, in fact, freely do if they *were* to exist in those circumstances.[3]

In addition to the simple foreknowledge and Molinist accounts, there is a growing minority of theistic philosophers called *open theists* who also affirm the reality of indeterministic events in the world, including some that are the result of human freedom. Unlike the former accounts of divine foreknowledge, though, open theists maintain that God does not know the outcome of these or any other future contingent event ahead of time. According to open theists, then, God did *not* know a thousand years ago that you would be reading this sentence right now.[4]

This feature of the open view has caused many philosophers and theologians to accuse open theists of denying God's omniscience. The accusation, however, is specious. For it is

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[2] For an able advocate of this position see, e.g., David Hunt, "The Simple-Foreknowledge View," in *Divine Foreknowledge: Four Views,* eds. James K. Beilby and Paul R. Eddy (Downers Grove, IL: InterVarsity Press, 2001), 65-103.

[3] There are numerous philosophers of religion who adhere to Molinism. For three such philosophers, see Thomas Flint, *Divine Providence: The Molinist Account* (Ithaca, NY: Cornell University Press, 1998); William Lane Craig, "The Middle-Knowledge View," in *Divine Foreknowledge: Four Views,* eds. James K. Beilby and Paul R. Eddy (Downers Grove, IL: InterVarsity Press, 2001), 119-43; and Kirk MacGregor, *Luis de Molina: The Life and Theology of the Founder of Middle Knowledge* (Grand Rapids, MI: Zondervan, 2015).

[4] For a comprehensive overview of the openness position, see Richard Rice's recent book *The Future of Open Theism: From Antecedents to Opportunities* (Downers Grove, IL: InterVarsity Press, 2020).

predicated on an assumption that many open theists reject—namely, that the future is fully settled in the sense outlined above. In contrast to this assumption, many open theists subscribe to the metaphysical doctrine known as *open futurism*. Roughly, open futurism is the thesis that future contingents are *not true*. Hence, a so-called "theistic open futurist" will maintain that the reason God did not know you would be reading this sentence a thousand years ago is because it was not yet true then that you'd be reading it right now. So, contrary to what many have supposed, open theists can readily affirm a strong account of divine omniscience, i.e., that God knows all and only truths. Thus, the question is not *What does God know?* Rather, the question should be *What is true?*

Recently, philosophers from both the simple foreknowledge and Molinist camps have begun to recognize that the growing majority of open theists actually hold to an open view of the future.[5] As noted in the previous paragraph, I refer to this position as *theistic open futurism*. Among Christian philosophers of religion, then, the bevy of attacks against theistic open futurists in the philosophical literature have been directed at the idea of an open future itself. Specifically, simple foreknowledge advocates and Molinists alike have, in one way or another, charged theistic open futurists with holding to a metaphysical position that is *both* logically problematic *and* detrimental to God's providential governance of the world.

In this dissertation, I set out to investigate these charges in six chapters. Each chapter is a single, self-contained journal article. The rationale for compiling several articles together in this manner is that the body of this work represents a continuation and development of my thought

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[5] Indeed, William Hasker—a prominent philosopher and open theist—has recently informed me that he has become an open futurist (email correspondence 6/11/2020). This marks a noteworthy shift in his thinking. For many years throughout his career, Hasker held that there were true future contingents, but that it was logically impossible for anyone, including God, to know them. This version of open theism goes by the name "limited foreknowledge open theism" for, on this view, God does not know all truths. Proponents of this version of open theism, unfortunately, were always at a dialectical disadvantage *vis-à-vis* their more traditional theistic opponents in that they could not affirm a strong account of divine omniscience.

regarding the logic of an open future from previous publications. Since each of my original publications on this topic has received scholarly interaction in the literature, writing further articles that addressed those who were engaging myself and others seemed both a natural and professional avenue to pursue.[6]

In Chapter 1, I consider an objection leveled against theistic open futurist Gregory Boyd by the Molinist philosopher of religion William Lane Craig. Craig's contention is that the open future view which Boyd and others promulgate rests on an understanding of the relation between *will* and *might* statements that is both semantically and modally confused. I argue that this is not the case and show that, if consistently observed, the standard counterfactual semantics that Craig's Molinist critique relies on not only undermine the validity of his complaint against the open theist, they actually support an argument *for* the openness position.

In Chapter 2, I reply to Molina scholar Kirk MacGregor's response to the essay included as Chapter 1. The argument of that chapter attempts to demonstrate how, given standard counterfactual semantics, one can derive an "open future square of opposition," that is, a depiction of the logical relations that hold between future-tense statements from an open theistic standpoint. Conceding the validity of the argument, MacGregor nevertheless sought to deny its soundness by criticizing both its conclusion and the Stalnaker-Lewis semantics on which it was based. In this chapter, I argue that MacGregor's reasons for rejecting the open future square, as

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[6] To date, two essays of mine have seen published responses or interaction in the relevant literature. My essay "Arguing from Molinism to Neo-Molinism" (*Philosophia Christi* 17 [2015]: 331-351), included as Chapter 1 of this dissertation, received a reply from Molina scholar Kirk MacGregor (see MacGregor, "The Neo-Molinist Square Collapses: A Molinist Response to Elijah Hess" *Philosophia Christi* 18 [2016]: 195-206). My essay "The Open Future Square of Opposition: A Defense" (*Sophia* 56 [2017]: 573-87) was constructively engaged by logician Lorenz Demey (see Demey, "Aristotelian Diagrams in the Debate on Future Contingents: A Methodological Reflection on Hess's Open Future Square of Opposition" *Sophia* 58 [2019]: 321-29). Indeed, some of Demey's observations surface in my rejoinder to MacGregor (which has recently been published as "The Neo-Molinist Square Stands Firm: A Rejoinder to Kirk MacGregor" *Philosophia Christi* 21 [2019]: 391-406). The latter article is included as Chapter 2 of this dissertation.

well as his Molinist alternative to the Stalnaker-Lewis semantics, are uncompelling. In the process, I unveil my original, bivalent truth-conditional semantics for *will* and *will not* statements, a semantics that provides open theists with a new means to demonstrate the logical coherence of open futurism via a hexagon of opposition.

In addition to charges of logical incoherence from Molinists like Craig and MacGregor, philosophers from the simple foreknowledge camp have accused theistic open futurists of holding a metaphysical view that is both mathematically and religiously problematic as well. For example, Alexander Pruss has recently argued on probabilistic grounds that Christian philosophers should reject open futurism on account of its alleged inability to handle certain statements about infinite futures in a mathematically or religiously adequate manner. In Chapter 3, I—along with my co-author Alan Rhoda—argue, *pace* Pruss, that once the distinction between *being true* and *becoming true* is applied to such statements, it is evident that they pose no problem for open futurists.

Something that arguably *does* pose a problem for theistic open futurists, however, is the effect that their view of divine foreknowledge potentially has on God's providential control. Open theists like Boyd and William Hasker, for instance, have argued that the open view, while offering less providential control to God than Molinism, allows for just as much divine control as the simple foreknowledge view.[7] Boyd, specifically, has claimed that on his so-called "neo-Molinist" account of open futurism God loses *no providential advantage whatsoever* when compared to the simple foreknowledge account. In Chapter 4, though, I argue that the alleged providential utility the neo-Molinist account of divine providence is often advertised to provide

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[7] See especially Gregory Boyd, "Neo-Molinism and the Infinite Intelligence of God," *Philosophia Christi* 5 (2003): 187-204; and William Hasker, *God, Time, and Knowledge* (Ithaca, NY: Cornell University Press, 1989) chapter 3. Indeed, Hasker goes so far as to claim that, with respect to divine providence, "If simple foreknowledge did exist, it would be useless" (p. 63).

via Boyd's infinite intelligence argument doesn't work. Contrary to what Boyd avers, it is not the case that God, given openness assumptions, can prepare for every possibility as effectively as if he were certain such possibilities were going to occur. Nor is it the case that he could be guaranteed, even in principle, that his ultimate purposes for creation would be fulfilled when those purposes depend on the decisions of libertarian free agents. Nevertheless, it is argued that, when examined in light of actual biblical cases, the providential advantage thought to be conferred on a God endowed with simple or *mere* foreknowledge may not be as extensive as some have supposed.

Of course, the question of how much providential control God has on simple foreknowledge, Molinist, and open theist models of providence would be moot if it could be demonstrated that human free will is logically incompatible with, or ruled out by, divine foreknowledge. And, indeed, there is an ancient and venerable argument for this very conclusion.[8] But while debate continues to rage on, given the long history of this dispute open theists probably should not think that their libertarian opponents will be swayed by this argument anytime soon. An open theist, then, might conceivably wish that a *new* argument for the conclusion that libertarian freedom is incompatible with exhaustive definite foreknowledge could be found. It is for this reason that Michael Tooley's latest argument against the possibility of divine foreknowledge is of potential interest to open theists. Tooley's argument trades on the idea that, whichever theory of time is true, the ontology of the future—or lack thereof—gives rise to special problems for God's prescience. Unfortunately for openness proponents, though, I investigate this argument in Chapter 5 and find Tooley's reasoning to be predicated on two

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[8] For a helpful overview and discussion of this argument and the myriad issues surrounding it, see the introductory essay in *Freedom, Fatalism, and Foreknowledge*, eds. John Martin Fischer and Patrick Todd (Oxford: Oxford University Press, 2015), 1-38.

mischaracterizations. I thus conclude that, on at least some theories of time, the possibility of divine foreknowledge appears secure.

However, after further reflection on the solution I gave to rebut Tooley's argument, I've come to believe that the deeper threat to human free will is not God's knowledge of the future but the truth-settledness of the future. In the sixth and final chapter, therefore, I sketch a novel argument for the conclusion that a fully determinate or settled future is inconsistent with a common requirement for incompatibilist freedom—namely, the ability to do otherwise. More specifically, I argue that having alternative possibilities available to choose from at any given time requires the future to be indeterminate or open at that time rather than settled. Given that many incompatibilists believe a person has free will only if such a person could have done other than they did, this result is significant. For it would mean that many incompatibilists who think we occasionally act freely should reject a widespread assumption about the nature of the future.

CHAPTER 1

ARGUING FROM MOLINISM TO NEO-MOLINISM

Elijah Hess

An earlier version of this paper appeared in *Philosophia Christi* 17 (2015): 331-35.

Abstract: In a pair of recent essays, William Lane Craig has argued that certain open theist understandings of the nature of the future are both semantically and modally confused. I argue that this is not the case and show that, if consistently observed, the customary semantics for counterfactuals Craig relies on not only undermine the validity of his complaint against the open theist, they actually support an argument *for* the openness position.

1. Introduction

In a pair of recent essays,[1] William Lane Craig has leveled a series of objections to certain open theist understandings of the nature of the future. Most prominent, perhaps, has been his complaint that bivalent accounts of the so-called *alethic openness of the future* which construe "will" and "will not" propositions as being contradicted by statements asserting what "might not" and "might" occur are, in each case, both semantically and modally confused.[2] One example of such a confusion, Craig alleges, occurs in the work of Gregory Boyd. By Craig's

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[1] William Lane Craig, "God Directs all Things: On Behalf of a Molinist View of Providence," in *Four Views on Divine Providence*, ed. Dennis W. Jowers (Grand Rapids, MI: Zondervan, 2011), 79-100; and "Response to Gregory A. Boyd," in *Four Views on Divine Providence*, 224-30. Cf. Craig and David P. Hunt, "Perils of the Open Road," *Faith and Philosophy* 30 (2013): 49-71.

[2] According to Alan Rhoda, the future is *alethically open* at time t if and only if for some state of affairs X and some future time t^* (i) neither the statement "X will obtain at t^*" nor the statement "X will not obtain at t^*" is true at t and (ii) neither of their tense-neutral counterparts, "X does obtain at t^*" and "X does not obtain at t^*," is true *simpliciter*. See idem, "The Fivefold Openness of the Future," in *God in an Open Universe: Science, Metaphysics, and Open Theism*, eds. William Hasker, Thomas Jay Oord, and Dean Zimmerman (Eugene, OR: Pickwick, 2011), 74. For theistic versions of bivalent open futurism see, e.g., Gregory Boyd, "Two Ancient (and Modern) Motivations for Ascribing Exhaustively Definite Foreknowledge to God: A Historic Overview and Critical Assessment," *Religious Studies* 46 (2010): 52-5. Cf. Rhoda, Boyd, and Thomas G. Belt, "Open Theism, Omniscience, and the Nature of the Future," *Faith and Philosophy* 23 (2006): 432-59.

lights, "Boyd proposes a reform of the English language according to which the contradictory of 'X will occur' is 'X might not occur,' and the contradictory of 'X will not occur' is 'X might occur.' The statements 'X will occur' and 'X will not occur' are on this view contraries, not contradictories."[3] Depicted on a square of opposition, these logical relations appear as follows.
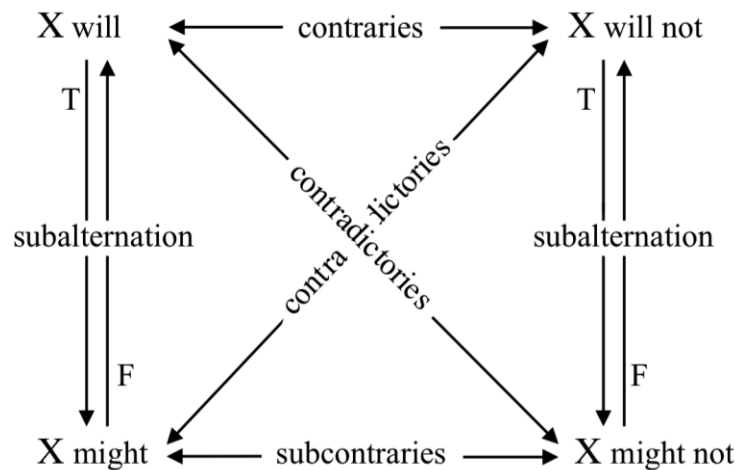
Figure 1

For open theists, the above picture illustrates how it's possible for the future to be a realm of both settled and unsettled aspects. That is, instead of ultimately being describable in terms of what *will* or *will not* take place, the future may also be comprised of that which has yet to be written into the "storyline" of world history—a realm of what still *might and might not* occur.

These ontological possibilities form a distinct category apart from truths about what will and will not happen and are what the above subcontraries, when expressed conjointly, are meant to represent. Indeed, it is the open theist's conviction that this tripartite division of logical space

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[3] Craig, "Response to Gregory A. Boyd," 229. For an early proponent of the idea that "will" and "will not" statements are contraries rather than contradictories, see Charles Hartshorne, "The Meaning of 'Is Going to Be,'" *Mind* 74 (1965): 46-58.

provides the best representation of the range of future possibilities in a world where genuine

indeterminism exists. And since, like their Molinist and Arminian brethren, it is also the open

theist's conviction that we have been granted a degree of indeterministic or so-called libertarian

freedom, such theists are convinced that figure 1 presents the best depiction of the future options

available in *our* world.[4]

Craig, however, isn't buying it. His primary complaint about this open future square of

opposition is that such a picture illicitly mixes modal locutions ("might" statements) with non-

modal locutions ("will" statements). According to Craig,

> He [Boyd] is speaking his own idiolect here…In normal English, the statement that
> something will occur, but might not occur, is perfectly coherent. That is just to affirm
> that it will occur contingently. Boyd must be assuming that 'will' statements are
> disguised modal statements to the effect that something 'must' occur and so can be set in
> opposition to 'might' statements.[5]

In what follows I'll argue that, contrary to Craig, all open theists need to arrive at the

opposition between "will" and "might not" (and, similarly, "will not" and "might") is to show

that these indicatives are simply *related* to a certain class of conditional statement. After laying

the groundwork for this relation, I demonstrate how Craig's attacks on Boyd's so-called "neo-

Molinist" understanding of might-statements can be turned and used, instead, as an argument in

support of the open theist's view of the future. I conclude by considering three objections to the

argument and note that, in their attempts to block it, traditional Molinists like Craig have

revealed that they are operating with a far more attenuated account of free will than many have

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[4] For further defense of the logical relations that appear on figure 1, see Elijah Hess, "The Neo-Molinist Square
Stands Firm: A Rejoinder to Kirk MacGregor," *Philosophia Christi* 21 (2019): 391-406; and idem, "The Open
Future Square of Opposition: A Defense," *Sophia* 56 (2017): 573-87.

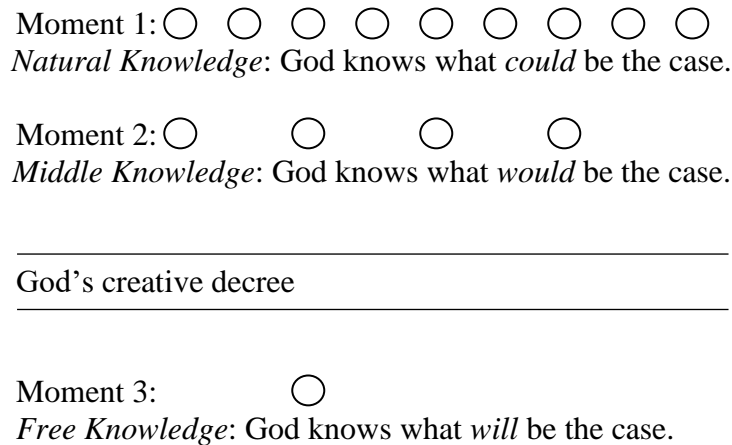[5] Craig, "Response to Gregory A. Boyd," 229.

realized—an account that may end up inadvertently providing a libertarian with considerable incentive to move from Molinism to neo-Molinism.

2. Preliminaries

To start, then, consider how the traditional Molinist views reality. "In the Molinist view," Craig writes,

> there are two logical moments prior to the divine decree: first, the moment at which God has natural knowledge of the range of possible worlds and, second, the moment at which he has knowledge of the proper subset of possible worlds that, given the counterfactual propositions true at that moment, are feasible for him to create. The counterfactuals which are true at that moment thus serve to delimit the range of possible worlds to worlds feasible for God.[6]

Hence, according to the Molinist picture (allowing circles to represent possible worlds), the logical "moments" at which the various stages of God's knowledge occur fall in this order:

Moment 1: ◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯
Natural Knowledge: God knows what *could* be the case.

Moment 2: ◯   ◯   ◯   ◯
Middle Knowledge: God knows what *would* be the case.

God's creative decree

Moment 3:   ◯
Free Knowledge: God knows what *will* be the case.

Figure 2

This picture is the key to seeing how, on the Molinist's understanding, future-tense indicatives are logically related to certain other conditional terms. In particular, future-tense indicatives stand in a definite relation to *counterfactual* terms. Moreover, there are open theists

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[6] Craig, "God Directs All Things," 82-3.

who, to a large extent, agree with the Molinist picture. So-called "neo-Molinist" accounts of

open theism, like those advocated by Boyd, also conceive of God's pre-creational knowledge in

two stages.[7] On the traditional as well as the neo-Molinist model, for any true "will" proposition

in the actual world there is a corresponding "would" counterfactual proposition that *preceded* it

and was known by God via his middle knowledge. However, just as the neo-Molinist will

insist—over and against other classical theists—that the future is alethically open and thus

ultimately apprehended by God via his free knowledge in terms of what "will," "will not," and

(in the case of future contingents) what "might and might not" occur, here too neo- and

traditional Molinists will ultimately divide over the content of God's middle knowledge.

For instance, when considering so-called "counterfactuals of creaturely freedom" (CCFs

hereafter), traditional Molinists ultimately acknowledge just two categories of counterfactual

conditional in God's middle knowledge, *would*-counterfactuals and *would not*-counterfactuals.

That is, they endorse the *Law of Conditional Excluded Middle* (CEM)—the claim that, for any

counterfactual $P \:\square\!\!\rightarrow Q$ (read: "If P were the case, Q would be the case"), either $(P \:\square\!\!\rightarrow Q)$ or $(P$

$\square\!\!\rightarrow \neg Q)$ is true. The law is notoriously controversial,[8] but it would appear the traditional

Molinist is committed to something like it, at least when the species of counterfactual is a CCF.

For as Craig points out, since the circumstances C in which the free agent is placed are fully

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[7] Boyd, "Neo-Molinism and the Infinite Intelligence of God," *Philosophia Christi* 5 (2003): 187-204. For a brief explication and defense of the stages of God's knowledge on the neo-Molinist model, see the ensuing discussion below.

[8] Though, for various defenses of CEM, see Charles B Cross, "Conditional Excluded Middle," *Erkenntnis* 70 (2009): 173-88; Richard Gaskin, "Conditionals of Freedom and Middle Knowledge," *The Philosophical Quarterly* 43 (1993): 412-30; Robert C. Stalnaker, "A Defense of Conditional Excluded Middle," in *Ifs: Conditionals, Belief, Decision, Chance, and Time*, eds. William L. Harper, Robert Stalnaker, and Glenn Pearce (Dordrecht: D. Reidel Publishing Company, 1981), 87-104; and Dean A. Kowalski, "On Behalf of a Suarezian Middle Knowledge," *Philosophia Christi* 5 (2003): 219-27. For further discussion, see also note 24 below.

specified in the counterfactual's antecedent, it would seem that if the agent were placed in *C* and left free with respect to action X, then she must either do X or not do X. "For what other alternative," Craig wonders, "is there?"[9]

Whereas the traditional Molinist posits only two logically distinct categories of counterfactual pertaining to the hypothetical actions of creatures at this moment in the divine mind (i.e., "would" and "would not" conditionals), the neo-Molinist allows for *three*—namely "would," "would not," and "might and might not." And it is specifically the latter sort of proposition that the neo-Molinist maintains is needed to properly express CCFs. Indeed, the neo-Molinist account of middle knowledge is unique in that it distinguishes between *volitional* and *creational* aspects of God's activity in relation to the divine knowledge. By "volitional" activity, the neo-Molinist means to refer to activity that depends on God's will. Relatedly, when speaking of "creational" activity, she means to refer to activity in which God produces (or instantiates) concrete and material effects. In this way, the latter implies the former but not vice versa. Middle knowledge, on the neo-Molinist scheme then, is between natural and free knowledge in that it is *pre-creational*—i.e., prior to creation (like natural knowledge but unlike free knowledge), but also volitional and, hence, dependent on God's will (like free knowledge and unlike natural knowledge). Here's how the "neo-logical" stages in the divine mind proceed.[10]

In God's *natural knowledge*, an individual creaturely essence *I* is known, necessarily, as a mere possibility ($\Diamond I$ & $\neg I$). God also knows what such essences *could* do in any situation they might be in. For example, Adam could eat the forbidden fruit, or he could refrain from eating it. But, necessarily, God knows that it's possible that Adam eat the fruit for at least two different

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[9] Craig, "Middle Knowledge, Truth-Makers, and the Grounding Objection," *Faith and Philosophy* 18 (2001): 338.

[10] For a summary chart containing the neo-Molinist's account of divine knowledge, see figure 4 included at the end of this essay.

reasons: Adam could eat the fruit because he's been *determined* to do so, or Adam could *freely* eat it. The same two possibilities account for how Adam could refrain from eating the fruit.

In God's *middle knowledge*, Adam's essence—once a mere possibility—is willed by God to exist. It is not yet instantiated, but it has been willed by God to be an *actual* creaturely essence. Moreover, God has decided that, were Adam to be placed in the garden, Adam should freely decide whether to eat of the forbidden fruit. Thus, God grants the capacity for libertarian freedom to Adam's essence, thereby grounding the truth of the following counterfactual conditional: "If Adam were in the garden, he *might and might not* eat the forbidden fruit." Because free will is a gift from God, whether an essence should possess such a capacity is contingent upon God's choice and is, thus, dependent on God's activity.[11]

At the moment of God's *creative decree*, God creates *ex nihilo* a particular "world-type," namely a world-type that is actually a delimited *set* of possible worlds, any one of which might be progressively actualized over the course of history depending on the choices free agents make. However, God also simultaneously decrees what he shall do in response to his free creatures' potential choices as well as the precise *range* of possibilities available for agents to choose from on any given occasion.[12]

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[11] This idea, i.e., that God grants a (once merely possible) creaturely essence both existence and a capacity for free choice at this moment in the divine mind, allows the neo-Molinist to turn back David Werther's charge that might-counterfactuals should be classed as necessary truths in God's natural knowledge. Werther points out that a proposition like "If one possesses libertarian freedom regarding an action in some set of circumstances then one might or might not perform that action" is necessarily true. However, as he goes on to note, "It is not possible that a person possess libertarian freedom regarding some action unless both the performing of the action and the refraining from its performance are possibilities. But, if this is so, then neo-Molinism's so-called might counterfactuals are rightly classed, along with all other necessary truths, among God's natural knowledge" (Werther, "Open Theism and Middle Knowledge: An Appraisal of Gregory Boyd's Neo-Molinism," *Philosophia Christi* 5 [2003]: 213). What Werther fails to realize here, however, is that it is not necessary that a creature *have* libertarian freedom. Since it is up to God whether such essences should be granted libertarian freedom, it is His decision that this be so that accounts for the transition from natural to middle knowledge at this point.

[12] Critics of the open view often worry that, were the future "open" in the way that open theists suppose, God's ultimate purposes for the cosmos could potentially be thwarted. For instance, Craig contends that "knowledge of mere 'might' counterfactuals is insufficient to give God the sort of specific providential control described in the

In God's *free knowledge*, what were once known as might-counterfactuals are now

known as a delimited set of might-*factuals*, ontological possibilities that now partly comprise a

future describable in terms of what "will," "will not," and "might and might not" be. God knows

what contingency plans he's set in place as well as the delimited set of might-factuals that he

himself has providentially left open to instantiated creaturely essences endowed with libertarian

freedom to choose from.

Commenting on the neo-Molinist view of counterfactuals, Craig correctly observes that

a few openness theologians have attempted to accommodate the insights of Molinism by affirming that God does have middle knowledge of 'might' counterfactuals of creaturely freedom, even though he lacks middle knowledge of 'would' counterfactuals of creaturely freedom. Thus, he knows logically prior to his decree what any person he could create might or might not do in any set of circumstances in which God should place him.[13]

"But," Craig asks,

if 'might' counterfactuals can be true logically prior to God's decree, then why not also 'would' counterfactuals? It is important to understand that in the customary semantics

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Bible. Nor is it clear that such knowledge is sufficient to bring about God's desired ends" (Craig, "God Directs All Things," 90-1). Similarly, David Hunt has claimed that the God of open theism could very well lose something as simple as a game of rock-paper-scissors (see Hunt, "The Providential Advantage of Divine Foreknowledge," in *Arguing About Religion*, ed. Kevin Timpe [London and New York: Routledge, 2009], 374-85). However, over and against other openness models to date, the neo-Molinist account of divine knowledge presented here allows God a significant amount of providential control. For, according to the neo-Molinist, the *topography* of modality is largely shaped by God. For example, God knows that, were he to enter into a game of rock-paper-scissors with Satan, he could potentially lose *that* game depending on what Satan plays. But God has the ultimate "say-so" concerning which creational "games" he enters into. So, if Satan's winning this game would be detrimental to God's overall plan, then God needn't risk ever losing such a game with Satan. Without completely abrogating Satan's freedom, God simply decides to enter into a game where he's left open to Satan *two* rather than three options to choose from. By allowing Satan, say, the possibility of choosing either rock or scissors, God knows that by playing rock he'll never lose this game with Satan. Indeed, as this example shows, the precise range of possibilities available to us is under God's power and may vary greatly from circumstance to circumstance. According to the neo-Molinist, then, this ability to determine *which* possibilities will remain open to us allows God a robust level of providential control over a world in which freedom is thought to consist in genuine, alternative possibilities. Aspects of my account of God's knowledge and providential activity build upon a similar view put forth by Boyd. For Boyd's "infinite intelligence" argument and how it relates to God's providential control on the neo-Molinist account of open theism, see especially his "Neo-Molinism and the Infinite Intelligence of God," 196-203; "Response to William Lane Craig," in *Four Views on Divine Providence*, 136-39; and "Randomness and Assurance: Does Everything Happen for a Reason?" in *The Other Journal: Evil* 20 (2012): 75-85.

[13] Craig, "God Directs All Things," 88.

for counterfactual conditionals, 'would' counterfactuals logically imply 'might' counterfactuals, so that in the Molinist view, *both* are true and known to God via his middle knowledge.[14]

Here Craig wants to know what basis the neo-Molinist could have for denying the truth of "would" CCFs when they accept the truth of "might" CCFs. After all, if it's true that I *might* order a pizza, then the subjunctive "I would order a pizza" *could* be true. Likewise, if it's true that I *might not* order a pizza, then "I would not order a pizza" could be true.[15] Apparently, the fact that might-conditionals have this implication for would-conditionals leads Craig to believe that the neo-Molinist's denial of true "would" CCFs is unjustified. "If…open theists are willing to accept true 'might' counterfactuals," he writes, "then I see no reason remaining to deny the truth of 'would' counterfactuals as well."[16]

As it turns out, however, the neo-Molinist has a very good reason for supposing God lacks middle knowledge of "would" CCFs, one that—despite what Craig's gloss might seem to suggest—relies on an important distinction within standard counterfactual semantics. In the next section, I demonstrate what the semantic basis for neo-Molinist middle knowledge is and how the open future square of opposition can be derived from it.

3. Is the Neo-Molinist Counterfactually Confused?

We've seen how on both Molinism and neo-Molinism future-tense indicatives like "will" and "will not" can be understood to relate to "would" and "would not" counterfactuals. But in order to demonstrate how the contradictory relations exhibited on the open future square of

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[14] Ibid., 89.

[15] Thanks to an anonymous reviewer for this example.

[16] Craig, "God Directs All Things," 89.

opposition can, *pace* Craig, actually be derived from standard counterfactual semantics, we'll

need to uncover just what exactly these standard or "customary" semantics for counterfactual

conditionals are. As it turns out Craig and his colleague, philosopher J. P. Moreland, provide the

answer in their remarkable book *Philosophical Foundations for a Christian Worldview*. There

they reveal that, "for want of a better alternative, most philosophers use the Stalnaker-Lewis

semantics."[17] Named after the pioneering work of philosophers Robert Stalnaker and David

Lewis, the Stalnaker-Lewis semantics for counterfactuals is a similarity-based approach to

determining the truth of these conditionals relative to possible worlds. Lewis's preferred model,

for example, has us think of similarity as a "closeness" relation between worlds arranged into a

system of spheres, $, where $ is (conceptually) structured as a series of concentric circles. As

Lewis explains, the $ used in interpreting counterfactuals

> is meant to carry information about the comparative overall similarity of worlds. Any
> particular sphere around a world *W* is to contain just those worlds that resemble *W* to at
> least a certain degree. This degree is different for different spheres around *W*. The smaller
> the sphere, the more similar to *W* must a world be to fall within it.[18]

As Craig and Moreland go on to elaborate, if we want to determine the truth of $P \mathbin{\Box\!\!\rightarrow} Q$

from, say, the perspective of the actual world *W*, we consider the worlds in the nearest sphere

centered on *W* in which the antecedent of our counterfactual is true. If in *all* the worlds in which

the antecedent is true, the consequent is also true, then a "would" counterfactual is true. If in

some of the worlds in which the antecedent is true, the consequent is also true, then a "might"

counterfactual $P \mathbin{\Diamond\!\!\rightarrow} Q$ (read: "If *P* were the case, *Q* might be the case") is true.[19]

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[17] J. P. Moreland and William Lane Craig, *Philosophical Foundations for a Christian Worldview* (Downers Grove, IL: InterVarsity, 2003), 53.

[18] David Lewis, *Counterfactuals* (Cambridge, MA: Harvard University Press, 1973), 14. The "*W*" in the above quote is my symbolization (Lewis uses "*i*"). Here and throughout, unless otherwise noted, I use *W* to represent an arbitrary world.

[19] Moreland and Craig, *Philosophical Foundations*, 53.

Now, importantly, Craig seems to think that when the neo-Molinist uses the modal locution "might" (or "might not") in reference to future contingents, they are doing so in a way that is fundamentally at odds with the way those terms are understood in the counterfactual semantics mentioned above. "In counterfactual discourse," Craig avers,

> 'might' has a technical sense that is quite different from Boyd's usage. Boyd uses the word to affirm causal indeterminism. Counterfactual discourse pairs 'might' with 'would,' not 'will' as Boyd does.[20]

We've already seen that by "counterfactual discourse" Craig is referring to the Stalnaker-Lewis semantics. But if "might" is supposed to be some kind of *terminus technicus* within these counterfactual systems, then what does it mean? How does it function? According to Craig, "In counterfactual logic, $P \diamondsuit\!\!\rightarrow Q$ is simply defined as the contradictory of $P \square\!\!\rightarrow \neg Q$, that is to say, as $\neg(P \square\!\!\rightarrow \neg Q)$.[21] Interestingly, by conceiving of the $\diamondsuit\!\!\rightarrow$ connective in this way, Craig is endorsing Lewis's "interdefinable" account of the counterfactual operators.[22] Here's what the definitions for these operators, given Lewis's approach, look like.

Lewisian interdefinability:

$P \diamondsuit\!\!\rightarrow Q =_{\text{def.}} \neg(P \square\!\!\rightarrow \neg Q)$,

$P \square\!\!\rightarrow Q =_{\text{def.}} \neg(P \diamondsuit\!\!\rightarrow \neg Q)$.

Based on these definitions Moreland and Craig construct what they call a "square of opposition for counterfactual statements"[23] which is reproduced below.

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[20] Craig, "Response," 228, n94.

[21] Moreland and Craig, *Philosophical Foundations*, 53. See also Craig, *Divine Foreknowledge and Human Freedom: The Coherence of Theism: Omniscience* (Leiden, Netherlands: E. J. Brill, 1991), 252; 258.

[22] Lewis, *Counterfactuals*, 2.

[23] See figure 2.3 in Moreland and Craig, *Philosophical Foundations*, 53.

$P \mathbin{\Box}\!\!\to Q$ ←— contraries —→ $P \mathbin{\Box}\!\!\to \neg Q$

implies

contradictories

contradictories

implies

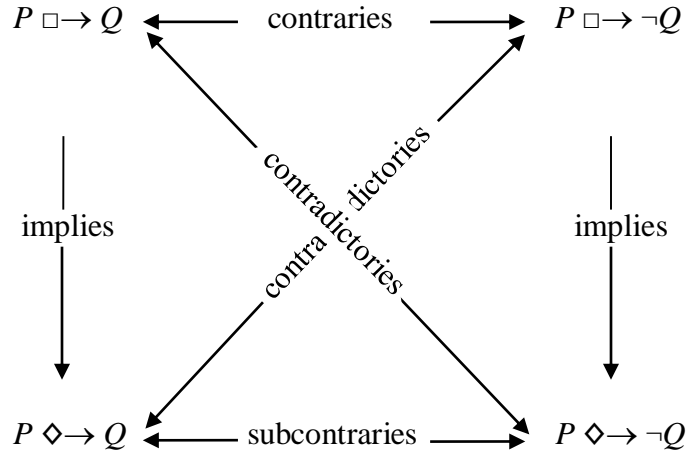$P \mathbin{\Diamond}\!\!\to Q$ ←— subcontraries —→ $P \mathbin{\Diamond}\!\!\to \neg Q$

Figure 3

Notice, however, that this diagram—and the interdefinability of the counterfactual connectives on which it's based—is *precisely* the sort of square of opposition that the neo-Molinist endorses for counterfactual conditionals. After all, it is exactly because of the logical relations shown here that the neo-Molinist concludes that God's middle knowledge must contain a threefold division between what "would," "would not," and what "might and might not" occur. Since the latter (conjunctive) type of proposition can stand in distinction from both "would" and "would not" counterfactuals, the neo-Molinist contends that, from a strictly logical point of view, God's middle knowledge cannot be restricted in the way advocates of CEM suggest.[24] Indeed, in support of the logical relations outlined on figure 3, Lewis tells us that

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[24] For the majority of Molinists, the idea that CEM holds for CCFs is upheld because such an idea is thought to be required for God's providential control; hence, in the present context, it is primarily a *theologically* driven postulate. But Molinists also attempt to defend the claim on philosophical grounds. Craig, for example, says the idea is plausible since "we are talking in this case about a very special set of counterfactuals involving the choices of some agent in fully specified circumstances. Such restrictive parameters remove the sort of ambiguities that serve to support mere might-counterfactuals" (Craig, "Ducking Friendly Fire: Davison on the Grounding Objection," *Philosophia Christi* 8 (2006): 163, n4; Cf. idem, *Divine Foreknowledge and Human Freedom*, 258; and Jonathan Kvanvig, *The Possibility of an All-Knowing God* (New York: St. Martin's Press, 1986), 146-8). But Craig's claim that CCFs can plausibly be thought to be true so long as the circumstances described in the antecedent are, in terms of accounting for all the relevant factors, "fully specified" is far from obvious. On the contrary, given that these conditionals are supposed to be about the *indeterministic* actions of agents, sober philosophical reflection would seem to suggest that no amount of (additional) information would be of any help in determining what are, through and through, causally indeterministic events. Dean Zimmerman makes the point well: "Many (I would guess most) philosophers simply do not have [Craig's] reaction: when carefully attending to the causal [indeterminism] of a

If the 'would' counterfactual $P \;\square\!\!\rightarrow Q$ is non-vacuously true, then the 'might' counterfactual $P \;\Diamond\!\!\rightarrow Q$ also is true. If $P \;\square\!\!\rightarrow Q$ and its opposite $P \;\square\!\!\rightarrow \neg Q$ are both false, then $P \;\Diamond\!\!\rightarrow Q$ and its opposite $P \;\Diamond\!\!\rightarrow \neg Q$ are both true; for this is the case in which Q is true at some of the closest P-worlds and $\neg Q$ is true at others of them. But when $P \;\square\!\!\rightarrow Q$ is false and its opposite $P \;\square\!\!\rightarrow \neg Q$ is true, Q holds at none of the closest P-worlds and $P \;\Diamond\!\!\rightarrow Q$ is therefore false.[25]

Thus, while it's true that would-counterfactuals logically imply might-counterfactuals, as figure 3 illustrates, the relation is *asymmetric*. A true might-conditional, then, *could* mean that its corresponding would-conditional is true, but we could not infer that it is on this basis alone. So long as we're adopting Lewis's standard semantics, CEM as construed above is in trouble. The reason is simple: Lewis's definition of "might" places "would" and "would not" in a *contrary* rather than contradictory relation.

The preceding insights concerning the relationship between future-tense indicatives and counterfactuals finally allow the neo-Molinist to arrive at the opposition between "will" and "might not" as depicted on figure 1 by way of the following syllogism:

    (1) X will occur $\supset$ X would occur   [from figure 2]

    (2) X would occur $\supset$ not [X might not occur]   [from figure 3]

    (3) X will occur $\supset$ not [X might not occur]   [from 1 & 2 by transitivity]

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certain outcome in certain possible circumstances that may never obtain, most of us do not find much plausibility in the idea that there is a definite fact about what would happen in those circumstances—at least, not a fact that could be known infallibly ahead of time…Throwing in more and more details about the situation would strike most of us, I believe, as irrelevant if the details leave the situation precisely as indeterministic as ever" (Zimmerman, "An Anti-Molinist Replies," in *Molinism: The Contemporary Debate*, ed. Ken Perszyk [Oxford: Oxford University Press, 2011], 182). Though not an open theist herself, Linda Zagzebski expresses a similar sentiment regarding the relation between CEM and indeterminism. See Zagzebski, *The Dilemma of Freedom and Foreknowledge* (Oxford: Oxford University Press, 1991), 139-40.

[25] Lewis, *Counterfactuals*, 21. For sake of uniformity, I've here replaced Lewis's antecedent and consequent symbolization (Φ and Ψ) for P and Q respectively.

Therefore it looks as if, from premises put forward by Craig himself, we can arrive at a conclusion, (3), which is just an affirmation of the open theist's view of the future (the same argument can be run, *mutatis mutandis*, for "will not" and "might").

3.1 Craig's Counterfactual Conflation

What all this points up is an important fact—CEM, on the one hand, and Lewis's understanding of the counterfactual operators, on the other, are formally incompatible. CEM, while valid on *Stalnaker's* semantics, is invalidated on Lewis's definition of $\diamond\!\!\rightarrow$. The reason is because Stalnaker assumes an anti-symmetry constraint for the similarity relation between possible worlds. As Theodore Sider explains, "Anti-symmetry prohibits 'ties'—it says that two distinct worlds cannot be at least as close to a given world *W* as the other."[26]

In contrast to Stalnaker, Lewis allows for ties in similarity to obtain between worlds (and between world segments). Hence a counterfactual describing an indeterministic event such as "If I had tossed the coin, it might have landed heads" is, as Jonathan Bennett points out, "true [on Lewis's interpretation] because it means that it is not the case that if I had tossed the coin it *would* have come down tails; or, in the 'worlds' dialect, Toss-worlds at which the coin comes down heads are as close to *W* as any at which it comes down tails."[27] As such, Lewis's semantics seem much better suited to model the metaphysical situation envisioned by libertarians, i.e., that there are, for any circumstances *C* in which I freely choose X, other worlds in which, in the same *C*, I choose not-X instead.[28]

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[26] Theodore Sider, *Logic for Philosophy* (Oxford: Oxford University Press, 2010), 206.

[27] Jonathan Bennett, *A Philosophical Guide to Conditionals* (Oxford: Oxford University Press, 2003), 191.

[28] By saying that the Lewisian semantics better "model" the metaphysical situation envisioned by libertarians, I am *not* saying that Lewis's semantics explain what *makes* counterfactuals like "If I had tossed the coin, it might have landed heads" true. Rather, I am simply saying—along with Zimmerman—that the acceptance and use of these semantics has definite *implications* for what makes such propositions true. "The standard way to assign a meaning

We can notice, further, how the following argument (borrowed from Bennett) demonstrates that, by accepting CEM *and* Lewisian interdefinability, as Craig appears to, one actually *collapses* the distinction between "would" and "might."

(4) $(P \,\square\!\!\rightarrow \neg Q) \vee (P \,\square\!\!\rightarrow Q)$ [CEM]

(5) $\neg(P \,\square\!\!\rightarrow \neg Q) \supset (P \,\square\!\!\rightarrow Q)$ [from 4 by def. of "⊃"]

(6) $(P \,\diamond\!\!\rightarrow Q) \supset (P \,\square\!\!\rightarrow Q)$ [from 5 by Lewis's def. of "◊→"]

(7) $(P \,\square\!\!\rightarrow Q) \supset (P \,\diamond\!\!\rightarrow Q)$ [obvious; entailed by Lewis's def.]

(8) $(P \,\square\!\!\rightarrow Q) \equiv (P \,\diamond\!\!\rightarrow Q)$ [from 6 & 7 by trivial logic]

As Bennett notes, "This conclusion is patently unacceptable, so something must yield: either CEM or Lewis's account of 'might.'"[29]

Since the Lewisian definition of ◊→ is, as we've discovered, incompatible with CEM, it should come as no surprise that the Molinist opts to challenge it. In order to block the neo-Molinist's move from (1) and (2) to (3) in the previous argument, therefore, (2) is where the real action is. I now turn to consider three objections to this premise and the counterfactual square of opposition it's predicated on.

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to the 'nearness' relation among worlds," Zimmerman rightly observes, "takes a stand on what sorts of similarities among worlds are relevant to these truth conditions—it is not a mere blank, that yields equally adequate theories of the meanings of conditionals no matter how it is filled in. The standard interpretation provides a candidate relation. In the case of an actually existing coin-flipping machine, the truth or falsehood of the conditional: 'If it were triggered at such-and-such time, it would yield 'heads,''" must (given this choice of the 'nearness' relation) supervene upon the actual laws and the actual categorical history leading up to the time of potential triggering. If the machine is in a state that would, as a matter of actual lawful behavior, yield heads, the conditional is true. If it is in a state that, due to indeterministic actual laws, might yield heads or tails, standard application of the Stalnaker-Lewis truth conditions requires that the conditional be false. Similarly, in the case of actual indeterministic processes of choice, the Stalnaker-Lewis semantics, with 'nearness' interpreted in the standard way, says that the actual world does not include enough facts to make the Molinist's [CCFs] true" (Zimmerman, "An Anti-Molinist Replies," 166).

[29] Ibid., 189.

4. Molinist Objections (and Neo-Molinist Replies)

Objection #1

The first objection that Craig and other Molinists are likely to raise against (2)—and the counterfactual square on which it's based—is that the "might" in the requirement for freedom is *not* the same as the $\diamond\rightarrow$ counterfactual connective. While the "might" counterfactual is technically defined as the negation of $P \square\rightarrow \neg Q$ so that $P \square\rightarrow \neg Q$ and $P \diamond\rightarrow Q$ are logically incompatible, still, the Molinist will insist, it remains true that if P were the case it could be the case that $\neg Q$. In other words, I *could* do otherwise, even if it is not the case that I *might* do otherwise. Craig, for instance, has pointed out that if one imagines "would" counterfactuals as being incompatible with creaturely freedom, then that person

> has forgotten the difference between what one *could* do and what one *might* do in any set of circumstances. *Freedom requires only that in a given set of circumstances one be in some sense capable of refraining from doing what one would do; it is not required that one might not do what one would do*.[30]

Reply

As Craig's comment makes clear, the above objection is based on the idea that "could" and "might" ought to be construed as distinct notions of possibility. When properly parsed, one will see that the libertarian needn't require Lewis's standard account of might-counterfactuals in order to express and affirm a robust sense of free will. Or, so the thought goes.

This objection is unpersuasive—or at least it should be if one wants to uphold common libertarian assumptions. For once we uncover what the difference between these two modal terms is supposed to be, we'll discover that the Molinist is operating with a far more attenuated account of freedom than many have realized. To see this we simply need to look again to Craig.

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[30] Craig, "God Directs All Things," 89 (original emphasis).

In the very same paragraph in which he approvingly gives Lewis's definition for ◇→, Craig

explains the relevant difference between the notion of "could" on the one hand, and the "might"

of counterfactual logic on the other.

> 'Might' counterfactuals should not be confused with subjunctive conditionals involving the word 'could.' 'Could' is taken to express mere possibility and so is a constituent of a modal statement expressing a possible truth. The distinction is important because the fact that something could happen under certain circumstances does not imply that it might happen under those circumstances. 'Might' is more restrictive than 'could' and indicates *a genuine, live option under the circumstances*, not a bare logical possibility.[31]

This account of the "might" counterfactual operator, of course, follows Lewis's usual

usage. And it is more than a bit baffling why Craig would suppose that the open theist

description of causally indeterministic events in terms of what "might and might not" occur is at

odds with it. Far from eschewing their differences, when the neo-Molinist affirms that an agent

S might have done other than X—that is, *might not* have done X—she is expressing an idea that

Lewis's semantics are perfectly well-equipped to handle. She is saying that there are, for any

circumstances *C* in which *S* freely chooses X, other worlds in which, in the same *C*, *S* chooses

not-X instead. Such an account of freedom is what Alfred Mele has appropriately dubbed *deep*

openness. As Mele puts it,

> Sometimes you and I would have made an alternative decision if things had been a bit different. For example, if you had been in a slightly better mood, you might have decided to donate twenty dollars to a worthy cause instead of just ten. But this isn't enough for the kind of openness at issue…What's needed is that more than one option was open to you, given everything as it actually was at the time—your mood, all your thoughts and feelings, your brain, your environment, and indeed the entire universe and its entire history. Having been able to have made a different decision if things had been a bit different is one thing; having been able to have made a different decision in the absence of any prior difference is another.[32]

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[31] Moreland and Craig, *Philosophical Foundations*, 53 (my emphasis).

[32] Alfred R. Mele, *Free: Why Science Hasn't Disproved Free Will* (Oxford: Oxford University Press, 2014), 2.

Counter-Objection

It has occasionally been pointed out in the literature, however, that besides his usual "not-would-not" reading of "might," Lewis also admitted a "would-be-possible" reading of the $\lozenge\rightarrow$ operator where "possible" means "some minute (though non-zero) chance."[33] The idea is supposed to be that a counterfactual such as

(9) If it were that *P*, then it would not be that *Q*

can be true and is compatible with

(10) If it were that *P*, then there would be some chance that *Q*.

But since (10) implies

(11) If it were that *P*, then it might be that *Q*

it would follow that (9) and (11) are compatible rather than contradictory. In other words, (9) is only incompatible with (11) when the "might" in (11) is taken as "not-would-not." The upshot is that on the alternative "would-be-possible" reading of (11), both (9) and (11) can be true together (similarly for "would" and "might not")—thus, figure 3 would be rendered invalid.

The question, then, is whether the traditional Molinist could adopt this "would-be-possible" sense of "might" as an adequate reading of our libertarian intuitions and in so doing deny (2) in the neo-Molinist's argument, (1)-(3), above. Against those who have put forward similar arguments,[34] this seems to be exactly what Craig's objection is getting at. And there have

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[33] This has been recognized, for instance, by Keith DeRose, "Can It Be That It Would Have Been Even Though It Might Not Have Been?" *Philosophical Perspectives* 13 (1999): 396-7, as well as Edwin Mares and Ken Perszyk, "Molinist Conditionals," in *Molinism*, 104 n12. For Lewis's discussion of this alternate interpretation of "might" see his "Postscripts to 'Counterfactual Dependence and Time's Arrow,'" in Lewis, *Philosophical Papers*, Vol. II (Oxford: Oxford University Press, 1986), 63-5; and the "Appendix" in *Counterfactuals*, 146.

[34] For arguments that have attempted to show—given Lewis's standard account of the might-counterfactual—that there are no true "would" CCFs, see Robert Merrihew Adams, "Middle Knowledge and the Problem of Evil," *American Philosophical Quarterly* 14 (1977): 109-17; William Hasker, "A Philosophical Perspective," in *The Openness of God: A Biblical Challenge to the Traditional Understanding of God* (Downers Grove, IL: InterVarsity, 1994), 145; and Peter Van Inwagen, "Against Middle Knowledge," in *Midwest Studies in Philosophy*, eds. Peter A.

been other Molinists who have objected to this line of reasoning in a similar fashion. For

example, Edward Wierenga and Thomas Flint have claimed that the Molinist should not agree

that a situation in which an agent makes a libertarian free choice with respect to doing or not

doing X is a situation in which the agent *might* do X but also *might not* do it. "Rather,"

Wierenga urges, "if an agent would do X if the agent were in *C*, then it is *possible that* the agent

be in *C* and not do X, and there are other worlds with the same initial segment in which the agent

is in *C* and does not do X."[35] Flint, too, is satisfied with this response and has even gone so far

as to say that Wierenga has said "all that needs to be said" to defuse arguments like (1)-(3) which

rely on Lewis's standard semantics.[36]

Counter-Reply

Contrary to what Craig, Wierenga, and Flint might wish however, the sort of possibility

at issue in Lewis's alternative reading of $\Diamond \rightarrow$ is much too thin to capture common libertarian

intuitions. Whereas, on Lewis's usual "not-would-not" reading of the "might" counterfactual,

(11) means that *some* of the most similar worlds where *P* is the case are also worlds where *Q* is

the case, the "would-be-possible" reading simply means that all of them are worlds where it is

possible for *Q* to happen. In fact, as Lewis points out, it's only when all of them are worlds

where *Q* is an *unfulfilled* possibility that makes the "would-be-possible" interpretation of (11)

true rather than the "not-would-not" interpretation.[37] Accordingly, the "would-be-possible"

French, Theodore E. Uehling, and Howard K. Wettstein (Notre Dame, IN: University of Notre Dame Press, 1997), 21:232.

[35] Edward Wierenga, "Tilting at Molinism," in *Molinism*, 136. Cf. idem, *The Nature of God: An Inquiry into Divine Attributes* (Ithaca, NY: Cornell University Press, 1989), 140-3. Again, in order to maintain uniformity with the symbols used throughout this paper, I've substituted "X" for Wierenga's "*A*" to represent the action of an agent.

[36] Thomas Flint, "Whence and Whither the Molinist Debate," in *Molinism*, 38.

[37] Lewis, "Postscripts to 'Counterfactual Dependence and Time's Arrow,'" 64.

reading is an unattractive account of "might" for libertarians. As the quote from Wierenga above makes clear, the libertarian doesn't just want to affirm that there's "some minute chance that Q" when that possibility is understood to be so thin as to never actually obtain in *any* of the nearest worlds. Thus for Molinists like Craig, Wierenga, and Flint, the alternative "would-be-possible" interpretation of the might-counterfactual is unavailable if they want to maintain that it is *both* (i) possible that a free agent be in *C* and not do X, and that (ii) there are other worlds with the same initial segment in which the agent *is* in *C* and does not do X.

I therefore conclude that, contra Craig, the neo-Molinist has not "forgotten the difference between what one *could* do and what one *might* do in any set of circumstances." In contrast to the traditional Molinist who rejects the standard account of $\Diamond\rightarrow$ in favor of a "bare possibility" interpretation, the neo-Molinist is upholding the mainstream libertarian intuition that, under any circumstances in which we freely act, choosing otherwise was indeed always a "genuine, live option."

Objection #2

Another way Molinists might object to the neo-Molinist's use of the counterfactual square of opposition is by pointing out that the neo-Molinist's assumption that would-counterfactuals negate opposing might-counterfactuals requires the neo-Molinist metaphysic to be unduly fatalistic. For example, if the truth of "I would order a pizza" means that the subjunctive "I might not order a pizza" is false, this would seem to suggest that it's not possible for me to refrain from ordering a pizza. So, I *must* order a pizza. But that's absurd, the Molinist will claim, for we are supposed to be talking about conditionals of *freedom*. Recall that Craig made a similar complaint above concerning the logical relations on the open future square of opposition. "In normal English," he wrote,

the statement that something will occur, but might not occur, is perfectly coherent. That is just to affirm that it will occur contingently. Boyd must be assuming that 'will' statements are disguised modal statements to the effect that something 'must' occur and so can be set in opposition to 'might' statements.

The idea, then, is that in order for the contradictory relations on the above squares of opposition to have any metaphysical import, open theists have to assume two things: future-tense indicatives are actually modal, and the relevant modality in question is that of necessity.

Reply

As we've already seen, like the traditional Molinist, the neo-Molinist does indeed want to suggest that future-tense indicatives are related to modal statements. Specifically, they want to maintain that the "will" statements that make up God's free knowledge are preceded by and were once apprehended as "would" statements in God's middle knowledge. So, the statement "Johnny will order a pizza" was preceded by "Johnny would order a pizza" which, on the Lewisian semantics, means that "Johnny might not order a pizza" is false. Does this mean that it's *impossible* for Johnny to refrain from ordering a pizza? No. The Molinist complaint here fails to take into consideration a point they were so eager to bring forward in the previous objection—that is, that modality comes in varying degrees and strengths. The neo-Molinist will insist that even though it's not the case that Johnny might not order a pizza, still, he *could* refrain from ordering a pizza. Such a thing after all is logically possible. Johnny could have done other than order out, but the worlds in which he refrains from dialing for delivery are less similar to and, hence, more distant from the actual world than those worlds in which Johnny orders his pie. Therefore, the neo-Molinist needn't assume that either "necessarily, Johnny will order a pizza" or "necessarily, Johnny would order a pizza" are true since they can happily acknowledge that he doesn't order a pizza in *every* possible world he happens to inhabit.

However, the neo-Molinist will be quick to point out that, while Johnny does not do what

he does of *necessity*, this fact is not, in and of itself, enough to secure the sorts of goods theistic

libertarians typically think genuine free will affords. For instance, in order to be genuinely free

and thus ultimately responsible for an action in a way that is God exonerating, the neo-Molinist

will argue that we need a kind of freedom that will rule out the possibility of manipulation.

Manipulation scenarios, as Robert Kane has suggested, can be cases of "nonconstraining

control," whereby

> the controllers do not get their way by constraining or coercing others against their wills,
> but rather by manipulating the wills of others so that the others (willingly) do what the
> controllers desire. The controlled agents consequently do not feel frustrated or thwarted.
> They act in accordance with their own wants, desires or intentions. Yet they are
> controlled nevertheless by others who have manipulated their circumstances so that they
> want, desire, or intend only what the controllers have planned.[38]

Recently, Dean Zimmerman has argued that exactly this sort of control is possible for the

God of traditional Molinism.[39] And, in his response to Zimmerman, Craig has revealed that the

traditional Molinist should have no problem with such cases of control. Here's how Craig

summarizes the objection:

> [The worry is that]…given that the circumstances *C* are non-determining, it must be a
> brute, contingent fact how [some agent] *S* would choose in *C*. But then it is plausible that
> there are an indefinite number of circumstances *C** that differ from *C* in imperceptible or
> causally irrelevant ways (for example, a different stellar event in Alpha Centauri at the
> same time of *S*'s decision), in which *S* would choose differently than in *C*. So God by
> placing *S* in one of these circumstances *C** could bring it about that *S* choose freely
> whatever God wishes without any deleterious impact upon God's providential plan.[40]

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[38] Robert Kane, *The Significance of Free Will* (Oxford: Oxford University Press, 1996), 65.

[39] Zimmerman, "Yet Another Anti-Molinist Argument," in *Metaphysics and the Good: Themes from the Philosophy of Robert Merrihew Adams*, eds. Samuel Newlands and Larry M. Jorgensen (Oxford: Oxford University Press, 2009), 33-94.

[40] Craig, "Yet Another Failed Anti-Molinist Argument," in *Molinism*, 145.

To be sure, Craig objects to this argument in numerous places, but what's important to note is this: he contends that even if such control were possible and utilized by God, we would *still* be free in the relevant sense. As he puts it,

> What is the import of such an objection? It does nothing, I think, to undermine the Molinist account of providence as such. In particular, it does not in any way undermine the freedom of the creatures in whatever circumstances they find themselves, for their choices are in every case causally undetermined. If a choice is freely made in *C*, then it would be freely made in *C** which includes some causally irrelevant event not included in *C*. If God places *S* in *C*, then *S*'s freedom is not compromised by the mere fact that had God placed *S* in *C** instead, *S* would have chosen differently.[41]

Craig, however, seems here to have overlooked a subtly important implication of this objection: even if it could be argued that *S*'s freedom is in no way compromised in the above scenario, God's *character* potentially would be. For suppose that, unlike *S*'s choice in *C**, *S*'s choice in *C* is one for which *S* will be held morally blameworthy. By purposely placing *S* in *C* rather than *C**, God would be deliberately bypassing an avenue—an avenue readily open to *both* him and *S*—in which *S* freely chose the good, and then punishing *S* for it. Hardly the behavior of a just and benevolent being! But, of course, it is exactly situations like this that occur on compatibilist conceptions of freedom and are why libertarians find such conceptions of freedom so objectionable. For given compatibilism, it is the case that for every *C* in which *S* sins, God could have determined instead that *S* freely *not* sin. This is possible after all since, on this account of freedom, freedom and determinism are understood to be *compatible*. Hence libertarian theists reject such accounts of freedom, not because compatibilist accounts of freedom can't be given, but because such accounts allow for morally problematic views *of God*.[42]

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[41] Ibid.

[42] For a trenchant analysis of the problematic nature compatibilist conceptions of freedom pose for God's character, see Jerry L. Walls's excellent article, "Why No Classical Theist, Let Alone Orthodox Christian, Should *Ever* Be a Compatibilist," *Philosophia Christi* 13 (2011): 75-104.

Compatibilists offer an account of freedom in which the agent, from the libertarian's perspective anyway, is not acting in a way that gets God sufficiently "off the hook." So, the agent is not ultimately responsible in the sense relevant to theistic libertarians outlined above.

Thus while Craig and other Molinists *formally* deny compatibilism, given the relatively broad reading of possibility they endorse, their understanding of what counts as a free choice nevertheless leaves room, in principle, for God to act in similarly objectionable ways. And to that degree at least, such a conception of freedom is one that many libertarians, including the neo-Molinist, will find troubling.[43] It is for this reason, then, that the neo-Molinist adopts the more restricted notion of possibility available on Lewis's standard account of "might" when thinking about libertarian free action. For it is the ability to do other than what we actually do, not just in some possible world or other, but *in the exact same circumstances that we are in* that allows us the kind of God exonerating freedom that so many theistic libertarians are intuitively after.

Objection #3

After having finally been confronted with the aforementioned incompatibility between the Stalnaker-Lewis semantics (and the trouble it can pose for their conception of middle knowledge), traditional Molinists often simply reject the standard counterfactual semantics as being "inadequate" to the task of analyzing CCFs.[44] Once again, Craig's response is representative:

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[43] Interestingly, the Reformed theologian Dennis Jowers has also recognized this very point. "William Lane Craig," Jowers observes, "sets forth a conception of freedom that sharply diverges from Boyd and resembles in important respects the conception ordinarily advocated by Calvinists." See Jowers, "Conclusion," in *Four Views*, 247.

[44] This, for instance, is Kowalski's recommendation. See his "On Behalf of a Suarezian Middle Knowledge," 225. See also Kirk MacGregor's attempt to offer Molinists an alternative semantics for CCFs in his "The Neo-Molinist Square Collapses: A Molinist Response to Elijah Hess," *Philosophia Christi* 18 (2016): 195-206. For a critique of

[O]bjections to middle knowledge based on its alleged incompatibility with the possible worlds account of…counterfactuals strike me as very unimpressive. That account was drafted without any consideration of the peculiar situations engendered by theism…or middle knowledge. The account may simply be inadequate for the concerns of the philosopher of religion. In fact, I think it is evident that the possible worlds semantics for counterfactual conditionals *is* defective, for that account cannot adequately handle counterfactuals with impossible antecedents.[45]

Reply

Such a retort is unsatisfactory for at least two reasons. In the first place, the supposed difficulty for standard possible world semantics posed by counterfactuals with "impossible antecedents" (i.e., counterpossibles) that Craig cites is, as Wierenga has demonstrated, easily resolved. Specifically, one can avoid such difficulties *and* continue to accept Lewis's interdefinable account of the counterfactual operators by adopting the following modification of Lewis's definition: $(P \Diamond\!\!\rightarrow Q) \equiv \neg(P \mathbin{\square\!\!\rightarrow} \neg Q) \vee (P \mathbin{\square\!\!\rightarrow} Q)$.[46]

Second, and more importantly, in light of his above complaint concerning Boyd's understanding of might-conditionals, Craig's response here regarding the use of possible worlds semantics is rather strange. For if the customary semantics for counterfactual conditionals are, as Craig states, ultimately inadequate, one wonders why he would attempt to object to the neo-Molinist's understanding of might CCFs based on an alleged *misunderstanding* of these semantics. Such an objection seems to imply that a correct understanding would serve to support Craig's position (or at least fail to support the neo-Molinist position). But it does nothing of the

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MacGregor's attempt, see my essay in the following chapter ("The Neo-Molinist Square Stands Firm: A Rejoinder to Kirk MacGregor").

[45] Craig, "Hasker on Divine Knowledge," *Philosophical Studies* 67 (1992): 103.

[46] Wierenga, "Theism and Counterpossibles," *Philosophical Studies* 89 (1998): 94.

sort.[47] As I've tried to show in this essay, in arriving at her view the neo-Molinist *is* observing

and maintaining the standard distinctions between Stalnaker and Lewis's actual formal semantics

for counterfactuals. And it is because of these distinctions that, from the neo-Molinist's point of

view, the truth of some conjoined might-counterfactuals is, given libertarian freedom, much

more plausible than the validity of CEM or some version thereof. Since the neo-logical stages in

God's knowledge provide a coherent alternative to the traditional Molinist account, therefore, the

above argument not only shows how one *could* move from Molinism to neo-Molinism, it shows

why a libertarian might want to do so.

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[47] Despite what Mares and Perszyk argue ("Molinist Conditionals," 104-5), Lewis's standard account of "might"
does *not* allow the Molinist to say there are worlds that are feasible for creatures to get to but unavailable to God.
For while it is true that, given traditional Molinist assumptions, Adam has counterfactual power over the true CCFs
about him, this does not mean that it was open to Adam to get to a world, say, in which he refrained from eating the
forbidden fruit. In order for Adam to have actually refrained from doing what he in fact did, God would have had to
been presented with a different CCF—something God has no control over. But this alone doesn't get Adam to a
world in which he passes on his wife's offer. In order to get to *that* world, God has to place (i.e., instantiate) Adam
in the relevant circumstances. And whether God decides to do this is not up to Adam at all. Indeed, the transition of
any true "would" CCF into a true future-tense indicative proposition is achieved solely by God's creative decree.
On the traditional Molinist scheme, therefore, it is ultimately *God* who decides what we will do, not us.

Neo-Logical Stages in God's Knowledge

Stage	Truths Known	Modal Status	Relation to God's Activity
Natural knowledge	What "must" ("must not"), "could" ("could not") be…	Necessary	Independent, pre-volitional
Middle knowledge	What "would," "would not," and "might and might not" be… Counterfactual Square of Opposition: (Fig. 3)	Contingent	Dependent, pre-creational God decides to bring creaturely essences into being by willing their existence and gifting the power of contrary choice to such essences.
God's creative act of will	What parameters and contingency plans are in place…	Contingent	Dependent God *instantiates* creaturely essences endowed with free will.
Free knowledge	What "will," "will not," and "might and might not" be… Open Future Square of Opposition: (Fig. 1)	Contingent	Dependent, post-creational God works toward his creational goals within the context of the parameters and contingency plans he's put in place for each individual creature.

Figure 4

<div style="text-align: center;">*References*</div>

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CHAPTER 2

THE NEO-MOLINIST SQUARE STANDS FIRM: A REJOINDER TO KIRK MACGREGOR

Elijah Hess

Abstract: In a previous issue of *Philosophia Christi*, Kirk MacGregor responded to an essay of mine in which I argued for a neo-Molinist account of open theism. The argument demonstrated how, given standard counterfactual semantics, one could derive an "open future square of opposition," that is, a depiction of the logical relations that hold between future-tense statements from an open theistic standpoint. Conceding the validity of the argument, MacGregor nevertheless sought to deny its soundness by criticizing both its conclusion and the Stalnaker-Lewis semantics on which the argument was based. In this paper, I argue that MacGregor's reasons for rejecting the open future square, as well as his Molinist alternative to the Stalnaker-Lewis semantics, are uncompelling.

1. Introduction

In a 2016 issue of *Philosophia Christi*, Kirk MacGregor responded to a previous article of mine in which I argued that certain Molinists, in their attempt to criticize open theistic views of the future, had inadvertently endorsed premises that could be used to construct an argument *for* the openness position.[1] In particular, I sought to show how a common definition of the logical operators for counterfactual conditionals could be used to derive an "open future square of opposition," that is, a depiction of the logical relations that hold between "will" ("will not")

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[1] My original article, "Arguing from Molinism to Neo-Molinism," appeared in *Philosophia Christi* 17 (2015): 331-51. For MacGregor's response, see "The Neo-Molinist Square Collapses: A Molinist Response to Elijah Hess," *Philosophia Christi* 18 (2016): 195-206.

and "might" ("might not") statements from an open theistic perspective. This square, which

MacGregor refers to as the "neo-Molinist square," is illustrated below.[2]
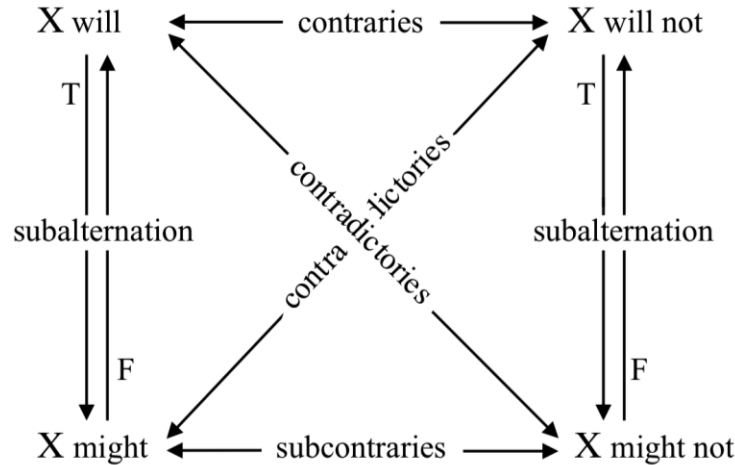
Figure 1

The syllogism I gave to arrive at the contradictory relations depicted on this square went

like this:

(1) If X will occur, then X would occur.

(2) If X would occur, then not [X might not occur].

Therefore,

(3) If X will occur, then not [X might not occur].

The argument is deductively valid and can be run, *mutatis mutandis*, for the contradictory

relationship between "will not" and "might." Premise (1) follows from the Molinist's conviction

[2] Referring to this square as the "neo-Molinist square," however, is misleading. For any proponent of open futurism (roughly, the thesis that future contingent statements are not true) could potentially endorse it. Neo-Molinism is a theistic *version* of open futurism and, as such, is a version of open theism. Hence not all open futurists are neo-Molinists. Nor, for that matter, are all open theists neo-Molinists (unlike other open theists, the neo-Molinist affirms a *type* of divine middle knowledge distinct from traditional Molinist accounts of that same doctrine; see Hess, "Arguing from Molinism to Neo-Molinism," 334-37, 351). It is for this reason, then, that I prefer the designation "open future square of opposition" when referencing the adjacent diagram (figure 1). Indeed, as will be shown below, when its full range of logical relations are made explicit, the open future square expands into a *hexagon* of opposition (figure 4).
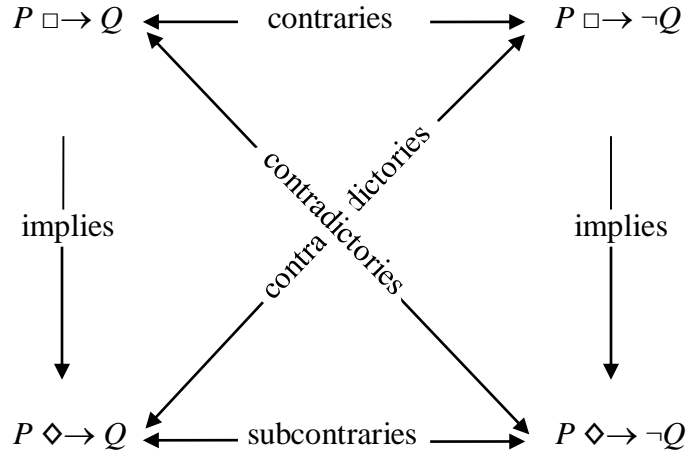
that, for any state of affairs X that obtains (or is going to obtain) in the actual world, God knew logically prior to his creative decree that, were he to actualize the circumstances in which X takes place, X *would* obtain. In other words, this first premise is simply predicated on the Molinist conception of God's so-called middle knowledge.

Premise (2) is based on Robert Stalnaker and David Lewis's standard semantics for counterfactuals. In particular, it derives from Lewis's definition of the counterfactual operators $\Box\to$ and $\Diamond\to$. The counterfactual conditional $P \Box\to Q$ ("If P were the case, Q would be the case") is, according to Lewis, simply defined as the contradictory of $P \Diamond\to \neg Q$ ("If P were the case, Q might not be the case"), that is to say, as $\neg(P \Diamond\to \neg Q)$. Similarly, the counterfactual conditional $P \Diamond\to Q$ ("If P were the case, Q might be the case") is defined as the contradictory of $P \Box\to \neg Q$ ("If P were the case, Q would not be the case"), that is, as $\neg(P \Box\to \neg Q)$.[3] Molinist defender par excellence, William Lane Craig, has also given these same definitions for the counterfactual operators and shown how one can derive the following counterfactual square of opposition from them.[4]

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[3] David Lewis, *Counterfactuals* (Cambridge, MA: Harvard University Press, 1973), 2.

[4] J. P. Moreland and William Lane Craig, *Philosophical Foundations for a Christian Worldview* (Downers Grove, IL: InterVarsity, 2003), 53. Cf. Craig, *Divine Foreknowledge and Human Freedom: The Coherence of Theism: Omniscience* (Leiden, Netherlands: E. J. Brill, 1991), 252; 258.

$$P \;\square\!\!\rightarrow Q \quad \xleftarrow{\quad} \text{contraries} \xrightarrow{\quad} \quad P \;\square\!\!\rightarrow \neg Q$$

implies   *contradictories* / *contradictories*   implies

$$P \;\Diamond\!\!\rightarrow Q \quad \xleftarrow{\quad} \text{subcontraries} \xrightarrow{\quad} \quad P \;\Diamond\!\!\rightarrow \neg Q$$

Figure 2

As I pointed out in my original article, premise (2) is where the Molinist is going to attack in order to block the neo-Molinist's move from (1) and (2) to (3). This is precisely what MacGregor sets out to do. Unlike Craig and certain other detractors of open theism, however, MacGregor acknowledges that "if we grant the Stalnaker-Lewis semantics in general and Lewis's interpretation of $\Diamond\!\!\rightarrow$ in particular, then the plausibility of neo-Molinism is bolstered."[5] This is because, over against Craig, MacGregor concedes that "the neo-Molinist has not misunderstood the Stalnaker-Lewis semantics but perceives their implications correctly."[6] Instead of supposing that the neo-Molinist has somehow misapplied standard counterfactual semantics, therefore, MacGregor's strategy is to offer traditional Molinists an *alternative* semantics for counterfactual conditionals, one that he believes to have been endorsed by Luis de Molina himself. Indeed, MacGregor contends that, from Molina's perspective, the possible world semantics on which the above argument is based are multiply flawed.

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[5] MacGregor, "The Neo-Molinist Square Collapses," 195.

[6] Ibid.

In this essay, I argue that MacGregor's reasons for rejecting the open future square are not compelling. I begin by defending the logical relations exhibited on each square of opposition. Contrary to what MacGregor suggests, I demonstrate that neither square is illogical. Nor would they undermine a libertarian conception of human freedom as he seems to suppose. I then consider MacGregor's proposed Molinist semantics for counterfactuals and show that, unfortunately, they do not provide libertarians with a viable alternative to Lewis's approach.

2. The Logic of the Square(s) Vindicated

Before getting into what he takes to be Molina's own, superior, semantics for counterfactual conditionals, MacGregor begins his paper by casting aspersions on the idea of an open future. He suggests that "some aspects of the neo-Molinist picture of the world are so counterintuitive (if not inimical to libertarian freedom) that their *prima facie* falsity would seem to render Hess's argument a *reductio ad absurdum* of Stalnaker-Lewis semantics and the Lewisian $\diamond \rightarrow$."[7] Fixing his initial gaze upon the open future square, MacGregor cautions that the logical relations outlined on it are "highly suspect."[8] He offers three criticisms of the square, one directed at the contrary relation, another at the contradictory relation, and one at the subaltern relation. To MacGregor's mind, the problems he poses demonstrate the square's ostensible collapse. None of his critiques, however, hit their mark.

To start, MacGregor flags a worry he has with the open future square's contrary relation. According to it, the statements "X will" and "X will not" are contraries rather than contradictories. This means that, although both statements cannot be true, they can nevertheless

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[7] Ibid., 195-6.

[8] Ibid., 196

both be false. But MacGregor finds this troublesome. "Lest we are prepared to say that the future defies the laws of logic," he notes, "it is incoherent to assert that 'In February 2021, neither will Hillary Clinton be U.S. President nor will she not be U.S. President.' Since one of 'X will' and 'X will not' must be true and the other false, they are indeed contradictories."[9] In effect, MacGregor is saying that the Law of Excluded Middle holds for these statements.[10] Therefore, he must be assuming that the disjunction "X will or X will not" is an instance of the logical schema $\phi \lor \neg\phi$.

This is a common assumption. In terms of syntax, however, if ϕ represents the statement "X will," then the proper negation of ϕ is not "X will not" but rather "not [X will]" or, in English, "It is not the case that X will." Indeed, in the context of the present debate, the distinction between the statements "X will not" and "not [X will]" runs deeper than mere syntax. For as we shall see, failure to observe the proper placement of the negation can affect the *meaning* of these statements as well. Let's look at how this initial mistake ends up undermining MacGregor's criticisms of the contrary, contradictory, and subaltern relations on the above squares. I'll consider each in reverse order.

2.1 The Subaltern Relation Vindicated

The open future square of opposition presents the relationship between "X will" and "X might" and between "X will not" and "X might not" as subalternation. Similarly, on the counterfactual square of opposition, the relationship between $P \mathrel{\Box\!\!\rightarrow} Q$ and $P \mathrel{\Diamond\!\!\rightarrow} Q$, on the one hand, and between $P \mathrel{\Box\!\!\rightarrow} \neg Q$ and $P \mathrel{\Diamond\!\!\rightarrow} \neg Q$ on the other hand, is that of subalternation as well.

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[9] Ibid.

[10] According to this law, for any statement *s*, *s* is either true or, if *s* is false, then not-*s* is true.

Now, as MacGregor correctly points out, subalternation carries with it the joint claims that the former statement in the pair implies the latter and that the falsity of the latter statement in the pair implies the falsity of the former, that is, that the law of contraposition holds between the members of the pair. However, MacGregor thinks this fact presents a problem for the above squares of opposition. Speaking, first, of the problem this supposedly presents for the counterfactual square, he says, "Unlike in sentential logic, in counterfactual logic contraposition fails."[11] Indeed, in depicting "would" and "might" counterfactuals as standing in a subaltern relation, MacGregor asserts that, ironically, "Hess parts company with the Stalnaker-Lewis semantics, as both Stalnaker and Lewis recognize the fallacy of contraposition for counterfactual statements."[12]

I'm afraid MacGregor is significantly confused on this point. The fallacy of contraposition for counterfactual statements occurs when one tries to treat the counterfactual operators ($\Box\!\!\to$ and $\Diamond\!\!\to$) as if they were a material conditional operator ($\supset$). For example, in sentential logic, a conditional statement such as $P \supset Q$ ("If P, then Q") is equivalent to $\neg Q \supset \neg P$ ("If it is not the case that Q, then it is not the case that P"). That is to say, the equivalence rule known as transposition (or "the law of contraposition") holds for the material conditional. But when considering a counterfactual statement like $P \Box\!\!\to Q$ this rule fails, for $P \Box\!\!\to Q$ is *not* equivalent to $\neg Q \Box\!\!\to \neg P$.[13] Contrary to what MacGregor suggests, however, neither square of

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[11] Ibid., 197.

[12] Ibid., n6.

[13] E.g., we could not infer from the premise *If Boris had gone to the party, Olga would still have gone* that therefore *If Olga had not gone, Boris would still not have gone*. For as Lewis explains, "Suppose that Boris wanted to go, but stayed away solely in order to avoid Olga, so the conclusion is false; but Olga would have gone all the more willingly if Boris had been there, so the premise is true" (Lewis, *Counterfactuals*, 35). Cf. Moreland and Craig, *Philosophical Foundations for a Christian Worldview*, 54.

opposition commits this fallacy. For when the counterfactual square indicates that $P \mathbin{\square\!\rightarrow} Q$

implies $P \mathbin{\diamond\!\rightarrow} Q$, the implication is arguably *logical* implication and hence a strict conditional

rather than a counterfactual conditional is in view: $\text{Nec}[(P \mathbin{\square\!\rightarrow} Q) \supset (P \mathbin{\diamond\!\rightarrow} Q)]$. Call this

conditional statement C. Because the would-counterfactual and the might-counterfactual make

up the antecedent and consequent of C, the following is a valid equivalence of C: $\text{Nec}[\neg(P \mathbin{\diamond\!\rightarrow}$

$Q) \supset \neg(P \mathbin{\square\!\rightarrow} Q)]$. Similarly, on the open future square of opposition, the statements "X will"

and "X might" form the antecedent and consequent of a strict conditional ("Necessarily, if X will

occur, then X might occur")—*not* a counterfactual conditional. Thus, contraposition holds

between each pair of subaltern statements found there too.

MacGregor's confusion is further manifested when he attempts to demonstrate the failure

of this equivalence rule for each pair of subaltern statements. Concerning the open future square

he writes, "the truth of 'If X will, then X might' does not entail that 'If X might not, then X will

not'…Likewise, the truth of 'If X will not, then X might not' does not entail that 'If X might,

then X will.'"[14] This is correct, but irrelevant. For, *pace* MacGregor, the contraposition of "If X

will, then X might" is not "If X might not, then X will not" but rather "If *it is not the case that* X

might, then *it is not the case that* X will." Similarly, the contraposition of "If X will not, then X

might not" is not "If X might, then X will" but rather "If it is not the case that X might not, then

it is not the case that X will not." The latter are valid inferences and make perfect sense.[15]

MacGregor's mistake is that he has failed to observe the proper placement of the negation. But

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[14] Ibid., 197.

[15] To flesh the point out, take a true statement such as "If John will mow the lawn, then he might mow the lawn." It would indeed be fallacious to infer from this that "If John might not mow the lawn, then he will not mow the lawn." Strictly speaking, though, the contraposition of the first statement is "If it is not the case that John might mow the lawn, then it is not the case that he will mow the lawn." Unlike the second statement, this last statement is true and follows from the first.

once we're careful to note that the correct negation of a statement like "X will" is "not [X will]" rather than "X will not," it is evident that contraposition holds between the relevant statement pairs.

2.2 The Contradictory Relation Vindicated

In addition to his misreading of the subaltern relation, MacGregor's assumption that the negation of "X will" is "X will not" leads him to make a fallacious inference with respect to the contradictory relation on the open future square. Noting that this square depicts "X will" and "X might not" as contradictories, MacGregor protests that such a view is incredible. He says,

> The only case in which one of 'X will' and 'X might not' must be true and the other false is if X is a *necessary* state of affairs. Hence the price that would need to be paid for making 'X will' and 'X might not' contradictories is rendering all X necessary, which would ironically destroy libertarian freedom. If, for all X, 'X will' and 'X might not' are truly contradictories, then all things, including human decisions, are determined to occur.[16]

But this, too, can be shown to be mistaken. Despite MacGregor's contention, a "will" statement needn't be construed modally in order for it to contradict a "might not" statement. Nor do we need to take a "will not" statement in a modal sense in order to see how it could contradict a "might" statement.[17] To begin to see why, consider the following: if God knows that X will

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[16] MacGregor, "The Neo-Molinist Square Collapses," 197 (my emphasis).

[17] To be sure, some open futurists *have* argued that "will" ought to be understood as either a disguised necessity operator or as implying some type of causal force. Amy Seymour takes the former approach in "Presentism, Propositions, and Persons: A Systematic Case for All-Falsism" (PhD diss., University of Notre Dame, 2015). Alan Rhoda argues for the latter in "The Philosophical Case for Open Theism," *Philosophia* 35 (2007): 301-311. However, as William Hasker and John Sanders have recently noted, these semantic proposals do not match very well with the way we treat such statements in practice (idem, "Open Theism: Progress and Prospects," *Theologische Literaturzeitung* 142 [2017]: 866). In an earlier essay (Hess, "The Open Future Square of Opposition: A Defense," *Sophia* 56 [2017]: 573-87), I appealed to an alternative semantic proposal for "will" statements put forward by Patrick Todd in order to defend the idea that "will" and "will not" are contraries rather than contradictories (see Todd, "Future Contingents are All False! On Behalf of a Russellian Open Future," *Mind* 125 [2016]: 775-98). But Todd's proposal has been criticized on several fronts lately (see, e.g., Anders J. Schoubye and Brian Rabern, "Against the Russellian Open Future," *Mind* 126 [2017]: 1217-37; Cf. Jacek Wawer, "Some Problems with the Russellian Open Future," *Acta Analytica* 33 [2018]: 413-25). Since then, I have come to develop my own semantics

occur, then it is *determinately the case that* X will occur. By saying it is "determinately the case," I simply mean that there is a fact of the matter concerning whether X will occur.[18] Such an understanding of determinacy is completely neutral with respect to whether X is contingent or whether X is instead somehow determined or necessitated to occur. Indeed, this is something MacGregor himself seems to recognize when he alleges that "it is perfectly consistent to affirm that Hillary Clinton might not be U.S. president in February 2021 (as nothing determines that she will be) but that she will *in fact* hold the presidency at that time (and do so contingently)."[19] Or, again, when he avers that "it is perfectly consistent to affirm that Hillary Clinton might be U.S. president in February 2021 (as nothing determines that she won't be) but that she will not *in fact* hold the presidency at that time (and fail to do so contingently)."[20] Following MacGregor, then, we may assume that if Clinton will be U.S. president in February 2021, then she will

for "will" and "will not," one that arguably avoids the critiques of MacGregor and others. I present the general outline of my theory in what follows.

[18] I mean to understand facts broadly. For my purposes here, a fact is just whatever it is that accounts for a statement's truth. Since this definition makes no specific claim about what states of affairs must exist for a given statement to be true, this notion of facts can be accepted by so-called truthmaker theorists and non-truthmaker theorists alike. For instance, even an anti-truthmaker theorist such as Trenton Merricks accepts all instances of the following schema: "*s*" is true because *s*. So, we might say, "Fido is brown" is true *because* Fido is brown. Or, "There were dinosaurs" is true *because* there were dinosaurs, etc. As Merricks notes, nobody would deny such claims (Merricks, *Truth and Ontology* [Oxford: Clarendon Press, 2007] xiii). What Merricks and other anti-truthmaker folks question, however, is whether such truths depend *in any substantive sense* upon being. Happily, this issue can be sidestepped. For, as we'll see below, my argument against MacGregor needn't appeal to a substantive account of truthmakers in order to go through. Instead, the notion of facts I have in mind is more general. This notion simply trades on the plausible idea that when we say a statement like "There were dinosaurs" is true because there were dinosaurs, we're positing a relation of *explanatory* dependence. The fact that there once were dinosaurs is what arguably *explains* or *accounts for* the truth that there were dinosaurs. Relatedly, if God knows that there will be a 2020 presidential race, then it's true that a 2020 presidential race will occur. Of course, it needn't be God's knowledge that explains or accounts for the fact that there will be a 2020 presidential race—it might be the other way around. That is, it could be the case that God knows a statement like "There will be a 2020 presidential race" is true simply because there will be a 2020 presidential race. My suggestion is that, however the details are worked out, the description occurring to the right-hand side of the locution "because" is a fact of some sort.

[19] MacGregor, "The Neo-Molinist Square Collapses," 197 (my emphasis).

[20] Ibid (my emphasis).

determinately—that is, will in fact—be president at that time. Similarly, if Clinton will not be U.S. president in February 2021, we can suppose that it is a settled fact that she won't be president then.

From a strictly logical perspective, however, it is possible that, prior to the time in question, there just *is no fact of the matter* concerning whether Clinton will be U.S. president in February 2021. In order to demonstrate this, let "DETERMINATELY" function as a non-modal determinacy operator (where DETERMINATELY is meant to be read: "It is in fact the case that"). Further, let h stand for the statement "Hillary Clinton will be U.S. president in February 2021." Thus defined, if God genuinely foreknows that Clinton is going to be U.S. president in February 2021, then the following is true:

(4) DETERMINATELY(h)

Of course, if God were to actually foreknow that Clinton will be president, he would have to possess *fore*knowledge rather than timeless knowledge of what is going to take place. Being infallible, therefore, God would believe at all times prior to February 2021 that (4) is true.[21]

Now suppose, instead, that Clinton will not be U.S. president at the relevant date. Since God's omniscience entails that he essentially knows only and all truths, his knowledge in this case would be correlated with the reality that Clinton will, in fact, *not* be U.S. president in February 2021. Hence God would know, say, in 2019 that

(5) DETERMINATELY¬(h)

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[21] Molinists like Craig and MacGregor should have no trouble with the idea that God possesses his free knowledge of what is going to occur at discrete moments of time. For both theologians hold that God, at least since creation, is temporal, and they each accept an A-theoretic view of time called "presentism" (i.e., only the present exists, the past and future do not). See MacGregor, *Luis de Molina: The Life and Theology of the Founder of Middle Knowledge* (Grand Rapids, MI: Zondervan, 2015), 96n48. Interestingly, MacGregor claims that Molina held to this view of time as well (MacGregor, *A Molinist-Anabaptist Systematic Theology* [Lanham, MD: University Press of America, 2007], 71).

But note: (4) and (5) do not exhaust the field of logical alternatives concerning what an omniscient being might infallibly know in 2019 about Clinton's potential presidency. For (5) is not the negation of (4) and, thus, is not the contradictory of (4). Rather, the proper negation of (4) is

(6) $\neg$DETERMINATELY(h)

Here we see that the scope of the negation makes a difference to the meaning of these statements. For example, in order for (5) to be true, there would have to be a fact about what will become of Clinton's presidential prospects. In particular, for (5) to be true, it would have to be the case that Clinton will not in fact be U.S. president in February 2021. But the same is not true for (6). Indeed, (6) could be true in the absence of any such fact. In essence, all (6) says is that it is not the case that Clinton definitely will be U.S. president in February 2021; unlike (5), it does *not* say that she definitely *won't* be.[22] Hence (5) and (6) have different truth conditions and, so, are logically distinct statements. Moreover, since (4) and (5) are not contradictories, it follows that the correct negation of (5) is not (4) but rather

(7) $\neg$DETERMINATELY$\neg$(h)

Here again we see how the placement of the negation makes a difference to the semantics under discussion. For unlike (4), (7) does not state that Clinton is definitely going to be U.S. president in February 2021. Instead, (7) merely says that it is not the case that she in fact won't be. Thus (4) and (7) are not synonymous statements; they too have different truth conditions and are therefore logically distinct.[23]

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[22] Here and elsewhere, when I use the term "definitely" in place of "determinately" I do so simply for ease of expression; for the purposes of this essay I am treating them both non-modally/causally.

[23] My proposed bivalent truth-conditional semantics for the English "will" and "will not," then, is as follows:

From a strictly logical perspective, then, when it comes to Clinton's presidential prospects in 2020 and beyond, God could know one of three things in 2019: (i) Hillary Clinton *will* be U.S. president in February 2021, (ii) Hillary Clinton *will not* be U.S. president in February 2021, or (iii) Hillary Clinton *might and might not* be U.S. president in February 2021. The latter is true in 2019 just in case both (6) and (7) are true at that time. This is because, as the contradictory of (5), (7) is the denial that Clinton will not be U.S. president in February 2021—a denial that, given the notion of determinacy offered above, is equivalent to affirming that Clinton's failure to obtain the presidency in 2021 is not a settled fact. Similarly, as the contradictory of (4), (6) is the denial that Clinton will be U.S. president in February 2021, which in the present context is equivalent to affirming that a future Clinton presidency in 2021 is not something that is definitely going to occur. Therefore, it may be the case in 2019 that *neither* (4) *nor* (5) are true because it is simply *indeterminate* at that time what the outcome of Clinton's 2020 presidential run will be. There could just be no fact of the matter about what's going to happen. And, of course, if this were the case, then God—being cognizant of all truth at all times—would not believe either (i) or (ii) in 2019 but, rather, (iii).

This leads us to an important point. Whereas MacGregor and other classical theists only recognize the future to be a realm of determinate reality, neo-Molinists and other proponents of open futurism recognize that logic allows for there to be two categories concerning the ontological status of future events, namely *determinacy* and *indeterminacy*. As the discussion above has shown, the former category applies to those things that either will or will not be.

"Will (ϕ)"   *True*: if the future obtaining of ϕ is a settled fact
         False: otherwise

"Will not (ϕ)"   *True*: if the future obtaining of not-ϕ is a settled fact
         False: otherwise

Being the contradictory of determinacy, however, the category of indeterminacy is expressed over against what will (or will not) occur in terms of what "might and might not" occur. The open future square of opposition implicitly allows for this latter category to stand as a distinct ontological state. To make these categories explicit, therefore, the square can be extended to form a *hexagon of opposition*:
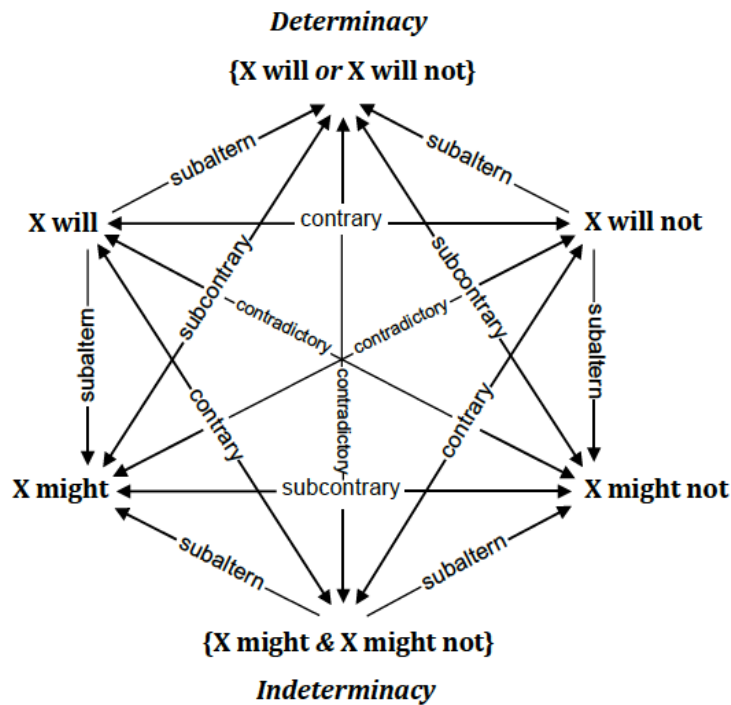
Determinacy

{X will *or* X will not}

{X might & X might not}

Indeterminacy

Figure 3

As Lorenz Demey has recently argued, this hexagon of opposition is a much more helpful representation of the debate between those who hold to an open view of the future and those who do not.[24] A world in which the future is at least partially indeterminate would be a world with an

[24] According to Demey, since one can show that there are no other consistent Boolean combinations of statements present in the open future square of opposition, the hexagon of opposition represents the Boolean closure of the square. See idem, "Aristotelian Diagrams in the Debate on Future Contingents: A Methodological Reflection on Hess's Open Future Square of Opposition," *Sophia* 58 (2019): 321-29. For an important paper that anticipated many of Demey's observations, see especially Gregory Boyd, Tom Belt, and Alan Rhoda, "The Hexagon of Opposition: Thinking Outside of the Aristotelian Box," unpublished manuscript (2008): https://reknew.org/2008/01/the-hexagon-essay/ (accessed 8/28/2019). Cf. Boyd, "Two Ancient (and Modern) Motivations for Ascribing

alethically open future. Alan Rhoda effectively captures the notion of an alethically open future

with the following definition.

> **Alethic Openness of the Future** =def. the future is *alethically open* at time *t* if and only if
> for some state of affairs X and some future time *t** (a) neither the statement "X will
> obtain at *t**" nor the statement "X will not obtain at *t**" is true at *t* and (b) neither of their
> tense-neutral counterparts, "X does obtain at *t**" and "X does not obtain at *t*,*" is true
> *simpliciter*.[25]

Of course, if the future were alethically open, then for any state of affairs X that rendered

(a) and (b) true, X would have to be *contingent*. After all, if X were causally determined or

necessitated to occur, there would be a determinate fact of the matter concerning what X's future

outcome is going to be. MacGregor's claim, therefore, that "the price…to be paid for making 'X

will' and 'X might not' contradictories is rendering all X necessary," is patently false. Far from

destroying the possibility of libertarian freedom, an ontologically indeterminate future would

require the presence of indeterminism.

2.3 The Contrary Relation Vindicated

Even when understood as a non-modal determinacy operator, then, "will" is arguably not

the contradictory of "will not." So, despite what MacGregor would have us believe, it is not the

case that one of "X will" and "X will not" must be true and the other false. Such statements can

be construed as contraries. For as we have seen above there are logically coherent scenarios in

which both statements are false *at a given time*.

Still, it is not part of open futurism to maintain that future contingent statements cannot *become* true. They can become true by either ceasing to be about the future or by ceasing to be about something contingent. As time passes and contingencies are resolved, what was future may become present or past, and what was a contingent possibility may become a certainty or become impossible. To illustrate, consider the following tense operators: N and F. Let N stand for a present tense operator (read: "It is now the case that"), and F stand for a future tense operator (read: "It will be the case that"). Finally, let *p* represent the tense-neutral statement "Clinton's presidency obtains." So understood, everyone will agree that the following is a necessary truth.

(8) NF($p \lor \neg p$)

However, it does not follow from this that either

(9) NF(p)

or

(10) NF$\neg$(p)

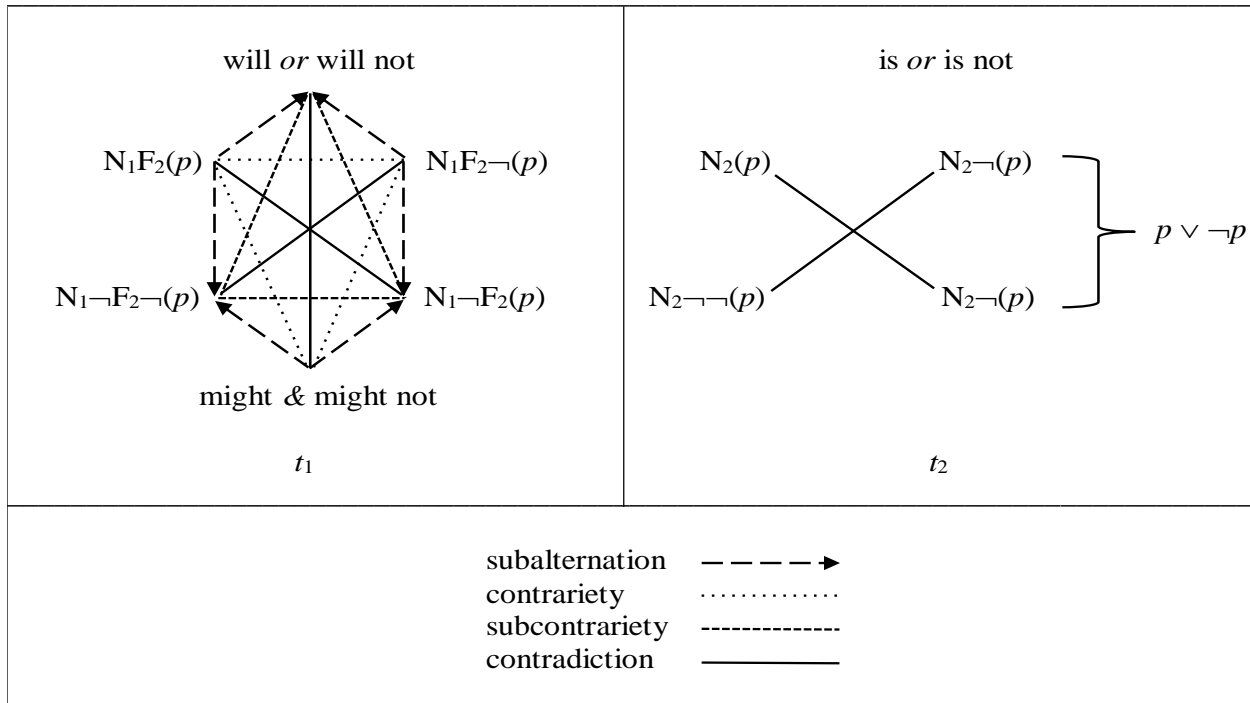is true. For, again, it may be the case that both

(11) N$\neg$F(p)

and

(12) N$\neg$F$\neg$(p)

are true instead.

In other words, while it is a necessary truth that a Clinton presidency will either occur or not occur, prior to the time in question, *which* disjunct ends up obtaining at the relevant date may be indeterminate. As illustrated below, however, this indeterminacy is eventually resolved as time passes.

The Logic of Temporal Passage

will *or* will not

$N_1F_2(p)$ $N_1F_2\neg(p)$

$N_1\neg F_2\neg(p)$ $N_1\neg F_2(p)$

might *&* might not

t_1

is *or* is not

$N_2(p)$ $N_2\neg(p)$

$N_2\neg\neg(p)$ $N_2\neg(p)$

$p \vee \neg p$

t_2

subalternation	– – – – ▶
contrariety	··············
subcontrariety	--------------
contradiction	——————

Figure 4

Here we see how the N and F operators, when indexed to specific times, intuitively

function in a dynamic or "tensed" world. Indeed, nothing about this scenario "defies the laws of

logic" as MacGregor suggests. To assert at t_1 that it's indeterminate whether a future Clinton

presidency will obtain at t_2 is not incoherent. For at the time the assertion is made it may not yet

be the case that she will definitely be president. Nor, for that matter, need it be a determinate

part of reality at t_1 that she will not be president at t_2. When t_2 becomes present, however, what

was once a future contingent statement ceases to be about the future. Hence the F operator

"drops out" and the hexagon collapses by trivial logic, leaving us with a contradictory pair.[26]

Whether a Clinton presidency obtains or does not obtain at t_2 is now a determinate state of the

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[26] Specifically, $p \vee \neg p$ is derived via two rules of replacement: double negation and tautology

world. And this determinacy remains forever after. For it will always be the case that her presidency was something that either *did* or *did not* take place.

So much, then, for the alleged incoherence of the square. There does not appear to be anything illogical about a partially indeterminate future. Nor would the reality of such a future rule out libertarian freedom.

3. The Stalnaker-Lewis Semantics Vindicated

After his supposed demonstration of the square's ostensible collapse, MacGregor unveils Molina's alternative theory to standard counterfactual semantics—a theory he believes Molinists can embrace in order to reject premise (2) in the argument above. Now, as both Craig and J. P. Moreland have recognized, while there really is no satisfactory semantics for counterfactual conditionals, for want of a better alternative, most philosophers use the Stalnaker-Lewis semantics.[27] Stalnaker and Lewis adopt a similarity-based approach for determining the truth of counterfactuals relative to possible worlds. Taking the actual world, *W*, as our point of departure, Stalnaker and Lewis then range other possible worlds into concentric spheres of worlds centered on *W* based on a similarity relation to *W*, the most similar worlds being in the nearest sphere. So, if we want to determine, say, the truth of the would-counterfactual $P \mathbin{\square\!\rightarrow} Q$, we consider the worlds in the nearest sphere centered on *W* in which *P* is true. If in *all* the worlds in which *P* is true, *Q* is also true, then the would-counterfactual is true. If in *some* of the worlds in which *P* is true, *Q* is also true, then the might-counterfactual $P \mathbin{\diamond\!\rightarrow} Q$ is true.

MacGregor complains that, from Molina's perspective, such an approach to analyzing counterfactuals seems "very odd."[28] For it assumes that the truth-value of counterfactuals can be

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[27] Moreland and Craig, *Philosophical Foundations*, 53.

[28] MacGregor, "The Neo-Molinist Square Collapses," 198.

determined by looking at other possible worlds that are relevantly similar to *W*. According to

Molina, however, the truth of $P \: \square\!\!\rightarrow Q$ is not determined by looking at whether *Q* obtains under

P in the closest actualizable-but-not-actual world. Rather, following what he takes to be

Molina's own approach, MacGregor urges that the only legitimate truth condition for $P \: \square\!\!\rightarrow Q$ is

simply that in *W*, if *P* obtains then *Q* obtains. "This is," MacGregor says, "the sole condition

employed by Molina for analyzing $P \: \square\!\!\rightarrow Q$."[29]

      As an alternative to the possible worlds approach of Stalnaker and Lewis, however,

Molina's analysis of the would-counterfactual is implausible. For consider the following

subjunctive conditional: "If kangaroos were tailless, they would topple over." Molina apparently

wants to analyze this statement without recourse to possible worlds. Instead, in order to

determine whether this statement is true, we're to simply think of a certain situation obtaining in

W, i.e., no kangaroos have tails, and see whether such marsupials stay upright. The problem with

this approach, though, is that whenever the antecedent *P* of a subjunctive conditional is a

contrary-to-fact supposition, then, by definition, *P* does not obtain in *W*. Hence, without

appealing to another possible world, it makes no conceptual sense to ask whether some

consequent *Q* would obtain under *P* in *W*, for, *ex hypothesi*, *P* and *W* are incompatible. When

attempting to determine whether kangaroos would topple over without their tails for balance,

then, we cannot simply look to *W*; we must imagine another world *W** in which, contrary to the

way things *actually* are, kangaroos don't have tails. But once we do this, we're invariably

engaged in an activity MacGregor sought to avoid—namely, comparing other possible worlds to

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[29] Ibid., 199.

W based on relevant (dis)similarities. The Stalnaker-Lewis approach to analyzing counterfactuals is thus not so easily dismissed.[30]

Turning to the might-counterfactual (*P* ◇→ *Q*), MacGregor argues that Molina would have rejected the Lewisian interpretation of ◇→. On the possible-world semantics of Stalnaker and Lewis, of course, "might" is more restrictive than "could," where the fact that something *could* happen under certain circumstances *P* does not imply that it *might* happen under *P*. Unlike something that merely could happen, to say that something might happen is to say that there is a possible world *in the nearest sphere* to *W* where it does happen. Indeed, in distinction to Stalnaker's account, Lewis's definition of ◇→ allows for ties in similarity to obtain between worlds. For example, a counterfactual describing an indeterministic event such as "If I had tossed the coin, it might have landed heads" is, as Jonathan Bennett points out, "true [on Lewis's interpretation] because it means that it is not the case that if I had tossed the coin it *would* have come down tails; or in the 'worlds' dialect, Toss-worlds at which the coin comes down heads are as close to *W* as any at which it comes down tails."[31] As I argued in my original paper, this feature of Lewis's semantics is well-suited to model the metaphysical situation envisioned by those who hold a libertarian conception of freedom. For such accounts of freedom entail that there are, under any circumstances *P* in which I freely choose X, other worlds in which, in identical circumstances, I choose not-X instead.

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[30] Another way MacGregor tries to dismiss the possible world semantics of Stalnaker and Lewis is by claiming that it relies on a theory of truthmakers in order to work. Thus, MacGregor asserts that "Opponents of [truthmaker theory] will see no reason to accept the Stalnaker-Lewis semantics" (idem, "The Neo-Molinist Square Collapses," 198). But this is simply mistaken. The Stalnaker-Lewis semantics for counterfactuals do not posit truthmakers for these conditional statements, they provide truth *conditions*. The former is a metaphysical theory, the latter is a semantical theory of meaning. For more on this distinction, and why it's important not to conflate the two, see Chad Vance, "Modal Truthmakers, Truth Conditions, and Analyses: Or, How to Avoid the Humphrey Objection," *Acta Analytica* 32 (2017): 145-59. See also Edwin Mares and Ken Perszyk, "Molinist Conditionals," in *Molinism: The Contemporary Debate*, ed. Ken Perszyk (New York, NY: Oxford University Press, 2011), 96-7.

[31] Jonathan Bennett, *A Philosophical Guide to Conditionals* (New York: Oxford University Press, 2003), 191.

Regarding the truth of $P \lozenge\!\!\rightarrow Q$, MacGregor acknowledges that if Q might be true under P, then there must exist a possible world where Q is true under P. But for Molina, he notes, "it does not follow that this world is actualizable or, if it is actualizable, that it falls among the feasible worlds in the nearest sphere to W in which P is true."[32] This is because, in contrast to the Stalnaker-Lewis semantics, Molina emphatically rejected the distinction between things that "could" happen and things that "might" happen. Hence MacGregor writes, "for Molina there is no such thing as a 'bare logical possibility' consistent with P; all logical possibilities are genuine."[33] Accordingly, MacGregor claims that the only legitimate truth condition for $P \lozenge\!\!\rightarrow Q$ is that in some possible world where P obtains, Q obtains, regardless of its actualizability, its identity to W, or how near or far (on the Stalnaker-Lewis account) to W it is. "Again," he says, "this is the sole condition employed by Molina for analyzing $P \lozenge\!\!\rightarrow Q$."[34]

Unfortunately, this collapse of the distinction between "could" and "might" cuts deeply against libertarian intuitions. For if all possibilities are genuine, and some possibilities are not actualizable, then it follows that some possibilities are to be regarded as genuine but unactualizable. For instance, suppose Sally is offered a bribe in W and takes it. Molinists like MacGregor, then, will claim that the following is true: "If Sally were offered the bribe, she would take it." However, if Sally *freely* took the bribe, then not only must it have been the case that she might have taken it, but also that she *might not* have taken it.[35] According to Molina,

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[32] MacGregor, "The Neo-Molinist Square Collapses," 199.

[33] Ibid., 200.

[34] Ibid.

[35] Some Molinists have tried to resist this inference. For example, Edward Wierenga has claimed that the Molinist should not agree that a situation in which an agent makes a libertarian free choice with respect to doing some action X is a situation in which the agent *might* do X but also *might not* do it (idem, "Tilting at Molinism," in *Molinism: The Contemporary Debate*, 136). For an analysis and rebuttal of the reasoning behind Wierenga's claim, however, see my essay "Arguing from Molinism to Neo-Molinism," 344-46.

though, all the might not-counterfactual ($P \diamond\rightarrow \neg Q$) posits is the existence of some possible world or other where P obtains and Q does not obtain. This world where Sally chooses, instead, to reject the bribe needn't be close (that is, in the nearest sphere) to W at all. Indeed, it needn't even be actualizable! On Molina's scheme, then, the ability to do otherwise in a given situation may be unactualizable but nevertheless considered a genuine, live option. I submit that this reading of $\diamond\rightarrow$ is far removed from what most libertarians would regard as a necessary requirement for freedom. For we do not want to say merely that Sally *could* have done otherwise in some possible world or other. Rather, we want to be able to say that, things being pretty much identical to the way they were, she *might* have done otherwise. Unlike Molina's semantics, Lewis's interpretation of $\diamond\rightarrow$ upholds this latter intuition. As a result, libertarians have good reason to prefer the Lewisian account of "might" to its Molinist alternative.

4. Conclusion

MacGregor's attacks against the open future square of opposition endorsed by neo-Molinists are not successful. The logic of an open future is both coherent and freedom preserving. Moreover, contrary to Molina's approach, the Stalnaker-Lewis semantics for counterfactuals on which the above syllogism is based are highly intuitive. Lewis's account, specifically, models libertarian intuitions concerning freedom much better than MacGregor's Molinist substitute. Therefore, since MacGregor acknowledges that the plausibility of neo-Molinism is bolstered if we grant the standard semantics in general and Lewis's interpretation of $\diamond\rightarrow$ in particular, I submit that the case for neo-Molinism has been bolstered indeed.

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CHAPTER 3

IS AN OPEN INFINITE FUTURE IMPOSSIBLE? A REPLY TO PRUSS

Elijah Hess and Alan Rhoda

Abstract: Alexander Pruss has recently argued on probabilistic grounds that Christian philosophers should reject Open Futurism—roughly, the thesis that there are no true future contingents—on account of this view's alleged inability to handle certain statements about infinite futures in a mathematically or religiously adequate manner. We argue that, once the distinction between *being true* and *becoming true* is applied to such statements, it is evident that they pose no problem for Open Futurists.

In a recent article, Alexander Pruss has argued on probabilistic grounds that Christian philosophers should reject Open Futurism, i.e., the view that propositions of the form "X will obtain," where X's occurrence is not determined by the present state of the world, are not true.[1] To make his case against Christian Open Futurism, Pruss asks us to imagine a possible world in which it is guaranteed that (a) the past is finite, (b) the future is infinite, and (c) every day an indeterministic and fair coin is tossed. Given these background assumptions, Pruss argues that, according to the Law of Large Numbers,[2] a proposition such as "The coin lands heads infinitely many times" will have a probability of *nearly 1*, a term he defines disjunctively as "either 1 or 1

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[1] Either because all such propositions are false or because they lack truth value.

[2] The Law of Large Numbers is a statistical theorem which says that, as the number of identically distributed, randomly generated variables increases, their sample mean (average) approaches their theoretical mean. For example, when a fair coin is flipped once, the theoretical probability that the outcome will be heads is equal to ½. Therefore, according to the Law of Large Numbers, the proportion of heads in a large number of coin flips should be ½. In particular, the proportion of heads after *n* flips will "almost surely" converge to ½ as *n* approaches infinity. Cf. Siegmund, "Probability Theory," *Encyclopedia Britannica* (2018): www.britannica.com/science/probability-theory (accessed 6/2/2020).

minus an infinitesimal."[3] Letting q stand for the above proposition, Pruss goes on to claim that this implication of probability theory poses a problem for the Open Futurist.

> The Open Futurist's view commits her not only to the claim that q isn't true, but also to the claim that q *never* becomes true. For there is always a causal possibility that there will be only finitely many heads. And yet q has a probability of nearly 1. How can one believe that a proposition with probability nearly 1 is neither true nor becomes true?[4]

To make the problem even sharper, Pruss considers q^*, the proposition that an indeterministic and fair coin is tossed on every day of a time sequence that goes on forever and lands heads on infinitely many of these days. Supposing that some coin is guaranteed to be tossed in this manner, Pruss notes that, like q, the probability of q^* will be nearly 1. "But on an Open Future view," he says, "it is *impossible* that the proposition q^* ever be true. For, necessarily, on every day of every time sequence, q^* is not true, since if q^* were true, there would be a fact about future contingents, namely that the coin will land heads infinitely often."[5] Thus, a conflict emerges. The Law of Large Numbers says that q^* is nearly certain. But, given Open Futurism, q^* can never be true. It is implausible to reject the Law of Large Numbers, so Pruss recommends that the Open Futurist's best bet would be to reject the possibility of an infinite future.

Rejecting the possibility that the future could be infinite, however, is a bet that Pruss informs us a *Christian* philosopher can't take. For it is a Christian dogma that there be a future resurrection, one where at least some will partake in an everlasting—and hence infinite—life of union with God. As such, a Christian philosopher should not deny the possibility of an infinite

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[3] Alexander Pruss, "An Open Infinite Future is Impossible," *Faith and Philosophy* 33 (2016): 462.

[4] Ibid.

[5] Ibid., 462-3.

future. Pruss therefore concludes that a Christian philosopher should not believe in an Open Future.

This is an intriguing argument. Given the above coin toss scenario, the Law of Large Numbers says that the following outcome is nearly certain:

The coin will land heads infinitely often.

This, essentially, is the proposition Pruss calls q^*. So, given Pruss's coin toss world, plus standard probability theory, we get:

(1) q^* has a probability of nearly 1.

But according to Open Futurists, since q^* is a future contingent it can't be true. Hence, Open Futurists believe that

(2) q^* cannot be true.

The fundamental point Pruss wants to make, then, is this: *it is irrational to believe both (1) and (2)*. Since he takes (1) to be unassailable, Pruss thinks a Christian who believes in an infinite future ought to give up (2) and, thus, ditch Open Futurism.

Despite its elegance, there are two ambiguities in the above argument that need to be resolved in order to evaluate it. First, according to the coin toss scenario envisioned by Pruss, the future is supposed to be infinite. But what sort of infinity is in view here? After all, the future may be infinite in one of two ways. It could either be *actually infinite* or merely *potentially infinite*. As it stands, Pruss's formulation of q^* strongly implies the former (an indeterministic and fair coin "lands heads on infinitely many…days"). With respect to the future, though, Christian Open Futurists such as ourselves hold to the latter conception of infinity. Consequently, Pruss's initial way of framing the issue is problematic, for it isn't done in a manner that his interlocutors can immediately accept. Indeed, over and against so-called

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eternalist theories of time, where all events—whether past, present, or future—are equally real, we maintain that there is a deep ontological asymmetry between the present and the future. Unlike the present, the future does not exist. So while, as Christians, we are committed to the notion that our days in heaven are everlasting and thus will have no end (Luke 1:33), we deny that the future is comprised of an actual infinite series of days, each standing in an *earlier than* relation to another.[6]

As it turns out, Pruss recognizes the problem. "Talk of how many times the coin will land heads over an infinite," he admits, "makes it sound like there actually might be an infinite number of future heads tosses."[7] However, he goes on to say that the scenario can be formulated without any such worries. To accommodate views like ours, then, Pruss notes that, on the assumption that time is linear, "The claim that the future is infinite can be put like this: '[T]omorrow there will be a day, and after every day there will be another day.' And, assuming this claim about an infinite future, the claim that the coin will land heads infinitely many times can be put like this: 'There will be at least one heads landing, and some time after every heads landing there will be another heads landing.'"[8] More specifically, since the majority of his Open Futurist opponents are *presentists*, the world described in Pruss's thought experiment ought to be understood as a place where only the present exists, while the past and future do not.[9] Hereafter,

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[6] In other words, we affirm that the future is ontically *open* rather than ontically settled or closed. According to Alan Rhoda, the future is ontically open relative to time *t* if and only if the world state at *t* does not stand in an *earlier than* relation to a unique and complete series of subsequent world states (Rhoda, "The Fivefold Openness of the Future," In *God in an Open Universe: Science, Metaphysics, and Open Theism*, eds. William Hasker, Thomas Jay Oord, and Dean Zimmerman [Eugene, OR: Pickwick, 2011], 73).

[7] Pruss, "An Open Infinite Future is Impossible," 463.

[8] Ibid.

[9] Though, an Open Futurist could also hold to a growing block view of reality (roughly, the view that both the past and present are real, but the future is not) without affecting the argument being made here.

we'll call this presentist-friendly conception of Pruss's coin toss world *W*. In order to avoid begging the question against Open Futurists, therefore, *q** needs to be formulated in a way that is consistent with *W*. That is, *q** needs to be phrased in a way that doesn't imply an actual infinite *or* the existence of any future coin toss. In keeping with Pruss's suggestion above, we submit that a sufficiently neutral formulation of *q** can be put like this:

> *q*N*: For any natural number *n*, there will occur some time after the *n*th coin toss another toss which lands heads.

With this revision in place, (1) and (2) then become

> (1*) *q*N* has a probability of nearly 1.

> (2*) *q*N* cannot be true.

Now, the question before us is whether it is indeed irrational to believe both (1*) and (2*). But before arriving at an answer there is a second ambiguity in Pruss's argument that needs to be cleared up. We need to know *why* Pruss thinks it would be irrational to believe these claims. Perhaps the idea is that there's an incoherence here. Initially at least, it is tempting to think that what underlies the perception that (1*) and (2*) are in conflict is that, on the one hand, (1*) seems to be intended as a claim about the probability of (1*)'s *being true*, viz. (1'):

> (1') The chance that *q*N* is true is nearly 1.

On the other hand, though, (2*) seems to entail (2'):

> (2') The chance that *q*N* is true is zero.

Obviously, (1') and (2') are in conflict. The chance that *q*N* is true cannot be both nearly 1 and 0.[10] However, we're not at all confident that this reading of (1*) and (2*) captures the difficulty Pruss has in mind. For while he undoubtedly thinks there is a *tension* between (1*)

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[10] Where "chance" = a single-case, objective probability.

and (2*), it's not clear that Pruss intends for them to be read as contradictory claims. More modestly, all Pruss's argument requires is that, from an epistemic standpoint, they appear to *clash*. The challenge for a Christian Open Futurist, then, is to explain why—contrary to appearances—it would be rational to believe both claims in *W*. Specifically, such an Open Futurist needs to provide an alternative reading of either (1*) or (2*) that massages the perceived tension and, at the same time, upholds both the possibility of an endless future and the Law of Large Numbers. Our conviction is that this can be done once we observe a distinction inherent to Open Futurist metaphysics, namely, the distinction between the probability of a certain proposition's *being true* and the probability of its tenseless content *becoming true* or *coming to pass*.

To begin, consider claim (2*). Understood along Open Futurist lines, (2*) should be read like this:

(2^) The chance of $q*N$'s *being true* is zero.

Why should an Open Futurist say that? Because the chance that a proposition *is* true can only be either zero or one. It's one if the proposition is, in fact, true. It's zero if the proposition is, in fact, not true.[11] And, of course, the Open Futurist maintains that there can be no true determinate future contingent propositions.[12] In particular, Christian Open Futurists such as

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[11] Some may wonder why we distinguish between (2') and (2^) since both seem to be identical interpretations of (2*). The reason we focus on the (2^) reading of (2*) is simply to make explicit the concept of something's *being* the case. This is done in order to set up a contrast with another concept that we introduce below, that is, the concept of something's *becoming* or *coming to be* the case.

[12] The word *determinate* is important here. For, in the context of the present discussion, the term "future contingents" is really shorthand for what we might call "representationally determinate propositions about the future," i.e., propositions that represent the future as determinate in some respect. This is normally expressed in English by saying that some event unqualifiedly "will" or, alternatively, "will not" happen. This contrasts with propositions saying that some event "might and might not" or "probably will" happen. In the latter case, the future isn't represented as being determinate with respect to that event.

ourselves who accept the principle of bivalence maintain that $q*N$ is false in Pruss's coin toss world. If it were true, we believe God would know this. But given the *metaphysics* of Open Futurism, God does not know $q*N$ at any time.

The idea that God would not know $q*N$ is predicated on the plausible assumption that God only believes on sufficient evidence. According to Christian Open Futurists, God is temporal and hence exists moment-by-moment in W. Thus while it is no problem for God to know that for any natural number n, there will be more than n coin tosses (according to Pruss's thought experiment, this is guaranteed to happen in W), such a deity would presumably not believe that for any n, there will be more than n heads landings. That is, God would not believe $q*N$. The reason we say this is because, in addition to their belief in a non-actual future, Open Futurists subscribe to the metaphysical doctrine that *contingent truth depends upon being*. Hence, we maintain that there is not enough "being" at any given moment in W for there to be a determinate fact of the matter concerning the outcome of any coin toss that has yet to take place. So, although the prospect that there will be at least one heads landing, and after every heads landing there will be another heads landing is extremely *likely* in W, there is nevertheless a vanishingly small chance that there will only ever be tails landings after any given toss. Ontologically, then, for any present time t, the possibility that there will only be tails landings after t cannot be definitively ruled out. As a result, an infallible, omniscient being that exists temporally in W wouldn't believe $q*N$.[13] By his very nature, God only believes that which he is

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[13] Given that $q*N$ has a probability of nearly 1, it might seem fantastic to think that God would refrain from believing such a proposition on account of there being an infinitesimal chance that the event described therein *not* occur. After all, since an infinitesimal number is a number that is smaller than any positive real number but greater than zero, God, it could be argued, would hardly register such a miniscule probability. However, we think this is a mistake. As one who is perfect, it is plausible that God's cognitive powers are sufficiently fine-grained to track infinitesimals. Moreover, being infallible, divine certainty leaves no room for error. So long as the theory is consistent, then, it seems reasonable to suppose that God knows and responds to infinitesimal probability values. For a recent defense of the coherence and utility of such probability values see Vieri Benci, Leon Horsten, and

certain of. Given the metaphysics of Open Futurism, however, God lacks sufficient evidence to

be certain of $q*N$. It therefore follows that $q*N$ isn't true at any time in W. This is why,

according to (2^), the chance of $q*N$'s *being true* at any time in W is zero—which is just to say

that $q*N$ cannot be true there, precisely as (2*) claims.

So, belief in (2*) seems perfectly sensible on the Christian Open Futurist's metaphysic.

But wouldn't it be irrational for such a philosopher to believe *both* (2*) *and* (1*), as Pruss

suggests? No. For when properly understood, (1*) does not conflict with (2*). To demonstrate

this, consider a simpler probabilistic argument Pruss once gave against Open Futurism.[14] We'll

cite Pruss's restatement of this argument, as contained in his more recent article. He writes,

> Suppose that I am determined by the present conditions and laws of nature to flip an indeterministic fair coin in exactly five minutes. According to Open Future views, it is neither true that the coin will land heads nor that it will fail to land heads (either both statements are false or neither statement has a truth value). Yet by definition of fairness, the probability that the coin will lands heads is 1/2. So the Open Futurist has to believe *both* that it is not true that the coin will land heads *and* that the probability that it will land heads is 1/2. Yet surely if one believes that it is not true that the coin will land heads, one assigns a probability *less* than 1/2 to the proposition. We can make the problem sharper by supposing the coin to be unfair and to have a probability of 9/10 of landing heads. Then the Open Futurist has to believe both that it is not true that the coin will land heads and that it has a probability 9/10 of doing so.[15]

Yet, Pruss now concedes that the Open Futurist has a way out of this problem. In light of a reply

provided by Alan Rhoda,[16] Pruss now acknowledges that

> The Open Futurist can, for instance, say that there is a tenseless proposition, u, that the coin lands heads at t_5, where t_5 is five minutes from now. The sentence 'The coin will

Sylvia Wenmackers, "Infinitesimal Probabilities," *The British Journal for the Philosophy of Science* 0 (2016): 1-44. Cf. Abraham Robinson, *Non-standard Analysis* revised ed. (Princeton, NJ: Princeton University Press, 1996).

[14] See Pruss, "Probability and the Open Future View," *Faith and Philosophy* 27 (2010): 190-6.

[15] Pruss, "An Open Infinite Future is Impossible," 461.

[16] Rhoda, "Probability, Truth, and The Openness of the Future: A Reply to Pruss," *Faith and Philosophy* 27 (2010): 197-204.

land heads in five minutes' can be said to have *u* as its 'tenseless content'…Then the probability that the coin will land heads in five minutes is *r* because *u* has a chance of degree *r* to *become* true. In other words, claims about the probabilities of future contingents are claims about the chances-to-become-true of tenseless propositions that are at present [not true].[17]

We contend that this same line of response can be adopted to show why (1*) does not, in fact, conflict with (2*). For consider that, no matter what number we plug into the statement schema we've been calling *q*N*, the event described there will have a near certain chance of *coming to pass*. For example, suppose the coin has just been flipped for the 56th time in *W*. As Pruss will concede, the Open Futurist can maintain that there is a tenseless proposition, *u*, that the coin lands heads at some time *t*, where *t* > 56. The sentence "There will occur some time after the 56th toss another toss which lands heads" can be said to have *u* as its tenseless content. Then the probability that the coin will land heads at *t* is *r* because *u* has a chance of degree *r* to *become* true. In other words, from an Open Futurist's perspective, claims about the probabilities of future contingent *events* are claims about the chances-to-become-true of tenseless propositions *describing these events* that are at present not true. As such, (1*) should be read like this:

(1^) The chance of *q*N*'s *descriptive content* coming to pass is nearly 1.

By "descriptive content" we mean the event description that is specified by substituting a natural number for *n* in the schema "There will occur some time after the *n*th toss another toss which lands heads." As noted above, this schema can be said to have the following tenseless content: The coin lands heads at some time *t*, where *t* > *n*. Once *n* is specified, standard probability theory ensures that the event described by *q*N* has a near certain chance of taking place given a potentially infinite or endless series of tosses. Accordingly, *q*N* is an excellent *prediction* to make in *W*, and we would be well advised to bet in its favor for each natural

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[17] Pruss, "An Open Infinite Future is Impossible," 461-2.

number n. However, no matter how many of these bets are successful the truth of $q*N$ is not entailed.[18] For, again, there will always be an astronomically small (though nonzero) chance that there will only ever be tails landings after any future toss.

The upshot is that there is no real conflict between (1*), understood as (1^), and (2*), understood as (2^). Thus, we conclude that Pruss's argument should not dissuade a Christian philosopher from believing in an Open Future.[19]

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[18] Thanks to William Hasker for this point.

[19] We'd like to express our appreciation to both the editor and two referees for their helpful feedback on earlier versions of this paper.

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CHAPTER 4

SOME REMARKS ON NEO-MOLINISM, INFINITE INTELLIGENCE, AND PROVIDENCE

Elijah Hess

An earlier version of this paper appears as part of the Evangelical Philosophical Society's web article series: www.epsociety.org/userfiles/ElijahHess-SomeRemarksonNeo-Molinism%20(final).pdf

Abstract: In this paper, I argue that the alleged providential utility the neo-Molinist account of divine providence is often advertised to provide via Gregory Boyd's infinite intelligence argument doesn't work. Contrary to what Boyd avers it is not the case that God, given openness assumptions, can prepare for every possibility as effectively as if he were certain such possibilities were going to occur. Nor is it the case that he could be guaranteed, even in principle, that his ultimate purposes for creation would be fulfilled when those purposes depend on the decisions of libertarian free agents. Nevertheless, it is argued that, when examined in light of actual biblical cases, the providential advantage thought to be conferred on a God endowed with simple or *mere* foreknowledge may not be as extensive as some have supposed.

1. Introduction

In recent years, a debate has been rekindled among theologians and philosophers of religion over the question of whether God could, in principle, know what a free agent would or would not do on any particular occasion. Among those who answer this question affirmatively are Molinists.[1] Specifically, Molinists will want to claim that for any possible agent *S* and circumstance *C* that God might choose to instantiate, God knew, logically *prior* to his decision to create, that were *S* in *C*, *S* would freely do act *A* (or, as the case may be, would *not* do *A*). That

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[1] So named after the sixteenth-century Spanish Jesuit theologian, Luis de Molina (1535-1600).

God has "middle knowledge" of such counterfactuals of creaturely freedom—or, for brevity, CCFs—is an assumption upon which the entire Molinist theory of providence depends.[2]

Others, however, do not share this assumption. One problem with the Molinist conception of CCFs, they say, is that it is not altogether clear how God could know these subjunctive conditionals given the kind of freedom they presuppose. After all, conditionals of this sort are supposed to be about the libertarian, and therefore *indeterministic*, free actions of persons. But if the circumstances in which *S* chooses to, say, do *A* are non-determining—as they must be if *S*'s choice is to be considered free—then nothing about the laws of nature or the state of the world leading up to the moment of *S*'s decision will be sufficient to guarantee that *S* chooses *A* rather than not-*A*. As Anthony Kenny notes, "for an indeterminist, points in any story where a free choice is made are precisely points where the story has two different and equally coherent continuations."[3] Thus a question naturally arises: What indication could God have, prior to *S*'s actual decision, that *S* would choose *this* way rather than *that* way?[4] While not

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[2] More specifically, Molina's theory was that, in addition to God's natural knowledge of everything that *could* be, and his free knowledge of all contingent truths that *will* be, God possesses "middle knowledge"—i.e., hypothetical knowledge of what, if he were to actualize a particular world, *would* be. On this picture, such knowledge is thought to be pre-volitional since, like God's natural knowledge, it occurs logically prior to his decision to create. But unlike his natural knowledge, which includes within its scope all *necessary* truths, the content of God's middle knowledge is *contingent*. Indeed, it was the great theological innovation of Molina to locate facts about what creatures would freely do in any circumstance—so-called *counterfactuals of freedom*—among the set of contingent truths that combine to comprise God's middle knowledge. Though he has no control over what counterfactual conditionals are true, the idea was that, by conceiving of God's hypothetical knowledge of creaturely free decisions as being explanatorily *prior* to his creative decree, God would be in a position to plan and thereby meticulously govern a world that is, nevertheless, populated by libertarian free agents.

[3] Anthony Kenny, *The God of the Philosophers* (Oxford: Clarendon, 1979), 68.

[4] A related worry has always been the question of what could explain or *ground* the truth of these conditionals. Such truths cannot be accounted for by appealing to God's will, for instance, since to do so would amount to theological determinism, something Molinists want to avoid. Nor would it seem that they could be made true by the actual decisions of the agents themselves; for CCFs are about *non-actual* persons, persons who do not yet exist (and in many cases will *never* exist). In the absence of any other candidates, however, it looks as if we are left with an unappealing conclusion, namely that *nothing* grounds these truths. This is, of course, the (in)famous "grounding problem." For a detailed and more formal articulation of this particular objection, see Alexander Zambrano, "Truthmaker and the Grounding Objection to Middle Knowledge," *Aporia* 21 (2011): 19-34; and William Hasker, "Counterfactuals and Evil: A Final Reply to R. Douglas Geivett," *Philosophia Christi* 5 (2003): 237-40. For a

absolutely decisive against the Molinist position, worries like this have proven serious enough that it has seemed to a growing number of philosophers that what is true (and hence knowable) prior to God's creative decree is not that *S* would or would not do *A* in *C* but, rather, that *S might* or *might not* do *A* in *C*.

One of the more interesting proposals to emerge along these lines has been a version of open theism called neo-Molinism.[5] According to the neo-Molinist, when it comes to the free actions of agents, God's middle knowledge cannot be assumed to pertain solely to what these agents "would" or "would not" do since such propositions—being *contraries* rather than contradictories—do not exhaust the range of possibilities. As I've discussed elsewhere,[6] on the standard counterfactual semantics employed by many Molinists, the contradictory of "*S* would do *A* in *C*" is not "*S* would not do *A* in *C*" but "*S* might not do *A* in *C*." Similarly, "*S* would not do *A* in *C*" is contradicted by "*S* might do *A* in *C*." Upon this basis the neo-Molinist goes on to insist that there is a logically distinct class of conjointly true "might and might not" propositions among the content of God's middle knowledge. That is, if it is true that *S* might do *A* in *C* and it is also true that *S* might not do *A* in *C*, then it is false that *S* would do *A* in *C* and, likewise, false that *S* would not do *A* in *C*. In other words, if *S* is genuinely free with respect to doing *A* under the circumstances in question, then there is a conjointly true "might and might not" conditional

sampling of Molinist responses to the grounding objection, see especially Thomas Flint, *Divine Providence: The Molinist Account* (Ithaca, NY: Cornell University Press, 1998), chap. 5; William Lane Craig, "Middle Knowledge, Truth-Makers, and the Grounding Objection," *Faith and Philosophy* 18 (2001): 337-52; and Edward Wierenga, "Providence, Middle Knowledge, and the Grounding Objection," *Philosophia Christi* 3 (2001): 447-57.

[5] The primary architect of this view (and the one responsible for its title) is Gregory Boyd. See Boyd, "Neo-Molinism and the Infinite Intelligence of God," *Philosophia Christi* 5 (2003): 187-204.

[6] Elijah Hess, "Arguing from Molinism to Neo-Molinism," *Philosophia Christi* 17 (2015): 331-51. See also my essay "The Neo-Molinist Square Stands Firm: A Rejoinder to Kirk MacGregor," *Philosophia Christi* 21 (2019): 391-406.

that represents this state of affairs (i.e., "If S were in C, S might and might not do A"), a conditional that negates both corresponding "would" and "would not" conditionals with the same antecedent. Supposing that God actualizes a world with persons capable of free choice, then, the resultant indeterminacy that obtains in God's middle knowledge from granting such a capacity would carry over into God's free knowledge as well. Among other things, the neo-Molinist argues, this would mean that the future is epistemically open for God.[7] In contrast to what the majority of Christian theists have supposed, therefore, given the neo-Molinist's framework, God would not know whether S is going to do in A or not-A in advance of S's decision—he would only know that S might or might not do A.

But here we come to an obvious worry: If God doesn't infallibly know what we are going to do on certain occasions, isn't his ability to act providentially in the world diminished? Indeed, critics of the open view often worry that, were the future open in the way that neo-Molinists and other open theists suppose, God's ultimate purposes for the cosmos could potentially be thwarted. As William Lane Craig puts it, "Knowledge of mere 'might' counterfactuals is insufficient to give God the sort of specific providential control described in the Bible. Nor is it clear that such knowledge is sufficient to bring about God's desired ends."[8] Similarly, Bruce Ware wonders whether, given openness presuppositions, "a believer [can] know that God will triumph in the future just as he promised he will."[9]

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[7] As Alan Rhoda defines it, the future is *epistemically open* at time t if and only if for some state of affairs X and some future time t^* neither the statement "X will obtain at t^*" nor "X will not obtain at t^*" (nor their tense-neutral counterparts) is infallibly known either (i) at t or (ii) timelessly. See Rhoda, "The Fivefold Openness of the Future," in *God in an Open Universe: Science, Metaphysics, and Open Theism,* eds. William Hasker, Thomas Jay Oord, and Dean Zimmerman (Eugene, OR: Pickwick, 2011), 75.

[8] William Lane Craig, "God Directs All Things: On Behalf of a Molinist View of Providence," in *Four Views on Divine Providence,* ed. Dennis W. Jowers (Grand Rapids, MI: Zondervan, 2011), 90-1.

[9] Bruce Ware, *God's Lesser Glory: The Diminished God of Open Theism* (Wheaton, IL: Crossway, 2000), 216.

Gregory Boyd, however, demurs. As a prominent open theist—and the foremost advocate of neo-Molinism today—Boyd has vigorously sought to blunt the force of such critiques. He writes,

> I believe that this criticism is completely without merit—at least if we grant that God is *infinitely intelligent*. If God's intelligence has no limit, then he can perfectly anticipate, from all eternity, each and every possible decision free agents might ever make. Indeed, an infinitely intelligent God is as prepared for every one of any number of possible future events as he would be for a single future event that was certain to take place.[10]

"With no limit to his intelligence," Boyd goes on to say, "God can anticipate and prepare for each and every possibility *as effectively as if it were a certainty*…It is evident, then, that the God of open theism knows the future just as effectively as the God of classical theism, who faces an eternally settled future."[11]

2. Is Infinite Intelligence Enough?

Though I was once sympathetic to the gesture, I have come to believe that the neo-Molinist's case has been overstated here. Without further argument, the claim that there is no distinction to be made between possibilities and certainties in terms of providential advantage for the God of open theism is false. For while it's true to say that God can perfectly envision any possibility, the problem is that Boyd goes further and says that God can be "as prepared for" any possible future event as he is for any certain future event. Here's why that claim won't work.

Suppose there are two possible indeterministic outcomes, *A* and *B*. Given openness assumptions, God does not know ahead of time which of these two outcomes will obtain. The neo-Molinist wants to say that God can nevertheless anticipate and be as prepared for *A* as he is

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[10] Boyd, "God Limits His Control," in *Four Views on Divine Providence*, 206.

[11] Ibid., 206-7 (my emphasis).

for *B*. Moreover, Boyd thinks that "because of God's infinite intelligence, it is irrelevant 'when' God knows what free agents would do in various situations…whether or not God is certain of what agents will do before they actually do it does not affect the perfection of God's preparedness in response to what they do."[12] On the neo-Molinist view, then, God is supposed to be thought of as being able to treat *A* as if it were certainly going to occur (and similarly for *B*).

But a moment's reflection will reveal that this can't be right. Contrary to what Boyd suggests, the time when God discovers which of these outcomes is going to obtain is not at all irrelevant to his level of providential preparedness. For it may be that the optimific response to each of these outcomes would require an element of activity that God would need to providentially implement *in advance* of their actual occurrence.[13] And, what's more, these responses might be mutually incompatible. The optimific response in preparation for *A*, say, might be X. But, arguably, the optimific response in preparation for *B* could be not-X. Thus, while God could confidently do X in anticipation of *A* if he were certain that *A* was going to occur, he cannot prepare an optimal response to the mere possibility of *A*'s occurrence if he's uncertain about whether *B* will occur instead. In other words, he cannot act as if *A* and *B* were each the *only* outcome he had to worry about since he cannot implement both X and not-X.

To illustrate the point, I borrow an example from David Hunt.[14] Imagine God is engaged in a game of rock-paper-scissors with Satan. He knows it is possible that Satan might play rock,

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[12] Boyd, "Neo-Molinism and the Infinite Intelligence of God," 199.

[13] The practice of so-called "past-directed prayer" (PDP) serves as just one example where this may be the case. James Anderson defines a PDP as a prayer that petitions God either (i) to have brought about some state of affairs at some time in the past or (ii) to bring about some state of affairs (now or in the future) that would require God to have brought about some (other) state of affairs at some time in the past (Anderson, "'May it Have Happened Lord!' Open Theism and Past-Directed Prayers," in *Philosophical Essays Against Open Theism*, ed. Benjamin Arbour [New York, NY: Routledge, 2018], 122-3). For a moving account of how at least one PDP appears to have been answered, see Helen Roseveare, *Living Faith: Willing to be Stirred as a Pot of Paint* (Scotland, UK: Christian Focus Publications, 2007), 56-8.

paper, or scissors. Can God be as prepared for any of these options as if they were the only option God had to worry about? No. For suppose God wants to win this game against Satan. If he acts as if it is certain that Satan will play rock, then God—if he is going to act optimally—will play paper. But he can't treat the possibility of Satan playing rock as a certainty *and* treat the possibility of Satan playing scissors (or paper) as a certainty as well for the simple reason that he can't play *both* paper *and* rock. The optimific responses are mutually exclusive.

Now in the game just imagined there are, of course, three possible moves available to Satan. Thus, God can't be guaranteed a win in this scenario since it is a genuine possibility that his move, whatever it happens to be, will be defeated. Hence, in addition to serving as a counterexample to Boyd's claim that, with respect to providential planning, God can treat possibilities as if they were certainties, hypothetical situations such as this also show that the *time* at which God comes to know what a free choice is going to be can serve as a relevant factor in assessing the overall utility of his providential activity; whether God knows ahead of time what the result of an indeterministic process will be, therefore, may bear directly on the level of effectiveness with which he can respond.

What can be said in response? Well, as I pointed out in my earlier paper on behalf of the neo-Molinist,[15] if we suppose that God is not willing to risk losing such a game then it may be that, from eternity past, he has opted to leave only *two* options open to Satan on this occasion. Such a response is in keeping with Boyd's idea that the parameters of creaturely freedom are set

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[14] See David Hunt, "The Providential Advantage of Divine Foreknowledge," in *Arguing About Religion* ed. Kevin Timpe (New York, NY: Routledge, 2009), 374-85. See also the exchange between William Hasker and Hunt in the *Journal of the Evangelical Theological Society* (JETS). Hasker, "Why Simple Foreknowledge is Still Useless (In Spite of David Hunt and Alex Pruss)," *JETS* 52 (2009): 537-44; Hunt, "Contra Hasker: Why Simple Foreknowledge is Still Useful," *JETS* 52 (2009): 545-50.

[15] Hess, "Arguing from Molinism to Neo-Molinism."

by God.[16] By allowing Satan to play just rock or scissors for instance, God could have set things up in such a way so as to preserve Satan's freedom, on the one hand, while at the same time guaranteeing that he never actually loses.[17] But, alas, what I realize now—and what I should have realized then—is that such an amendment is still inadequate to deliver the sorts of goods neo-Molinists like Boyd believe they can have on an infinite intelligence model of providence, namely, a guarantee that God will *win* in the end. Indeed, Boyd is emphatic that God can guarantee, for example, that there will be a group of people who freely choose to enter into a loving relationship with him, for, as he rightly notes, "Scripture unequivocally depicts God as certain that he will have a people for himself, a bride."[18] Quickly anticipating the inevitable objection, however, Boyd immediately writes "But if God did not predestine or at least foreknow that anyone in particular would accept his invitation, then, it might be argued, he simply could not be certain of this. It seems that God's goal for world history could fail and that Satan could win this conflict after all."[19] Boyd offers two lines of response to this objection, both of which I believe can be seen to fail.

The first response Boyd gives to the objector who holds that the God of open theism cannot be certain that anyone will freely come to him involves the idea that, though God cannot be certain that any one *specific* individual will accept his love, he can nevertheless be statistically guaranteed at the macro level that a *group* of unspecified individuals will come to be saved. As he puts it, "As Creator, [God] knows humans exhaustively, infinitely better than any human

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[16] Boyd, *Satan and the Problem of Evil: Constructing a Trinitarian Warfare Theodicy* (Downers Grove, IL: InterVarsity Press, 2001), 156.

[17] Hess, "Arguing from Molinism to Neo-Molinism," 336-7n13.

[18] Boyd, *Satan and the Problem of Evil*, 155.

[19] Ibid.

could ever know them. Now, if sociologists, advertisers, and insurance companies can

accurately predict the behavior of large groups of people under certain conditions, though they

are unable to predict the behavior of any particular individual within these groups, how much

more should we assume that God is able to predict the behavior of large groups of people over

long periods of time, that is, the whole human race throughout the whole of world history?"[20]

Boyd goes on to clarify that,

> [W]e need not suppose that God had an exact or fixed knowledge of the percentage of
> people who would and would not respond to his offer of grace in the event that humans
> fell. That is, his knowledge of this group behavior may be a wave probability, and this
> wave probability might fluctuate due to various contingencies over time. The objection
> we are considering, however, is avoided so long as this fluctuating wave probability
> could never include zero.[21]

The first problem with this line of response is that the ability to predict a group's

behavior with a great deal of accuracy is not equivalent to being infallibly *certain* that such

behavior will occur. Sociologists, advertisers, and insurance companies sometimes make

mistakes precisely because they, unlike God, are fallible knowers. Second, and more to the

point, Boyd's last sentence is simply false. The objection we are considering, after all, is that

God—given openness assumptions—cannot be certain that he will win against Satan. That is,

God cannot be guaranteed that some people will ultimately resist the devil's deceptions and

come to accept Christ. For suppose that Satan's "winning" of the rock-paper-scissors match

represents the possibility that Satan succeeds in preventing any individuals from coming to the

Lord. In other words, if Satan wins, no one is ultimately saved—if God wins, however, then

some are saved.[22] As mentioned above, if God is unwilling to accept the grim prospect that no

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[20] Ibid., 156.

[21] Ibid.

[22] By "some" I mean *at least one*.

one ultimately comes to him, he can ensure that he never actually loses to Satan by deciding to

enter into a 2x2 game (two players, two options) rather than the 2x3 game (two players, three

options) represented by the original rock-paper-scissors scenario. Again, by only leaving open to

Satan the options of rock or scissors, God, in choosing to play rock, could guarantee that he

won't lose. But here's the rub, *being guaranteed that one will not lose the game just described*

does not imply that one has thereby been guaranteed a win. On the contrary, it may be that God,

in choosing to play rock, simply "draws." So even if he can guarantee that Satan never

ultimately wins, it does not follow that God will emerge victorious in the sense advocated by

Boyd. Indeed, God could be stuck in a tied match throughout eternity with Satan if the Prince of

Darkness happened to freely choose rock every time they faced off.

This last point serves to rebut Boyd's second response to the objection that God could not

be certain that he will, in the end, have secured a people for himself if open theism is true. In

addition to his claim that God can be statistically assured that at least some will be saved, Boyd

suggests that, "the Lord could know from the start that he would certainly have a bride on the

basis of his perfect knowledge of *his own character and ability*."[23] He argues,

> As the biblical narrative testifies, [God] is the Lord of love who refuses to give up! Even
> if it were possible for entire generations completely to rebel against him, the Lord knew
> before he entered into this plan that he was willing to do whatever it took and to work for
> however long it might take to see his creation bear the fruit he was seeking. If he must
> delay consummating his plan to allow more people to enter into his eternal kingdom, he
> is willing to do this (see 2 Pet. 3: 9-10).[24]

At best, however, all the open theist can say here is that God is willing to grant an

indefinite amount of opportunities for people to make salvation decisions should humanity have

fallen. It may be thought that, given enough time, the likelihood that some will turn and be

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[23] Ibid.

[24] Ibid., 156-7.

saved becomes increasingly great as we approach infinity. Still, even granting such an assumption, God could not *infallibly know* that some will eventually turn to him. For as Johannes Grössl and Leigh Vicens have recently argued,[25] if for every person *S* and salvation opportunity *O* that is afforded *S*, it is metaphysically possible that *S* either chooses to resist or submit to God's call (given libertarian freedom), then it is metaphysically possible (however unlikely) that for every *S* and *O*, *S* chooses to resist God. It therefore remains the case that God's purposes for the cosmos—to have a people for himself—*could* never be realized.

The openness proponent may object that this is a problem for every free-will theist, whether one is an open theist, Molinist, or simple foreknowledge Arminian. On Molinism, for instance, the CCFs could have turned out such that no person in any circumstances in which they might be placed would freely accept Christ. If such a scenario obtained, there would be no feasible worlds for God to create in which his purposes are achieved. More radically, on the simple foreknowledge view, God runs the risk of not knowing whether anyone will freely accept his offer of salvation until *after* he decides to create a world.

In response, I think it is important to note the following distinction. While it is true that God cannot *himself* guarantee that anyone freely chooses to repent on libertarian conceptions of salvation, in contrast to the open view, God can—at least theoretically—*be* guaranteed that some will be saved on both the Molinist and simple foreknowledge scheme. If, for example, there *are* true CCFs that indicate some persons would accept Christ, then the Molinist God, in actualizing the circumstances specified in the relevant counterfactual's antecedent, could know logically prior to his creative decree that he would have a people for himself. Similarly, on the simple foreknowledge view, if upon creating the world *it turns out to be true* that some will freely

[25] See Johannes Grössl and Leigh Vicens, "Closing the Door on Limited-Risk Open Theism," *Faith and Philosophy* 31 (2014): 475-85.

accept his offer, God could know this immediately consequent to his creation and, thus, infallibly

know all who will be saved ahead of time. Molinists and simple foreknowledge Arminians can

both affirm with confidence, then, that when John wrote of those who would one day come to

worship before the Lord—individuals from every nation, tribe, people, and language—the divine

source of John's vision was capable of knowing this (Revelation 7:9). God, who is essentially

omniscient, was able to infallibly know that all these people were eventually going to come to a

saving knowledge of him because, apparently, this is what was true at the time of John's writing

(22:6). Since this sort of infallible foreknowledge is not even a theoretical possibility within

open theism, it is difficult to see how Boyd's neo-Molinist position can account for passages

such as this.

3. Potential Open Theistic Responses

Difficult, but perhaps not impossible. For it could be the case that the biblical passages

referenced above are, in fact, *conditional* in nature. That is, despite being *stated* in unconditional

terms, certain prophecies may nevertheless have an implicitly conditional aspect. To illustrate,

consider the following passage from the book of Isaiah:

> In those days Hezekiah became sick and was at the point of death. And Isaiah the
> prophet the son of Amoz came to him, and said to him, 'Thus says the Lord: Set your
> house in order, for you shall die, you shall not recover.' Then Hezekiah turned his face to
> the wall and prayed to the Lord, and said, 'Please, O Lord, remember how I have walked
> before you in faithfulness and with a whole heart, and have done what is good in your
> sight.' And Hezekiah wept bitterly. Then the word of the Lord came to Isaiah: 'Go and
> say to Hezekiah, Thus says the Lord, the God of David your father: I have heard your
> prayer; I have seen your tears. Behold, I will add fifteen years to your life. I will deliver
> you and this city out of the hand of the king of Assyria, and will defend this city' (38:1-6,
> English Standard Version).[26]

What's important to note about this passage is that God is depicted as giving an

unconditional declaration to Hezekiah ("…you *shall* die, you *shall* not recover"). And, yet,

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[26] Cf. 2 Kings 20:1-6.

Hezekiah does not die. Since God can't lie (Titus 1:2; Heb. 6:18), his initial statement was arguably a disguised conditional—*if* things remain as they are, *then* you shall not live. Hezekiah's response, though, introduced a change in the situation, one that God apparently let influence him to alter Hezekiah's pronounced fate. Indeed, that God sometimes allows seemingly unconditional declarations to be conditioned on how people respond is something he explicitly affirms in the book of Jeremiah:

> If at any time I declare concerning a nation or a kingdom, that I will pluck up and break down and destroy it, and if that nation, concerning which I have spoken, turns from its evil, I will relent of the disaster that I intended to do to it. And if at any time I declare concerning a nation or a kingdom that I will build and plant it, and if it does evil in my sight, not listening to my voice, then I will relent of the good that I had intended to do to it (18:7-10, English Standard Version).

So, while the texts concerning John's vision in Revelation may *appear* to be couched in no uncertain terms, there is at least some biblical precedent for understanding such passages to be conditional in nature. At any rate, this is what I believe an open theist *should* argue.[27] Regardless, it remains the case that Boyd will need to back off the claim that God, from the foundation of the world, could infallibly know that he would win in the end. For even though Scripture may depict God as being certain that people from every nation will come to repentance, if this outcome is dependent on the free responses of individuals, the consistent open theist will, I think, have to concede that such an outcome is (i) implicitly conditional, and that (ii) the antecedent of the conditional in question is not known by God in advance. Of course, the Molinist and simple foreknowledge Arminian can also affirm (i). But they have the added providential advantage of not having to also affirm (ii).

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[27] For one example of such an argument, see James Goetz's book *Conditional Futurism: New Perspective of End-Time Prophecy* (Eugene, OR: Resource Publications, 2012).

There is a legitimate question, though, concerning just how *much* of a providential advantage the simple foreknowledge advocate has over the open theist. For while I believe Hunt's rock-paper-scissors example is successful in demonstrating that there is at least *some* advantage to be had, it is unclear how far this advantage extends when applied to less artificial cases.

By way of example, consider the biblical prophecy about king Cyrus. In the twenty-fifth chapter of Jeremiah it is reported that, as a consequence of its rebellion against God, the Lord said the kingdom of Judah would be taken into Babylonian captivity for a period of seventy years (25:12). Wayne Jackson comments that,

> After a series of devastating campaigns, Judah fell; the city and temple were destroyed in 586 B.C…In 536 B.C., however, Babylon fell to the Persians. The new Persian monarch was Cyrus. According to the biblical record, Cyrus issued a decree authorizing the Jews to return to their homeland. In the decree, Cyrus affirmed that 'Jehovah, the God of heaven,' had given him the kingdoms of the earth; further, wrote Cyrus, 'he [God] had charged me to build him a house in Jerusalem which is in Judah' (Ezra 1:2).[28]

The interesting thing about this ordeal is that it had been foretold by the prophet Isaiah around 140 years earlier. "I am the Lord," God declares through Isaiah, "who says of Cyrus, 'He is my shepherd, and shall fulfill all my purpose;' saying of Jerusalem, 'She shall be built,' and of the temple, 'Your foundation shall be laid'" (44: 24, 28). Isaiah continues, "Thus says the Lord to his anointed, to Cyrus…'I call you by your name, I name you, though you do not know me…he [Cyrus] shall build my city and set my exiles free, not for price or reward,' says the Lord of hosts" (45: 1-13).

Boyd and other open theists recognize prophecies such as this and accept them as authentic. According to Boyd though, God can know what's going to happen because, in cases like this, he has decided to curb the freedom of the individuals in question so that he might

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[28] Wayne Jackson, "Ezra 1:2—Cyrus the Deliverer," *ChristianCourier.com* (accessed 6/6/2020): https://www.christiancourier.com/articles/823-ezra-1-2-cyrus-the-deliverer.

bring about his specific purpose and desire. "In these cases," Boyd writes, "it seems that for providential reasons the Lord determined that he would exert whatever influence was necessary to accomplish these tasks through these individuals. The libertarian freedom of these individuals was thus restricted to this extent ahead of time."[29]

Hunt thinks that the simple foreknowledge advocate has a clear advantage here. Concerning the case of Cyrus, Hunt proclaims that, unlike the open theist's account, God needn't restrict Cyrus's freedom to accurately foretell what was to transpire; he simply foreknows what shall take place and, on the basis of this foreknowledge, reveals the relevant information to his prophet. Thus, Hunt claims that Boyd and other open theists find *less* free agency at work in the case of Cyrus than the simple foreknowledge advocate does.[30]

It seems to me, however, that Hunt is wrong about this. For as Hunt has elsewhere argued, any providential use of foreknowledge needs to avoid the following metaphysical principle (hereafter MP).

> (MP): It is impossible that a decision depend on a belief which depends on a future event which depends on the original decision.[31]

To violate MP is to posit a vicious explanatory loop—that is, an explanatory circularity that Hunt and many others suspect to be incoherent. What I want to suggest is that, when the relevant details are examined, a simple foreknowledge reading of the prophecy concerning Cyrus results in a violation of MP. The details I have in mind are provided by the first-century Jewish historian Flavius Josephus. In his work *The Antiquities of the Jews*, Josephus recounts how

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[29] Boyd, *Satan and the Problem of Evil*, 121 n7. Cf. Idem, "The Open-Theism View," in *Divine Foreknowledge: Four Views*, James K. Beilby and Paul R. Eddy eds. (Downers Grove, IL: InterVarsity Press, 2001), 19-20.

[30] Hunt, "A Simple-Foreknowledge Response," in *Divine Foreknowledge: Four Views*, eds. James K. Beilby and Paul R. Eddy (Downers Grove, IL: InterVarsity Press, 2001), 53.

[31] Hunt, "Divine Providence and Simple Foreknowledge," *Faith and Philosophy* 10 (1993): 398.

Cyrus came to know that he had been called by God to rebuild Jerusalem and its temple.

Josephus writes,

> This was known to Cyrus by his reading of the book which Isaiah left behind him of his prophecies; for this prophet had said that God had spoken thus to him in a secret vision:—'My will is, that Cyrus, whom I have appointed to be king over many and great nations, send back my people to their own land, and build my temple.' This was foretold by Isaiah one hundred and forty years before the temple was demolished. Accordingly, when Cyrus read this, and admired the divine power, an earnest desire and ambition seized upon him to fulfill what was so written; so he called for the most eminent Jews that were in Babylon, and said to them, that he gave them leave to go back to their own country, and rebuild their city Jerusalem, and the temple of God, for that he would be their assistant, and that he would write to the rulers and governors that were in the neighborhood of their country of Judea, that they should contribute to them gold and silver for the building of the temple, and, beside that, beasts for their sacrifices.[32]

Now, the simple foreknowledge advocate would have us believe that God, on the basis of his foreknowledge that Cyrus would let the Jews return to their homeland, simply decided to reveal this to his prophet Isaiah. But according to the historical details provided by Josephus, Cyrus was prompted to do what was prophesied about him *because* of the prophecy. So, we have an explanatory loop: God's decision to foretell the event of Cyrus's decree depends on his belief that Cyrus was going to issue the decree, an event that occurs because of—and thus depends on—God's original decision to issue the prophecy. I submit that this is a straightforward breach of MP.

To avoid metaphysical incoherence, the simple foreknowledge proponent must offer the same sort of explanation the open theist does for this prophecy. But, then, *mere* foreknowledge of the future does not provide God with any providential advantage in this case. Still, it is possible that such foreknowledge would offer God an advantage in *other* circumstances described in the Bible. Whether this is true, though, will have to be assessed on a case-by-case

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[32] Flavius Josephus, *The Antiquities of the Jews* (11.1.2), in *Josephus: The Complete Works*, trans. William Whiston (Nashville, TN: Thomas Nelson, 1998), 343.

basis.[33]

4. Conclusion

Though I remain convinced that the nature of libertarian freedom would likely preclude a traditional Molinist conception of middle knowledge, I've come to believe that the alleged providential utility the neo-Molinist account of divine providence is often advertised to provide via the infinite intelligence argument doesn't work. Given openness assumptions, it is not the case that God can prepare for every possibility as effectively as if he were certain it was going to happen. Nor is it the case that he could be guaranteed, even in principle, that his ultimate purposes for creation would be fulfilled when those purposes depend on the decisions of libertarian free agents. When examined in light of actual biblical cases, however, it is not clear how much providential advantage is actually conferred on a God endowed with simple or *mere* foreknowledge. Nevertheless, it seems to me that a God who has infallible foreknowledge of what his creatures will freely do at least has a *potential* advantage, providentially speaking, to the God of neo-Molinism.

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[33] For other investigations into the extent that simple foreknowledge may or may not bolster God's providential control, see Alexander Pruss, "Prophecy Without Middle Knowledge," *Faith and Philosophy* 24 (2007): 433-57. For a critique of Pruss, see Joseph Corabi and Rebecca Germino's "Prophecy, Foreknowledge, and Middle Knowledge," *Faith and Philosophy* 30 (2013): 72-92. See also Dean Zimmerman, "The Providential Usefulness of 'Simple Foreknowledge'" in *Reason, Metaphysics, and Mind: New Essays on the Philosophy of Alvin Plantinga*, eds. Kelly James Clark and Michael Rea (Oxford: Oxford University Press, 2012), 174-96.

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CHAPTER 5

CONTRA TOOLEY: DIVINE FOREKNOWLEDGE IS POSSIBLE

Elijah Hess

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Abstract: Michael Tooley's latest argument against the possibility of divine foreknowledge trades on the idea that, whichever theory of time is true, the ontology of the future—or lack thereof—gives rise to special problems for God's prescience. I argue that Tooley's reasoning is predicated on two mischaracterizations and conclude that, on at least some theories of time, the possibility of divine foreknowledge appears secure.

1. Introduction

Consider the following argument:

(1) Necessarily, if God believes that Sally will eat an apple, then Sally will eat an apple.

(2) God believes that Sally will eat an apple.

Therefore,

(3) Sally will eat an apple.

Suppose, though, that Sally's choice of snack is a contingent event, one that is neither determined by God nor by the world's causal history or its laws of nature. Certain philosophers over the years have maintained that such an account would rule out the possibility of God knowing ahead of time whether Sally will, in fact, eat the apple in question. Indeed, these philosophers have generally argued that (2) could be true only if Sally's choice were *not* contingent.[1]

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[1] The literature on this subject is massive. For a helpful overview of the many issues surrounding this debate, see Patrick Todd and John Martin Fischer's introductory essay in *Freedom, Fatalism, and Foreknowledge*, eds. John Martin Fischer and Patrick Todd (Oxford: Oxford University Press, 2015), 1-38. The arguments against divine

Michael Tooley's latest argument against the possibility of divine foreknowledge, however, is relevantly different.[2] Instead of arguing that God's prescience would somehow undermine the contingency of Sally's choice, Tooley claims that in order for divine foreknowledge of future contingent events to be possible, such events would have to causally give rise to beliefs, or belief-like states, in the mind of God at earlier times. But given a correct account of the ontology required for cause-effect relationships, backward causation is not possible on most dynamic theories of time. Consequently, divine foreknowledge is not possible on most dynamic theories of time. Those theories of time where backward causation is at least theoretically possible, however, end up allowing for the possibility of "under-cutting" causal loops, loops that, given his omnipotence, God would presumably be able to initiate in ways that produce contradictory states of affairs. Since nobody can bring about a contradiction, God, it turns out, does not have access to the sort of power that initially seemed to make foreknowledge possible on these theories of time. The upshot is that, no matter which theory of time is correct, divine foreknowledge of future contingents is impossible.

In this paper, I argue that Tooley's argument is predicated on two mischaracterizations. Following recent work in the metaphysics of grounding, I argue, first, that the dependence relation between future contingent events, on the one hand, and God's knowledge of those events on the other, is not one of causal dependence but, rather, *metaphysical* dependence. Second, I argue that, given God's essential infallibility, Tooley's conception of what ought to be possible

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foreknowledge that I will be considering in this paper, however, are distinct from those presented in standard works on the topic. Consequently, I will not be engaging with very much of that literature here.

[2] Michael Tooley, "Time, Truth, Actuality, and Causation: On the Impossibility of Divine Foreknowledge," *European Journal for Philosophy of Religion* 1 (2010): 143-63.

for an omnipotent being is not required by omnipotence at all. The result is that, on at least some

theories of time, the possibility of divine foreknowledge appears secure.

2. Differentiating Theories of Time

Before evaluating Tooley's argument against the possibility of divine foreknowledge, I

first need to introduce a bit of terminology that will help delineate the various theories of time

Tooley considers throughout his argument. All mainstream views concerning the nature of time

either take the future to be ontically open or ontically closed. The future may be said to be

"ontically open" relative to time t if and only if the world state at t does not stand in an *earlier*

than relation to a unique and complete series of subsequent world states.[3] For example, any

model of time that holds the future to be unreal—such as presentism or, say, the growing

block—would qualify as positing an ontically open view of the future.[4] In contrast, so-called

eternalist and moving spotlight theories of time take the future to be just as real as the present.[5]

According to these models, my future death is an event that exists at some time "up ahead" of

me. That event is just as much a part of the ontological furniture of the world, so to speak, as my

fingers typing this sentence are now. Since these theories hold that, relative to the current

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[3] This definition comes from Alan Rhoda's essay, "The Fivefold Openness of the Future," in *God in an Open Universe: Science, Metaphysics, and Open Theism*, eds. William Hasker, Dean Zimmerman, and Thomas Jay Oord (Eugene, OR: Pickwick, 2011), 73.

[4] Technically, Storrs McCall's so-called "branch attrition" model of time—according to which each one of a great many possible future states exist—also counts as an ontically open future view since, as Rhoda points out, there is no *unique* series of future world states (Ibid., 74). Details can be found in McCall, *A Model of the Universe: Space-Time, Probability, and Decision* (Oxford: Oxford University Press, 1994). For defenses of presentism and the growing block see, e.g., Craig Bourne, *A Future for Presentism* (Oxford: Oxford University Press, 2006) and Michael Tooley, *Time, Tense, and Causation* (Oxford: Oxford University Press, 1997) respectively.

[5] Barry Dainton provides an excellent treatment of the eternalist position in *Time and Space* 2nd edition (Montreal & Kingston: McGill-Queen's University Press, 2010), 27-41. For a recent explication and defense of the moving spotlight theory, see especially Ross Cameron, *The Moving Spotlight: An Essay on Time and Ontology* (Oxford: Oxford University Press, 2015).

moment, there *is* a unique and complete series of subsequent world states, such understandings of time posit an ontically closed or settled future.

More commonly, though, presentist, growing block, and moving spotlight views are referred to as "dynamic" or "A-theories" of time. Alternatively, eternalism is often called the "static" or "B-theory" of time. The former theories take our phenomenological experience of temporal passage to be an objective feature of reality, whereas the latter does not. Common as these designations are, however, they fail to capture the distinction that is relevant to the argument under consideration. For as we'll see below, what's important for Tooley's argument is the idea that, whichever view of time one takes, it's the ontology of the future—or lack thereof—that allegedly creates special problems for God's foreknowledge.

3. Tooley's Argument Against Divine Foreknowledge

With the foregoing distinctions in place, it's time to look at Tooley's argument. The first part of Tooley's reasoning against the prescience of God runs like this. Backward causation is required for divine foreknowledge. But backward causation is not possible on an ontically open future. Therefore, divine foreknowledge is not possible on an ontically open future.

This initial segment of the argument is based on Tooley's understanding of causation. And, in many ways, it's a very natural one. If Sally is freely eating an apple right now and God knew yesterday that Sally was going to eat it, then it's quite natural to think that Sally's activity is causally responsible for God's past mental state. After all, it's not divine knowledge that makes Sally do what she does in this case, but the other way around. It's because Sally does what she does that God believed what he did. As Tooley notes, divine foreknowledge "requires that God's beliefs about the future are *counterfactually dependent* upon the future events in

question, since if some future event had not occurred, God would not have believed that it was going to occur."[6]

This seems exactly right. If Sally had decided to forgo eating the apple and had opted, instead, for string cheese, then God would not have believed that she was going to eat an apple. Indeed, Tooley claims that a correct analysis of counterfactuals is a *causal* one. Specifically, Tooley thinks that God's belief about what Sally is going to eat is an effect that is counterfactually dependent upon a certain cause, namely Sally's act of eating. Because of this, he argues, "Divine foreknowledge of future contingent events requires that those events causally give rise to God's beliefs about them."[7] Hence if God genuinely knew ahead of time what Sally would eat, then, given a causal account of the counterfactual dependence in question, it follows that God's foreknowledge of this event required backward causation.

The above analysis generalizes to all cases where divine foreknowledge of future contingents is in view. The problem though is that, given what Tooley takes to be the best account of cause-effect relationships, backward causation is not possible on any theory of time with an ontically open future. For, as Tooley has argued elsewhere, a cause must be actual as of the time of its effect.[8] On most dynamic models of time, however, a unique actual future does not exist. For instance, according to presentist and growing block views of the nature of time, there is no future ontology and therefore no future states of affairs. On these views, then, future contingent events cannot causally give rise to earlier beliefs in the mind of God, since no future contingent event is actual as of any earlier time.

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[6] Tooley, "Time, Truth, Actuality, and Causation," 154. (my emphasis)

[7] Ibid.

[8] The argument is part of a larger case Tooley makes for the reality of a growing block model of time in his book *Time, Tense, and Causation*.

Despite the difficulties that these theories of time pose for divine foreknowledge, Tooley goes on to observe that God could at least potentially foreknow future contingents on *other* models of time. For example, according to both eternalist and moving spotlight views, the future is ontically closed rather than open. This is because, on each of these theories, all times, whether past, present, or future—as well as the states of affairs that obtain at them—are equally real. Given these conceptions of reality there is a unique actual future, an ontology where future events exist and can therefore theoretically stand in causal relations with earlier events. This leads Tooley to entertain the idea that backward causation is potentially possible on an ontically closed future.

But now a new worry crops up. For if a world with an ontically closed future is one where backward causal processes can connect with forward causal processes, and vice versa, then there is the potential for what we might call "under-cutting" causal loops. David Lewis illustrates the problem nicely in his paper "The Paradoxes of Time Travel." There, Lewis describes the following time travel case:

> Consider Tim: He detests his grandfather, whose success in the munitions trade built the family fortune that paid for Tim's time machine. Tim would like nothing so much as to kill Grandfather, but alas he is too late. Grandfather died in his bed in 1957, while Tim was a young boy. But when Tim has built his time machine and traveled to 1920, suddenly he realizes that he is not too late after all. He buys a rifle; he spends long hours in target practice; he shadows Grandfather to learn the route of his daily walk to the munitions works; he rents a room along the route; and there he lurks, one winter day in 1921, rifle loaded, hate in his heart, as Grandfather walks closer, closer…[9]

What would happen if Tim were to pull the trigger? According to Tooley, what would have been the case if Tim killed Grandfather is fixed by what follows in virtue of causal laws from the proposition that Tim killed Grandfather combined with propositions that describe the

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[9] David Lewis, "The Paradoxes of Time Travel," *American Philosophical Quarterly* 13 (1976): 149.

minimally modified world at the time in question, or shortly before it, which is such that Tim kills Grandfather. "But when this approach to counterfactuals is adopted," Tooley writes, "the combination of causal laws and the propositions describing that minimally modified world certainly seem to entail Tim's non-existence."[10]

The problem that the above situation presents for divine foreknowledge is supposed to be this. If someone like Tim, with access to backward causal processes, can potentially bring about a contradictory state of affairs, then surely God, as an omnipotent being, could too. For if God at some time has foreknowledge of the fact that Sally will eat an apple in the future, and has that foreknowledge because Sally's activity brings about, via backward causation, God's belief that Sally will eat it, then God, at the earlier time, has the power to make a contradiction true, for being omnipotent, he certainly has the power to prevent Sally from eating an apple at the time in question.

But, of course, nobody can make a contradiction true. And hence nobody can access any causal power that might enable them to bring about a contradiction. It turns out then that, even on an ontically closed future, God doesn't have access to the sort of causation needed for foreknowledge. It therefore follows that divine foreknowledge is not possible on any theory of time.

4. Tooley's Argument Considered

Or so Tooley says. But consider again the first step of Tooley's argument. Backward causation is required for divine foreknowledge, Tooley claims, because the contingent truths God is said to foreknow are, like his cognitive state, counterfactually *dependent* on the relevant events—a dependence relation that is supposedly causal in nature. But I think this is a misstep.

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[10] Tooley, "Time, Truth, Actuality, and Causation," 159.

For although God's foreknowledge can be described as counterfactually depending on future

events, counterfactual dependence is arguably subsumed under a broader, more generic notion of

dependence. This notion of dependence has come to be termed "explanatory dependence."

Following the work of Fabrice Correia and others, Philip Swenson has recently observed that,

like necessity, explanatory dependence comes in different varieties. "Just as we have logical,

conceptual, metaphysical, and natural necessity," he says, "we also have corresponding types of

explanatory dependence."[11] Swenson goes on to offer the following examples from the literature

(where "*A* because *B*" means "*A* explanatorily depends on *B*"):

> *Logical:*   Sam is ill or 2+2 = 5 because Sam is ill.
> *Conceptual:*   The vase is colored because it is red.
> *Metaphysical:* The set {Socrates} exists because Socrates exists.
> *Natural:*   Sam died because John stabbed him in the heart.[12]

Note, however, that of the dependence relations just described, only the last is plausibly

causal in nature. The question, then, is whether God's foreknowledge of future contingents is

best thought of in terms of natural explanatory dependence. And here, I think, the defender of

divine foreknowledge is well within her rights to say that the relation between future contingent

events, on the one hand, and God's knowledge of those events on the other, is not one of natural

or causal dependence. After all, whatever other kinds of knowledge God may have, in contexts

where divine foreknowledge is under discussion it is generally *propositional* knowledge that is in

view. For instance, in keeping with our above example, suppose an eternalist theory of time is

correct and Sally eats an apple at time *t*. Suppose, further, that at some earlier time, God exists

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[11] Philip Swenson, "Ability, Foreknowledge, and Explanatory Dependence," *Australasian Journal of Philosophy* 94 (2016): 660.

[12] Ibid. The examples Swenson cites come from Correia, *Existential Dependence and Cognate Notions* (Munich: Philosophia Verlag, 2005); idem, "Ontological Dependence," *Philosophy Compass* 3 (2008): 1013-32, and Benjamin Sebastian Schnieder, "A Certain Kind of Trinity: Dependence, Substance, Explanation," *Philosophical Studies* 129 (2006): 393-419.

and believes Sally will eat the fruit in question. If Sally were to refrain from consuming an apple at *t*, then a true proposition *p* stating that Sally does eat an apple at *t* would have been false. And, necessarily, if *p* had been false, then God would not have believed that Sally was going to eat it. Hence, what God foreknows concerning Sally counterfactually depends on what Sally does. But this is arguably *metaphysical* dependence. On an eternalist theory of time, Sally's behavior non-causally makes the relevant proposition about her behavior true. I say "non-causally" because, like sets and numbers, propositions—if such entities exist—are abstract and thus do not stand in causal relations.[13] Backward causation, therefore, is not necessary for divine foreknowledge to be possible. So, Tooley's argument is unsound.

5. Tooley's Additional Argument Against Divine Foreknowledge

Aside from questions concerning causality and the nature of time, however, it turns out that Tooley believes a more general insight can be gleaned from his initial argument. This insight, he avers, points toward a distinct argument against the possibility of divine foreknowledge that is based, not on causation, but on divine *omnipotence*. Whatever view of time we adopt, Tooley argues,

> divine foreknowledge requires that contingent future events can [somehow] give rise to beliefs, or belief-like states, in the mind of God, and God, being omnipotent, can then act on the world to bring about a state of the world at some time prior to the contingent, future event in question, where the state is such as to rule out the occurrence of the contingent, future event in question…[thus] divine foreknowledge would entail God's having the power of making contradictions true. But it is logically impossible for

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[13] One candidate relation between a true proposition *p* and the state of affairs that makes *p* true, of course, is the truthmaker relation. For a clear statement on the non-causal nature of truthmakers, see D. M. Armstrong's *Truth and Truthmakers* (Cambridge: Cambridge University Press, 2004), 5. Linda Zagzebski has also recognized that counterfactual dependency needn't be causal. She writes, "Counterfactual dependency of the past on the future may not entail causal dependency of the past on the future or, to be more accurate, a type of dependency of the past on the future truly expressed by a subjunctive conditional may not entail causal dependency." Zagzebski, *The Dilemma of Freedom and Foreknowledge* (Oxford: Oxford University Press, 1991), 81.

contradictions to be true, and so it is logically impossible for there to be such a power. Accordingly, divine foreknowledge is logically impossible.[14]

6. Tooley's Additional Argument Considered

To see what's wrong with this line of reasoning, recall Tooley's earlier recognition that God's foreknowledge of X is counterfactually dependent on X. As he notes, if X had not occurred, God would not have believed that X was going to occur. Here, Tooley is tacitly assuming for the sake of argument that God is *infallible*. And, of course, many theists would agree with this conception of the divine nature. Indeed, God's infallibility is what undergirds the truth of premise (1) in the argument considered at the beginning of this paper. So, if God believes that X will occur, then X will occur without fail. What would happen then if, as an infallible and omnipotent being, God were to intervene at some time prior to X's occurrence in such a way as to ensure that X does *not* come to pass? Contrary to what Tooley suggests, it does not appear that a contradiction would follow. More plausibly, if God were to act in such a way, then God would not have believed that X was going to occur since *it would not have been true* that X was going to occur. In other words, it is arguably the case that God's foreknowledge already encompasses all that has and ever will take place in the world, including everything that God, by his omnipotence, has done or ever will do. Divine prescience, then, would not entail that God has the power to make contradictions true. For if God knows that X is going to occur, then regardless of what he *could* do to prevent X, as a matter of fact, he has simply chosen not to act in such a way as to prevent X from occurring.

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[14] Tooley, "Time, Truth, Actuality, and Causation," 161.

7. Conclusion

So far as I can see, then, God's foreknowledge neither requires backward causation nor the uncanny ability to make contradictions true. On an eternalist theory of time anyway, a being who knows all and only truths may be said to foreknow an event because the event itself non-causally makes a certain proposition about what happens at the relevant date true. Moreover, being infallible, God is certain that the event shall come to pass—all the while knowing that, though he could choose to prevent it, he has not exercised his omnipotence toward that end. Whatever other difficulties there may be for divine prescience, therefore, I submit that Tooley has not uncovered any here.[15]

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CHAPTER 6

WHY THE ABILITY TO DO OTHERWISE REQUIRES AN OPEN FUTURE

Elijah Hess

This paper is currently in preparation for submission

Abstract: Most philosophers believe that the future can, in principle, be exhaustively described in terms of what *will* or *will not* occur. I argue that this view of the future is inconsistent with a common requirement for incompatibilist freedom—namely, the ability to do otherwise. More specifically, I argue that having alternative possibilities available to choose from at any given time requires the future to be indeterminate or open at that time rather than settled. Given that many incompatibilists believe a person has free will only if such a person could have done other than they did, this result is significant. For it would mean that many incompatibilists who think we occasionally act freely should reject a widespread assumption about the nature of the future.

Most philosophers regard the future to be completely determinate or *settled*. Despite our epistemic limitations that often hinder us from knowing what shall come to pass, they say, there is nevertheless a fact of the matter concerning what will be. Hence most theorists take what we might call the truth-settledness of the future for granted. Formally defined, the future is settled with respect to truth at time *t* if and only if for any event or state of affairs X and future time *t**, either the statement "X will obtain at *t**" or the statement "X will not obtain at *t**" is true at *t*.[1]

Such a view of the future, however, is arguably inconsistent with the so-called alternative possibilities condition (hereafter AP) that many libertarians think is necessary for free choice.

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[1] Or, given an eternalist theory of time, either of their tense-neutral counterparts, "X does obtain at *t**" or "X does not obtain at *t**," is true *simpliciter*. Such a definition draws on the work of Alan Rhoda ("The Fivefold Openness of the Future," in *God in an Open Universe: Science, Metaphysics, and Open Theism*, ed. William Hasker, Thomas Jay Oord, and Dean Zimmerman [Eugene, OR: Pickwick, 2011]), who refers to this concept as the *alethic* settledness of the future.

According to AP, a person is free with respect to doing X only if they have both the ability and opportunity to do other than X.[2] To see why AP is inconsistent with the truth-settledness of the future, consider a possible world W consisting of two times: t_1 and t_2, where t_1 is earlier than t_2. Suppose a person A exists at t_1 and will later perform some action X at t_2. If A's choice to do X is made freely (in a manner incompatible with determinism), then proponents of AP will insist that there's another possible world—say, W^*—with the same set of laws and causal history as W, in which A refrains from doing X at t_2. So, like all theorists who take a settled view of the future for granted, libertarians who think the future is fully determinate will contend that one of two possible situations obtains at t_1:[3]
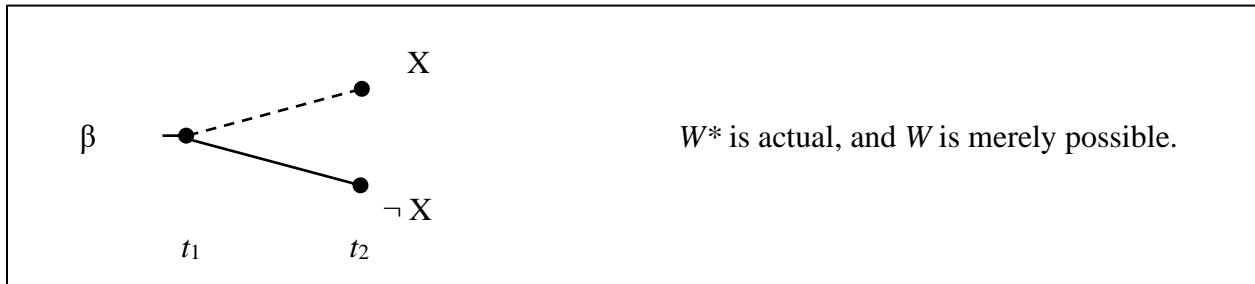
ALPHA

α

W is actual, and W^* is merely possible.

t_1 t_2

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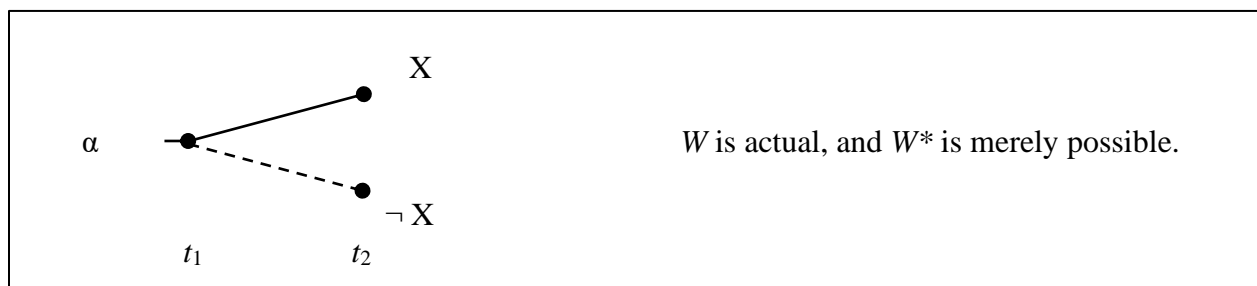
[2] Indeed, merely having the ability to do some action would not amount to much if one did not also have an opportunity to *exercise* that ability. A concert pianist, for example, might have the ability to play *Claire de lune* but, without a piano present, he does not have the opportunity to perform Debussy's popular composition. Consequently, a pianist in such a situation cannot freely play the piece. Nor can it be said that he's freely refraining from playing, for under the circumstances he cannot help but *not* play. Thus, as I shall understand it, if one lacks the opportunity to do other than X, then, given the spirit of AP, they're not doing X freely. For a helpful discussion of AP and its relation to other accounts of free will, see especially Kevin Timpe, *Free Will: Sourcehood and Its Alternatives* 2nd ed. (New York, NY: Bloomsbury, 2013).

[3] I refer to possible "situations" at this point instead of possible worlds because, unlike the restricted scope of individual worlds, a possible situation may have implications that bear upon more than one world.

$W*$ is actual, and W is merely possible.

Both ALPHA and BETA represent situations in which each possible world has a distinct

mode of reality. In each situation, one possibility is actual and the other is *merely* possible, i.e.,

possible but *not* actual. The solid line pertains to which world is actual. It represents the idea

that, as of t_1, the event or state of affairs in question is a settled fact, something that is

determinately going to happen at t_2. In contrast, the dotted line indicates which world is merely

possible. As such, the future event or state of affairs it pertains to is not, as of t_1, settled or

definitely set to occur.[4]

Now, in keeping with our above example we're supposing that ALPHA obtains rather

than BETA. But why would this be the case? That is, why would it be ALPHA that represents

the true state of things at t_1 instead of BETA? A popular line of response among libertarians is to

claim that this fact is accounted for, at least in part, by A's action.[5] Specifically, it is *because* of

A's choice to do X that W is actual rather than $W*$. Whether W or $W*$ obtains, then, is contingent

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[4] Thus, from the idealized perspective of one who knew all truths (e.g., God), the branch corresponding to the actual world would appear "lit up" with what Nuel Belnap and Mitchell Green have called "the thin red line," indicating that *it* is the branch that uniquely will obtain—the one that, in contrast to all the others, is such that it is *going to happen*. See Belnap and Green, "Indeterminism and the Thin Red Line," *Philosophical Perspectives*, vol. 8, in *Logic and Language*, ed. James Tomberlin (Atascadero, CA: Ridgeview Publishing Co., 1994).

[5] This is so regardless of whether one holds to an agent-causal or event-causal account of free action. According to the latter account, a free action is caused by events involving the agent, such as his having certain beliefs, desires, reasons, or intentions. In contrast, on the former account, a free action is thought to be caused not by an event but by the agent himself.

upon what A does. Unlike competing accounts of freedom within deterministic frameworks, it is not A's action that is caused by the state of the world, but the other way around.

If this is right, then the asymmetry between W and W^* exhibited in ALPHA is explanatorily *dependent* on A's action.[6] Alternatively, if A had decided not to do X at t_2, then the asymmetry exhibited in BETA would have obtained instead. Thus, in either situation, A's action is (partly) responsible for the unequal mode of reality that W and W^* have.

Arguably, though, if the asymmetrical reality that exists between W and W^* is dependent on what A does, then, in the explanatory order of events, one would expect there to be a *symmetrical* reality between the two worlds prior to A's action taking place. However, there are only two ways for the possibilities under discussion to have an equal mode of reality. Either both would have to be actual, or neither would be actual. But it cannot be the case that W and W^* are ever symmetrical in the sense that each one is actual, for it cannot be the case that A both *does* and *does not* do X at t_2. Therefore, the relevant symmetry we'd expect to see prior to A's choice being made could only occur in the following situation:

GAMMA

Neither W nor W^* is actual.

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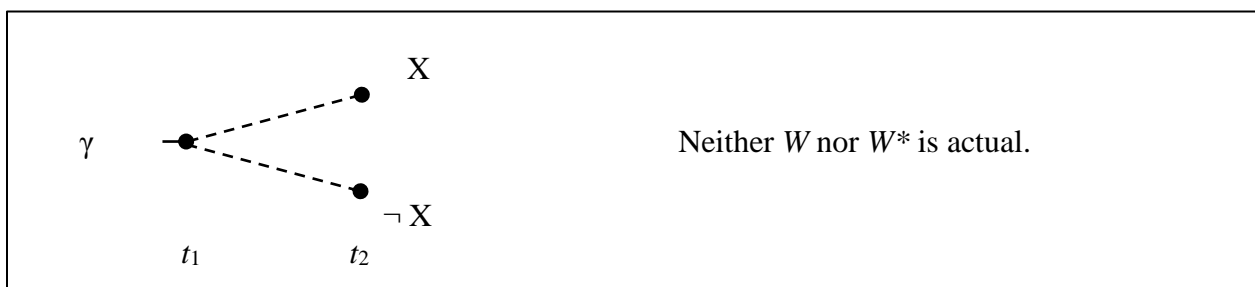
[6] Such a conception of dependence is discussed, for instance, by Philip Swenson in his article "Ability, Foreknowledge, and Explanatory Dependence," *Australasian Journal of Philosophy* 94 (2016): 658-71. For an informative overview of how this and other notions of dependence have been deployed in response to fatalistic arguments, see Patrick Todd and John Martin Fischer, *Freedom, Fatalism, and Foreknowledge*, ed. Fischer and Todd (Oxford: Oxford University Press, 2015), 2-21.

Unlike in ALPHA and BETA, *W* and *W** both share the same mode of reality in GAMMA. Each world there is a mere possibility. Accordingly, the situation in GAMMA allows for the plausible assumption that, given AP, having the opportunity to do otherwise consists in having the opportunity to choose between alternative possibilities that are equally *available* for actualization.

This has an important implication for the sense in which GAMMA would need to be "prior" to *A*'s action. For a libertarian might be tempted to think that, in the explanatory order of events, since *A*'s decision at t_2 to perform the action they do is *logically* prior to the situations depicted in ALPHA and BETA, the state of affairs shown in GAMMA would, in turn, be logically prior to *A*'s action. In other words, a libertarian might be tempted to think that the relevant order of states is *purely* logical, like this:

> *Logical Moment 1*:   GAMMA obtains
>
> *Logical Moment 2*:   *A*'s action at t_2
>
> *Logical Moment 3*:   Either ALPHA or BETA obtains

Alas, such a view would be mistaken. The reason is that relations between events or states of affairs like those said to occur at moments *1-3* cannot constitute a sequence of mere logical priority, for states *1* and *3* are incompatible. Relations of strict logical priority, though, can only obtain between things that are mutually compatible, that is, between things that are capable of being jointly true, such as the premises and conclusion of a valid argument. For not only is it impossible for contradictory things to obtain at the same time, it's also impossible for contradictions to obtain timelessly, or ever at all.[7] Consequently, if *A*'s action at t_2 is the result

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[7] Cf. Rhoda, "Foreknowledge and Fatalism: Why Divine Timelessness Doesn't Help," in *Debates in the Metaphysics of Time*, ed. L. Nathan Oaklander (New York, NY: Bloomsbury, 2014), 265-66.

of a choice between options that are equally available to be actualized, then GAMMA must obtain in time, *chronologically* prior to what *A* does. But then, contrary to what most philosophers have thought must be the case, the future would be indeterminate or open at t_1 rather than settled.

An Objection

A potential objection might go something like this. Sure, *W* and *W** aren't equal with respect to their non-actuality in either ALPHA or BETA, but who cares? What's required to satisfy AP is that they're equal with respect to their *modality*. They each must really be possible. All that's needed for the relevant alternatives to be "available" for actualization is that it be possible for *A* to do X at t_2 and possible for *A* to refrain from doing X at that time. For example, letting the diamond operator ($\Diamond$) stand for causal possibility, the precondition for *A*'s free action can simply be represented this way:

Logical Moment 1*: $\Diamond W$ and $\Diamond W*$

Unlike GAMMA, the situation depicted at *1** is perfectly consistent with what obtains at subsequent moments *2* and *3*. And so, since *1*-3* are mutually compatible, two things can be true at t_1: (a) ALPHA obtains, and yet (b) it's possible for *A* to do other than X at t_2. It is therefore unnecessary to suppose that the future must be indeterminate or open at t_1 in order for the AP condition to be met with respect to *A*'s action.

A Response

Despite its apparent coherence, I believe this objection fails. In order for *A* to have the opportunity to do otherwise, it is not enough that *W* and *W** are both possible. In addition to

their modal symmetry, to be equally available for actualization both worlds would need to be not-yet-actual as well. To explain why this is, consider the situation depicted in ALPHA again. In ALPHA, it's possible that A refrains from doing X at t_2, but it's not the case that A refrains from doing X at t_2. It is not the case that A refrains from doing X at t_2 because, in fact, A will do X then. And so, W is actual—its mode of reality is what it is thanks to what A does. However, the same cannot be said of W^*. As a mere possibility, W^*'s ontological status does not depend on A, for W^* would still be merely possible even if A didn't exist.[8] The same is true for W in BETA. It's not up to A, then, whether such possibilities *are* merely possible. Rather, what A's free action determines is whether such possibilities *remain* merely possible. But if it's up to A whether to do X and, depending on what A does, thereby leave either W or W^* in the realm of mere possibility, then both W and W^* would have to *be* mere possibilities. Hence GAMMA must obtain at t_1 after all, chronologically prior to A's action.

Given AP, therefore, what A's free choice and subsequent action arguably does is settle or render determinate a previously indeterminate state. This requires a very specific sort of change, one involving a temporal sequence that moves from an indeterminate to determinate actuality. However, this sort of change is not achievable on common conceptions of possible worlds like W and W^*. For according to common conceptions of possible worlds, each world has a fully determinate history—a complete or maximal description of its past, present, and future. As defined by Alvin Plantinga, "a state of affairs S is *complete* or *maximal* if for every state of affairs S', S includes S' or S precludes S'."[9] In contrast to ALPHA and BETA, the situation depicted in GAMMA isn't a complete or maximal state of affairs since it neither

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[8] Assuming, of course, that A's (non)existence is contingent.

[9] Alvin Plantinga, *The Nature of Necessity* (Oxford: Clarendon Press, 1974), 45.

includes nor precludes *A*'s performance of X at t_2. For this reason, *A* has the opportunity in GAMMA to "fill in the gap" at t_2, that is, to resolve the indeterminacy there in more than one possible way.[10] But this same opportunity is not available to *A* in ALPHA or BETA. This is because, given the notion of possible worlds just described, whichever world is actual is *unchangeable* and thus entails what I shall call the "Unchangeability of Actual Worlds Principle" (UAW):

> (UAW) = Necessarily, for any world ϕ, if ϕ is actual, then ϕ is the *only* possible world that obtains from one moment to the next.

The Formal Proof

With the foregoing observations in place, we're now ready to construct a formal argument for why the truth-settledness of the future rules out any opportunity for *A* to do otherwise. Letting the box operator ($\Box$) represent logical necessity and allowing U(p) to stand for "It is unchangeably the case that p," the first three premises can be stated as follows:

> (1) W [Assumption]
>
> (2) $\Box(W \supset U(W))$ [UAW]
>
> (3) U(W)   [1 and 2, Modus Ponens]

To these three premises we can add another premise that is derived from an uncontroversial necessary truth (NT):

> (NT) = Necessarily, no state of affairs that is inconsistent with a world ϕ can obtain in ϕ.

Thus, letting X_2 stand for "*A* does X at t_2," we get

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[10] Contrary to popular belief, however, the idea that there is an indeterminacy at t_2 waiting to be resolved does not require one to deny the principle of bivalence. For details see, e.g., Todd, *The Open Future: Why Future Contingents are All False* (Oxford: Oxford University Press, 2021). See also Elijah Hess, "The Neo-Molinist Square Stands Firm: A Rejoinder to Kirk MacGregor," *Philosophia Christi* 21 (2019): 394-403.

(4) $\Box(W \supset X_2)$ [NT][11]

Then, given a plausible transfer principle (TP), namely $\{[\Box(p \supset q) \wedge Up] \supset Uq\}$,[12] from (3) and

(4) we arrive at

(5) $U(X_2)$ [3 and 4, TP]

But as I've argued above, (5) is inconsistent with the sort of change that one arguably

brings about when exercising a free choice. For in so doing, one of two (or more) merely

possible states are transformed into a determinate actuality. Letting A_2 mean "A is free to do

otherwise at t_2," therefore, we have

(6) $U(X_2) \supset \neg A_2$ [AP]

and finally

(7) $\neg A_2$ [5 and 6, Modus Ponens]

In short, if W is the actual world as of t_1, then it's unchangeably the case that A will do X

at t_2. But if it's unchangeably the case that A will do X at t_2, then A lacks the opportunity to do

otherwise at t_2, for A cannot alter the situation that is already set to obtain at that time. Since this

conclusion generalizes for any agent, action, and time in any world with a settled future, I

suggest that libertarians who are inclined to accept AP ought to rethink a widespread assumption

about the nature of the future.

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[11] The basic idea here is that, since the statement "A does X at t_2" is a member of the set of true statements that make up W's identity, X's occurrence at t_2 is an *essential* feature of W. The same reasoning holds, *mutatis mutandis*, for W^*.

[12] This principle is closely related to the demonstrably valid transfer of logical necessity: $\{[\Box(p \supset q) \wedge \Box p] \supset \Box q\}$.

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CONCLUSION

In this dissertation I have argued that contrary to what their free will critics have supposed, theistic open futurists do not subscribe to a metaphysical vision of the future that is logically incoherent. I have also argued that, while some open theists have overstated their case concerning the amount of providential control God could have given the reality of an open future, the simple foreknowledge model of divine providence may not offer God *that* much more control than the openness position. In any case, I have argued that if one holds to an incompatibilist account of free will and believes we occasionally act freely, then that person ought to think the future is open.

One area that stands in need of further investigation is how one might go about developing a robust tense logic for open futurism. Indeed, the two basic or fundamental axioms of current tense logics are (1) for any X, if X obtains, then it has always been the case that it was going to be the case that X obtains, and (2) for any X, if X obtains, then it always will be the case that is was the case that X obtained. Obviously, (1) and (2) are predicated on the assumption that worlds have complete, fully determinate histories. Since open futurists accept (2) but deny (1), a new tense logic will need to be carefully worked out that takes this asymmetry into consideration. Such a project, however, will require a deeper familiarity with philosophical logic than I possess. A second area worth looking into is this. Given that other free will theisms have a comparative advantage, providentially speaking, to theistic open futurism, one might wonder if there might nevertheless be outweighing benefits for both God and human agents within the open view. I believe that there are, but these benefits are primarily religious or theological rather than philosophical. I have therefore not explored such things here, but someday in a different context I hope to.