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The Fivefold Openness of the Future

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OPEN THEISTS ARE THEISTS of a “broadly classical” sort.¹ But why the qualifier? What puts the “open” in open theism? The answer to that question has two sides. One concerns the openness of *the future*, meaning, roughly, that the shape of things to come is not fully given in advance. Instead, things are progressively “taking shape” as events unfold, as choices are made, as contingencies become resolved one way or the other. The other side has to do with the openness of *God*,² who, according to open theists, freely enters into dynamic, ongoing, two-way relations with his creation. As open theists see matters, these two sides to the openness question are intimately related. Having a world with an open future requires a degree of openness in God. As an essentially perfect knower responsible for creating and sustaining an open-ended world, God’s knowledge and experience of the world must change to accurately reflect changes in the world. Conversely, God’s openness to creation, particularly his openness to developing loving relationships with his creatures, requires an open

1. I define “broadly classical theism” as the view that there is a unique personal being (God) who exists necessarily, who possesses a maximal set of compossible great-making properties, including omnipotence, omniscience, and perfect goodness, and who created the world *ex nihilo* and can unilaterally intervene in it as he pleases.

2. This concern is reflected in the title of the book most responsible for bringing open theism to widespread attention, viz., Clark Pinnock et al., *The Openness of God* (Downers Grove, IL: InterVarsity, 1994).

future in which their free contributions help to determine the shape of things to come.

The foregoing sketch of open theism is, admittedly, quite rough. No doubt there are many non-open theists who, with suitable qualifications, could endorse most or all of it. To refine the sketch, and to make more precise the issues that divide open and non-open theists, I think it is most helpful to focus on the openness of the future. There are several different senses in which the future may be thought of as “open” that need to be carefully distinguished. In this paper I identify five such senses: *causal*, *ontic*, *alethic*, *epistemic*, and *providential*.³ After defining these, I argue that they are connected in important ways. Working from premises that many, if not most, *non-open* theists accept, I argue for a series of symmetry principles, according to which two or more of the five senses of openness stand or fall together. Using those principles, I give reasons for thinking that *if* the future is causally open, then it is open in *all five* senses. I close by highlighting some ramifications of my argument for both open and non-open theists. In particular, if causal openness entails openness in the other respects, then open theism is the only viable form of free will theism (i.e., theism plus creaturely libertarian freedom). In addition, one major version of open theism⁴ is untenable.

FIVE SENSES OF OPENNESS DEFINED

I begin by clarifying some of the terms that I’m going to use in my definitions and arguments. First, by a “state of affairs” I mean *a concurrent arrangement of concrete particulars*. Concurrency is essential for me because I need to be able to speak about states of affairs obtaining *at a time*. With respect to concrete particulars, I mean to stay as neutral as possible on their metaphysical constitution. I don’t care whether they are understood as enduring substances, bundles of tropes, Whiteheadian actual entities, or something else entirely. All that is essential for my purposes is that states of affairs be able to serve as truthmakers, be able to obtain at a time, and be able to possess causal powers and/or stand in causal relations.

3. Terminological note for non-philosophers: “ontic” means *concerning what exists*; “alethic,” *concerning truth*; and “epistemic,” *concerning knowledge*.

4. For a description of three important versions of open theism, see Alan R. Rhoda, “Generic Open Theism and Some Varieties Thereof,” *Religious Studies* 44 (2008) 225–34.

Second, by a “proposition” I mean an abstract or conceptual representation of a state of affairs. A proposition is *true* if and only if a state of affairs corresponding to the represented state of affairs obtains. Thus, the proposition expressed by the sentence token “My daughter Janelle is hungry” represents Janelle, my daughter, as being hungry and it is true if and only if a state of affairs that includes her being hungry obtains.

Third, I speak of states of affairs obtaining “at a time,” as well as of propositions being true “at a time.” This needs some defense and clarification. As for defense, some contemporary philosophers reject the notion of a proposition’s being true at a time, claiming to find the idea unintelligible.⁵ Such worries are misplaced, in my opinion. The standard examples used to question the notion of truth at a time come from mathematics, where the worry, for example, is that to say that $2 + 2 = 4$ is true *now* falsely implies that it might have *failed* to be true at some other time. But there is no such implication. That $2 + 2 = 4$ is true *now* is fully compatible with its being a necessary truth. Intuitions to the contrary may stem from a conflation of logical implication with conversational implicature.⁶ Furthermore, refusal to admit the notion of truth at a time becomes decidedly awkward when we face questions like “Will it be the case *tomorrow* that $2 + 2 = 4$?” The question is not incoherent—imagine, if you wish, that it is asked by a child who hasn’t yet *realized* that $2 + 2 = 4$ is a necessary truth. The obvious answer to the question is “of course.” But how can one sensibly affirm that it will be *the case* tomorrow that $2 + 2 = 4$ while denying that it will be *true* tomorrow that $2 + 2 = 4$? Finally, the notion of truth at a time is harmless so long as we can relate truth at a time to truth *simpliciter*, and that’s not a problem.⁷

5. See, for example, Peter van Inwagen, *An Essay on Free Will* (Oxford: Clarendon, 1983) 34–43.

6. See Paul Grice, “Logic and Conversation,” in idem, *Studies in the Way of Words* (Cambridge: Harvard University Press, 1989). To say “ $2 + 2 = 4$ is true *now*” does misleadingly suggest that it might have failed to be true at some other time, but this suggestion is merely ‘implicated’ by the use of the sentence in a conversational context. It is not logically implied by the sentence.

7. Philosophers, of course, may disagree about the proper way to understand that relation. For example, if presentism is right, then only what is true *now* is true *simpliciter*. Alternatively, if truth is omnitemporal, then whatever is true *at any time* is true *at all times*, and so truth at a time reduces to truth *simpliciter*. Finally, if truth is timeless, then a tensed proposition is true at a time just in case a proposition expressing its tenseless truth conditions is true *simpliciter*.

Turning to the issue of clarification, it is important to understand the word “time” in “truth at a time” and “obtains at a time” in an *absolute* sense, not in the *relativistic* sense introduced by Einstein’s special theory of relativity (STR). STR defines “simultaneity” in terms of the experimental possibility of synchronizing clocks by light signals. Due to the finite speed of light, what events count as “simultaneous” thus varies from one reference frame to another. It is sometimes claimed, therefore, that STR shows there to be no such thing as absolute time.⁸ But, as has been extensively documented,⁹ Einstein’s definitions of “simultaneity” and of “time” are fundamentally epistemological. He held for broadly verificationist reasons that if we can’t experimentally identify absolute simultaneity relations then such relations are physically dispensable.¹⁰ That inference may work fine in the practice of physics, but it won’t work for philosophical theology, where the idea of a sempiternal God who experiences succession must be taken seriously.¹¹ We could suppose on such an account that God is *immediately* acquainted with a fundamentally dynamic reality. Given that God’s acquaintance with reality is immediate, the finite speed of light, which creates relativistic issues for us, cannot be an issue for God. Thus, if divine timelessness is false and if God experiences succession, then from God’s perspective there is a succession of moments in absolute time.

Fourth, by a “world state” I mean an all-inclusive concurrent state of affairs, the totality of what obtains *at a given time* from an absolute or “God’s eye” perspective. A world state is not a possible world, as most philosophers understand the latter. Possible worlds are proposition-like abstract entities. World states, and states of affairs generally, are concrete. History, I take it, has been a continuous succession of world states begin-

8. The classic expression of this argument is Hilary Putnam, “Time and Physical Geometry,” in *idem, Philosophical Papers*, vol. 1. (Cambridge: Cambridge University Press, 1975). For an extended response, see William Lane Craig, *Time and the Metaphysics of Relativity* (Dordrecht: Kluwer Academic, 2001).

9. See William Lane Craig, *The Tenseless Theory of Time: A Critical Examination* (Dordrecht: Kluwer Academic, 2000) and Craig, *Time and the Metaphysics of Relativity*.

10. Verificationism is widely regarded as self-refuting. Regardless, it should be clear that the inference from the epistemological claim that we cannot experimentally identify absolute simultaneity relations to the metaphysical claim that there are no absolute simultaneity relations is a *non sequitur*.

11. Recent defenses of divine sempiternality include William Lane Craig, *Time and Eternity: Exploring God’s Relationship to Time* (Wheaton, IL: Crossway, 2001), and Garrett J. DeWeese, *God and the Nature of Time* (Hampshire, England: Ashgate, 2004).

ning, if there was a beginning, with an initial world state consisting of God and God alone *sans* creation.

Finally, in some of my definitions I'm going to employ locutions like "for some state of affairs X and some future time t^* " in which I quantify over possible states of affairs and (possible) future times. This is for ease of discourse, and is not meant to imply commitment to the existence of possibilities and futuralia. Those who wish may paraphrase such locutions into talk of propositions representing matters *as if* a state of affairs obtained at a future time.

The foregoing clarifications in place, I now define five different senses in which the future may be conceived of as "open." First, the future may be *causally* open:

The future is *causally open* relative to time t if and only if there is more than one causally possible future relative to t .

By a "causally possible future," I mean a complete, non-branching, logically possible extension of the actual past, compatible with holding fixed the laws of nature and supernature.¹² If the future is causally open, then there are multiple such futures, which implies that indeterminism is true, that determinism is false, and that there are "future contingents," i.e., states of affairs that obtain on some causally possible futures and not on others. In other words, there is some state of affairs X and some future time t^* such that neither X 's obtaining at t^* nor X 's non-obtaining at t^* is guaranteed to happen. If we construe "might" as connoting causal possibility, then we can say that the future is causally open at t with respect to X 's obtaining at t^* if and only if both $\langle X \text{ might obtain at } t^* \rangle$ ¹³ and $\langle X \text{ might not obtain at } t^* \rangle$ are true at t .

Second, the future may be *ontically* open:

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.

12. I include "laws of supernature" in order to allow for the existence of non-physical beings (God, angels, Cartesian souls, etc.) capable of influencing the course of events. Such beings, if they exist, presumably have natures or essences that constrain or limit what they can do, much as the laws of nature constrain what physical beings can do.

13. Angle brackets denote propositions as distinct from the sentences they enclose. Thus, $\langle p \rangle$ refers to the proposition named by the sentence " p ".

This definition is meant to imply a dynamic, non-eternalist theory of time—one which either denies the existence of future world states altogether or which admits their existence but denies that they constitute a *unique and complete* series. One view that denies the existence of future world states is “presentism.” According to presentism, there is only one world state, the present one. Past world states no longer exist. Future ones do not yet exist. The present world state, in virtue of its intrinsic features, is evolving into a new world state that will replace it. Another view that eschews future world states is the “growing block” view. According to this position, the present world state is the leading edge of a series of world states stretching back into the past. All past and present world states exist. They are not replaced, as on the presentist view, but are succeeded as new world states come into being. Another model that entails ontic openness is the branch attrition model¹⁴ according to which all of many causally possible futures exist, such that there is no *unique* series of future world states. As for completeness, no one to my knowledge has seriously proposed that some but not all future world states exist. It’s hard to see what could motivate such a view. Not only would it face all of the standard objections to dynamic theories of time without any of the standard advantages,¹⁵ but it would create new problems to boot: Why do only some future states of affairs exist? Why these and not others? I propose, accordingly, a *no partial futures* (NPF) thesis: It is not possibly the case that some but not all future world states exist.

Third, the future may be *alethically* open:

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 $\langle X \text{ will obtain at } t^* \rangle$ nor $\langle X \text{ will not obtain at } t^* \rangle$ is true at t and (ii) neither of their tense-neutral counterparts, $\langle X \text{ does obtain at } t^* \rangle$ and $\langle X \text{ does not obtain at } t^* \rangle$, is true *simpliciter*.

Simply put, the future is alethically open just in case there is no “complete true story” depicting a unique series of events as *the* actual future. There

14. Storrs McCall, *A Model of the Universe: Space-Time, Probability, and Decision* (Oxford: Oxford University Press, 1994).

15. Standard objections to dynamic models include those stemming from McTaggart’s paradox and from the special theory of relativity. Standard arguments for dynamic models appeal to their better fit with our psychological experience of time and with a realist understanding of causality. For a helpful discussion of these and related issues, I recommend DeWeese, *God and the Nature of Time*, ch. 2.

are at least two ways in which alethic openness can be satisfied. The first approach denies bivalence, the principle that every proposition is either true or, if not true, then false. Thus, it has been suggested by some that, if X 's obtaining at t^* is a future contingent, then $\langle X$ will obtain at $t^* \rangle$ and $\langle X$ will not obtain at $t^* \rangle$ (and their tense-neutral counterparts) either have a third indeterminate truth value or have no truth value at all.¹⁶ The second approach retains bivalence by holding that $\langle X$ will obtain at $t^* \rangle$ and $\langle X$ will not obtain at $t^* \rangle$ (and their tense-neutral counterparts) are contraries, not contradictories. On this account, $\langle X$ will obtain at $t^* \rangle$ and $\langle X$ will not obtain at $t^* \rangle$ are both false at t just in case $\langle X$ might obtain at $t^* \rangle$ and $\langle X$ might not obtain at $t^* \rangle$ are both true at t .¹⁷ Likewise, $\langle X$ does obtain at $t^* \rangle$ and $\langle X$ does not obtain at $t^* \rangle$ are both false *simpliciter* at times prior to t^* .¹⁸ While I favor the second approach,¹⁹ I won't presuppose it in what follows.

Fourth, the future may be *epistemically* open:

The future is *epistemically open* at time t if and only if for some state of affairs X and some future time t^* neither $\langle X$ will obtain at $t^* \rangle$ nor $\langle X$ will not obtain at $t^* \rangle$ (nor their tense-neutral counterparts) is infallibly known either (i) at t or (ii) timelessly.

What this says, essentially, is that the future is epistemically open just in case it is alethically open *as far as anyone infallibly knows*. The adverb “infallibly,” and clause (ii) at the end, are there to avoid trivialization. It is, after all, boringly obvious that the future is epistemically open to fallible beings like ourselves. Epistemic openness only becomes an interesting and controversial thesis when it concerns an essentially perfect and infallible knower, like God. If there is no God, epistemic openness is trivially true. As for (ii), a timeless God has no temporal properties and stands

16. See, for example, Jan Łukasiewicz, “Many-Valued Systems of Propositional Logic,” in *Polish Logic*, Storrs McCall, ed. (Oxford: Oxford University Press, 1967).

17. Here and throughout, “might” is to be understood as connoting causal possibility, not epistemic possibility.

18. One way to argue for this is by appealing to reference failure. Arguably, both \langle The present king of France is bald \rangle and \langle The present king of France is not bald \rangle are false *simpliciter* because there is no present king of France. Similarly, arguably, both $\langle X$ does obtain at $t^* \rangle$ and $\langle X$ does not obtain at $t^* \rangle$ are false *simpliciter* if there is no time t^* , as would be the case on either the presentist or growing block model of an ontically open future.

19. I defend it in Alan R. Rhoda, Gregory A. Boyd, and Thomas G. Belt, “Open Theism, Omniscience, and the Nature of the Future,” *Faith and Philosophy* 23 (2006) 432–59.

in no temporal relations and so cannot know anything *at a time*. Since I'm sure that advocates of divine timelessness don't want to be committed to epistemic openness simply on that account, (ii) adds a necessary restriction.

Fifth and finally, the future may be *providentially* open:

The future is *providentially open* as of time t if and only if for some state of affairs X and some future time t^* neither X 's obtaining at t^* nor X 's non-obtaining at t^* has been efficaciously ordained either (i) as of t or (ii) timelessly.

For an agent S to *efficaciously ordain* X is for S deliberately to act in a way that guarantees the eventual occurrence of X and for S to know with certainty that in so acting he is guaranteeing the eventual occurrence of X . In Plantinga's terms, S efficaciously ordains a state of affairs if and only if S either "strongly" or "weakly" *actualizes* it.²⁰ If S strongly actualizes X then S 's actions are intrinsically efficacious (i.e., causally sufficient) for bringing about X . If S weakly actualizes X then S 's actions satisfy the antecedent of a true counterfactual of freedom having $\langle X$ obtains \rangle as a consequent. In this latter case, S 's actions are extrinsically efficacious (and not causally sufficient) for bringing about X . Presumably, the only agent possibly in a position to render the future providentially settled is God.²¹ Hence, we may say that the future is providentially settled if and only if God exercises "meticulous providence," that is, if and only if God efficaciously ordains "whatsoever comes to pass."²² If, on the contrary, God exercises non-meticulous or "general" providence, then the future is providentially open.²³

20. Alvin Plantinga, *The Nature of Necessity* (Oxford: Clarendon, 1974) 173.

21. If there is no God, of course, then providential openness is trivially true.

22. Westminster Confession of Faith 3.1. A more elaborate statement of meticulous providence is given by Alfred J. Freddoso, "Introduction" to Luis de Molina, *On Divine Foreknowledge: Part IV of the Concordia*, Alfred J. Freddoso, trans. (Ithaca, NY: Cornell University Press, 1988) 3: "God, the divine artisan, freely and knowingly plans, orders, and provides for all the effects that constitute His artifact, the created universe with its entire history, and executes His chosen plan by playing a causal role sufficient to ensure its exact realization. Since God is the perfect artisan, not even the most trivial details escape His providential decrees."

23. For one account of how this could be, see Peter van Inwagen, "The Place of Chance in a World Sustained by God," in *Divine & Human Action: Essays in the Metaphysics of Theism*, Thomas V. Morris, ed. (Ithaca, NY: Cornell University Press, 1988). Van Inwagen proposes that God may ordain "either a or b " without specifically ordaining a and without specifically ordaining b .

Of these five senses of openness, causal openness is widely, though not universally, accepted, whereas the other four—ontic, alethic, epistemic, and providential—are all highly controversial. Causal openness is rejected by causal determinists but affirmed by proponents of the “libertarian” conception of free will, and also by those who think that quantum mechanics reveals the existence of causal indeterminacy in nature.²⁴ Ontic openness is rejected by philosophers who hold to a static block theory of time, as well as by those who hold to certain versions of the dynamic theory of time, such as the so-called “moving spotlight” view. It is accepted, however, by both presentists and growing blockers.²⁵ As for alethic openness, many philosophers reject it. Most, however, seem to take its falsity for granted, assuming with little to no argument that there is such a thing as a unique and complete series of events that either is or will be *the* future.²⁶ Finally, epistemic and providential openness are hotly contested issues among theists. A growing minority (open theists) say that the future is open in both respects, but many others (theological determinists, Molinists, etc.) hold that the future is settled in at least the epistemic, if not the providential, sense.

As we can see, there are several distinct yet interrelated debates concerning the openness of the future. I believe that we can make significant headway on many of these debates, in particular the open theism debate, by identifying interdependencies among the five senses of openness that I have distinguished. To that project I now turn.

IDENTIFYING INTERDEPENDENCIES

In what follows, I shall assume the existence of God.²⁷ Moreover, I assume that God is an essentially perfect knower, that is, a being who essentially knows all that can be known as well as it can be known. As such, I take it

24. See, for example, Abner Shimony, “The Reality of the Quantum World,” *Scientific American* 258 (1988) 46–53.

25. For an introductory overview of major views on the metaphysics of time, I recommend Craig Bourne, *A Future for Presentism* (Oxford: Oxford University Press, 2006) ch. 1.

26. William Lane Craig, for example, takes the alethic settledness of the future as axiomatic. He writes (in *Time and Eternity*, 262) that “the future, *by definition*, is just as unalterable as the past. . . . To change the future would be to bring it about that an event which will occur will not occur, which is self-contradictory” (emphasis added).

27. Readers who are non-theists can substitute a hypothetical ideal knower for God.

that God has maximal knowledge in both the propositional sense of infallibly believing all truths that can be known and in the experiential sense of being fully acquainted with all of reality. In sum, I assume that God is essentially as close to being unqualifiedly omniscient as it is possible for a being to be. Theists on all sides of the open theism debate can, I think, agree on that much.

To simplify matters, I'll use bold letters **A**, **C**, **E**, **O**, and **P** to stand for the alethic, causal, epistemic, ontic, and providential openness of the future, respectively. I'll represent their denials, the theses that the future is *settled* in the corresponding respects, by putting a tilde, \sim , in front of the letter. Thus, **A** means that the future is alethically open and \sim **A** (read "not-**A**") means that the future is alethically settled. In addition, I use " \rightarrow " to symbolize entailment,²⁸ " \leftrightarrow " for two-way entailment, " \supset " for the material conditional, " \equiv " for material equivalence, " \vee " for truth-functional inclusive disjunction ("or"), " \wedge " for conjunction ("and"), and " \square " for broadly logical necessity. I begin with the most obvious derivations.

A \rightarrow **E**: This is a necessary truth. It follows from the platitude that knowledge entails truth (KET). If neither $\langle X \text{ will obtain at } t^* \rangle$ nor $\langle X \text{ will not obtain at } t^* \rangle$ is true at t , then God cannot know either of those propositions at t . Similarly, if neither $\langle X \text{ does obtain at } t^* \rangle$ nor $\langle X \text{ does not obtain at } t^* \rangle$ is true *simpliciter*, then God cannot know those propositions either.

E \rightarrow **C**: This follows from core theistic commitments. Suppose \sim **C**. That is, suppose that the future is causally settled, such that the present world state and causal laws determine a unique series of future world states. In that case, like Laplace's demon, a God fully acquainted with the present world state and the laws could predict with certainty the unique and complete course of future history. It follows that \sim **C** \rightarrow \sim **E**, which contraposes to **E** \rightarrow **C**.²⁹

28. By entailment, I mean strict implication. Thus, $p \rightarrow q$ is equivalent to $\square(p \supset q)$.

29. One may wonder whether I am entitled to use contraposition as an inference rule since I am not presupposing bivalence and since contraposition is not valid for multi-valued logics. Nevertheless, inference rules that are not generally valid may still be valid for a *restricted class* of propositions. While contraposition fails for propositions that lack truth values, or that have indeterminate truth values, it remains valid for propositions that are *essentially bivalent*, as **A**, **C**, **E**, **O**, and **P** most certainly are. Because they specify *necessary and sufficient* conditions, each is either true or, if not true, then false. (I thank Mike Rea for bringing this issue to my attention.)

$E \rightarrow O$: This also follows from core theistic commitments. According to theism, everything that exists is either an aspect of God's being or a part of God's creation. As an essentially perfect knower, God has perfect self-knowledge. As omnipresent creator and sustainer of everything else, God is fully acquainted with all of creation. Hence, nothing in all of reality can be hidden from God.³⁰ Now, either there is a unique and complete series of future world states or there isn't. If there is, then God is fully acquainted with it, in which case the future is not epistemically open. It follows that $\sim O \rightarrow \sim E$, which contraposes to $E \rightarrow O$.³¹

$E \rightarrow P$: It follows from the definition of "efficaciously ordain" that God knows what he has efficaciously ordained. Hence, if the future is providential settled, that is, if all its details have been efficaciously ordained by God, then the future is epistemically settled as well. It follows that $\sim P \rightarrow \sim E$, which contraposes to $E \rightarrow P$.

The foregoing derivations will be accepted by nearly all theists. From here on, however, things get more controversial, so let's pause to note some consequences.

First, from $A \rightarrow E$ and $E \rightarrow C$ it follows that $A \rightarrow C$.

Second, from $A \rightarrow E$ and $E \rightarrow O$ it follows that $A \rightarrow O$.

Third, from $A \rightarrow E$ and $E \rightarrow P$ it follows that $A \rightarrow P$.

Combining these, we get the result that $A \rightarrow (C \wedge O \wedge E \wedge P)$. In other words, if the future is alethically open, then it must be open in all of the other four senses. Let's continue.

$E \rightarrow A$: This follows if God essentially knows all truths,³² an assumption that all non-open theists, and many open theists, will grant. Thus, if

30. Cf. Hebrews 4:13, "Nothing in all creation is hidden from God's sight. Everything is uncovered and laid bare before the eyes of him to whom we must give account" (NIV).

31. Joseph Jedwab pointed out to me that a theist could resist this inference by allowing for the possibility of future world states subsequent to t that are inaccessible to God at t . This would require denying that God's perspective on reality is necessarily identical with the proverbial "God's eye" or absolute perspective on reality.

32. Strictly speaking, $E \rightarrow A$ follows from the weaker assumption that God essentially knows all truths *about the future*. On a separate note, some philosophers believe that first-person truths, such as the one I know when I know <I am Alan Rhoda>, are essentially unknowable by anyone else. This view is controversial, but if correct, it affects all theists, and not just open theists. For discussion, see Edward R. Wierenga, *The Nature of God: An Inquiry into Divine Attributes* (Ithaca, NY: Cornell University Press, 1989) ch. 2.

the future is alethically settled, then for every possible state of affairs X and every future time t^* there is a true proposition stating whether or not X obtains at t^* . Hence, if God essentially knows all truths, then the future is epistemically settled for God. In short, $\sim A \rightarrow \sim E$, from which it follows that $E \rightarrow A$. Some open theists, however, reject $E \rightarrow A$. According to Richard Swinburne and William Hasker, for example, God is not omniscient in the sense that he essentially knows all truths, but rather in the sense that he essentially knows all truths *that can be known*,³³ which is presumed to be a proper subset of all truths. For now, I set this view aside. (I'll argue against it later.) Since non-open theists concede $E \rightarrow A$, let's accept it and see what follows.

We have derived $E \rightarrow C$, $E \rightarrow O$, $E \rightarrow P$, and $E \rightarrow A$. Combining these gives us the result that $E \rightarrow (C \wedge O \wedge A \wedge P)$. In other words, if the future is epistemically open, then it must be open in all of the other four senses. In addition, combining $E \rightarrow A$ and $A \rightarrow E$, gives us an important symmetry principle:

$A \leftrightarrow E$: Necessarily, the future is alethically open (settled) if and only if it is epistemically open (settled).

Moving on, let's consider what, if anything, follows from a providentially open future, P , regarding A , C , O , and E . What we can conclude here depends on whether it is impossible for the future to be (alethically, causally, epistemically, ontically) settled unless it is providentially settled. That is, does $\sim\sim P$ entail $\sim\sim A$, $\sim\sim C$, $\sim\sim E$, or $\sim\sim O$? Apart from theism, I doubt that these entailments have much plausibility. Certainly many non-theists have thought the future could be causally, ontically, or alethically settled without there needing to be an agent who has efficaciously ordained all the details. But given a God who exists necessarily and who is the creator and sustainer of all other (concrete) existents, it makes sense to wonder how the future could be settled in those respects apart from God's exercising meticulous providence. We must, however, distinguish between *the future's* being settled in a given respect and things always *having been* settled in that respect. It would seem that a God exercising general providence could have set up the world so that it starts out as causally open, but

33. See Richard Swinburne, *The Coherence of Theism*, rev. ed. (Oxford: Oxford University Press, 1993) 180; William Hasker, *God, Time, and Knowledge* (Ithaca, NY: Cornell University Press, 1989) 187; idem, "The Foreknowledge Conundrum," *International Journal for the Philosophy of Religion* 50 (2001) 110–11.

then eventually *becomes* causally settled. Indeed, open theists are committed to this possibility since God, on their view, has the power to determine all events in history and therefore the power to set whatever limitations on future contingents he wants to. And since they believe that alethic and epistemic openness are consequent upon causal openness, they are also committed to the possibility that the world could start out as alethically or epistemically open but eventually become settled in those respects. So open theists, at least, cannot endorse $P \rightarrow A$, $P \rightarrow C$, or $P \rightarrow E$.³⁴ Matters are different, however, for many non-open theists. According to theological determinists and Molinists, for example, P is *necessarily false*. As such, it trivially entails A , C , E , and O .

What about $P \rightarrow O$? A strong case can be made that theists generally are committed to it. Suppose $\sim O$. That is, suppose that a unique and complete series of future world states exists. Given the theistic doctrine of creation, there can be no non-divine (concrete) beings apart from God's creative and sustaining activity. Hence, it follows that all future world states owe their existence to God's creative and sustaining activity. Given that such activity on God's part is essentially efficacious and that God cannot fail to know exactly what he is doing, $\sim O$ entails $\sim P$, which entails $P \rightarrow O$. It seems, then, that theists generally, or at least those committed to a traditional doctrine of creation,³⁵ should affirm $P \rightarrow O$.

Now let's shift our focus to ontic and causal openness. We'll start with $O \rightarrow A$, $O \rightarrow E$, and $O \rightarrow P$. All of these, it turns out, are *false* unless C is necessarily true.³⁶ As noted above, if the future were causally settled, a God fully acquainted with the present world state (and causal laws) could predict with certainty a unique and complete series of future world states. In that case the future would be epistemically settled even if it was ontically open. It follows that $(\sim C \wedge O) \rightarrow \sim E$. From $A \rightarrow E$, it also follows that $(\sim C \wedge O) \rightarrow \sim A$. Similarly, it follows from the doctrine of creation that if the future were causally settled God would be knowingly and efficaciously

34. They might, however, endorse $P \supset A$, $P \supset C$, or $P \supset E$ if they believe that God has *de facto* policies in place which preclude the possibility of the world's ever becoming causally, alethically, or epistemically settled.

35. Process theists are a notable exception.

36. $O \rightarrow C$ is trivially true if C is necessarily true, but almost certainly false otherwise. Most theories of time that affirm an ontically open future, such as presentism and the growing block theory, are compatible with a causally settled future. I will therefore set $O \rightarrow C$ aside.

responsible for that fact. Hence, $(\sim C \wedge O) \rightarrow \sim P$. Now, most theists have wanted to say that C , if true, is only *contingently* true.³⁷ Since that seems to me the right thing to say, I will not try to defend either $O \rightarrow A$, $O \rightarrow E$, or $O \rightarrow P$. Instead, I will argue for the weaker $(C \wedge O) \rightarrow A$, $(C \wedge O) \rightarrow E$, and $(C \wedge O) \rightarrow P$.

My argument requires the assumption that (contingent) *truth supervenes on being* (TSB). According to TSB, every (contingent) difference in truth corresponds to a (contingent) difference in being, such that if anything that is true had not been true, then there would have been a corresponding difference in reality.³⁸ In other words, reality must be sufficiently robust to discriminate propositions that are (contingently) true from those that aren't. I take TSB to be a necessary truth. It is, I submit, indispensable for a realist (as opposed to anti-realist) approach to metaphysics and theology. To deny TSB is to admit that (contingent) truths can "float free" of being. Some may be comfortable with that idea.³⁹ I am not.

Now, suppose that the future is alethically settled ($\sim A$), such that for all possible states of affairs X and all future times t^* , either $\langle X \rangle$ will obtain at t^* or $\langle X \rangle$ will not obtain at t^* is now true, or alternatively, either $\langle X \rangle$ does obtain at t^* or $\langle X \rangle$ does not obtain at t^* is true *simpliciter*. Form the

37. Again, process theists are a notable exception. In distinction from broadly classical forms of theism, they hold that C is necessarily true and $\sim C$ necessarily false. Conversely, many theological determinists hold that C is necessarily false and $\sim C$ necessarily true. Broadly classical free will theists generally take C to be contingent on the grounds that God could have created a causally settled world, but didn't.

38. Aquinas argues for the stronger principle that *ens et verum convertuntur*, being and truth are convertible (*Summa Theologica* 1a.16.3). This entails TSB and adds to it the claim that every difference in being corresponds to a difference in truth. This addition may be controversial, particularly if one thinks that truth depends on the existence of minds and that the existence of minds is contingent. If that's right, then presumably it is possible for there to be being without truth (for example, before any sentient life has evolved). That objection, however, is not available to theists who believe in the necessary existence of an essentially omniscient Mind (i.e., God).

39. Molinists may object to TSB because it creates problems for them vis-à-vis the well-known "grounding objection," but I think the proper response to that is "so much the worse for Molinism." As Graham Oppy ("Arguments from Moral Evil," *International Journal for Philosophy of Religion* 56 [2004] 69) puts it, "The principle that there are no pairs of possible worlds with minimal supervenience bases that differ *only* with respect to the truth-values of counterfactual claims is . . . a pretty secure piece of metaphysical doctrine" (emphasis his), one that is well-motivated independently of issues in philosophical theology.

conjunction Ω of all such truths. Either a sufficient metaphysical ground obtains for the truth of Ω or it does not. If not, then we have a violation of TSB, for reality fails to discriminate between the truth of Ω and contrasting alternatives. If, however, a sufficient ground obtains for the truth of Ω , then either that ground is constituted by wholly *non-future* states of affairs or it is constituted at least in part by *future* states of affairs. If the former, then the future is causally settled, which violates C. For if any possible state of affairs were still such that it both *might* and *might not* obtain in the future, then wholly non-future grounds would not yet be *sufficient* to ground the truth of Ω , contrary to hypothesis. If, however, a sufficient ground for the truth of Ω exists and is constituted in part by future states of affairs, then it follows from NPF (no partial futures) that a complete series of future states of affairs obtains. Moreover, since this series of future states of affairs must discriminate between Ω and contrasting alternatives, it must be unique. We are therefore led to posit a unique and complete series of future states of affairs, which violates O.⁴⁰ So there we have it: Given TSB and NPF, $\sim A$ entails either $\sim C$ or $\sim O$, which is equivalent to $(C \wedge O) \rightarrow A$.

Combining $(C \wedge O) \rightarrow A$ with $A \rightarrow E$ gives us $(C \wedge O) \rightarrow E$. And combining that with $E \rightarrow P$ gives us $(C \wedge O) \rightarrow P$. From here we can derive several significant results. $(C \wedge O) \rightarrow A$ is equivalent to $\Box((C \wedge O) \supset A)$, which is equivalent to $\Box(C \supset (O \supset A))$, which is equivalent to $C \rightarrow (O \supset A)$. From that and $A \rightarrow O$ we get $C \rightarrow (O \equiv A)$. Parallel derivations yield $C \rightarrow (O \equiv E)$ and $C \rightarrow (O \equiv P)$. We thus arrive at a trio of conditional symmetry principles.

$C \rightarrow (O \equiv A)$: Necessarily, if the future is causally open, then the future is ontically open (settled) if and only if it is also alethically open (settled).

40. A similar argument is developed in Michael C. Rea, "Presentism and Fatalism," *Australasian Journal of Philosophy* 84 (2006) 511–24, and in Alicia Finch and Michael Rea, "Presentism and Ockham's Way Out," *Oxford Studies in Philosophy of Religion* 1 (2008) 1–17. William Lane Craig (*The Tensed Theory of Time: A Critical Appraisal* [Dordrecht: Kluwer Academic, 2000] 213–14) tries to skirt the issue by proposing that a contingently true proposition about the future (e.g., $\langle X \text{ will obtain} \rangle$) is true not in virtue of what *exists* at a future time but rather in virtue of what *will exist* at a future time. But this reduces to the options in the text, for what will exist either consists of wholly *non-future* states of affairs or it includes *future* states of affairs or it consists of no states of affairs at all, in which case TSB is violated. For further discussion, see section four of Rhoda, Boyd, and Belt, "Open Theism, Omniscience, and the Nature of the Future."

$C \rightarrow (O \equiv E)$: Necessarily, if the future is causally open, then the future is ontically open (settled) if and only if it is also epistemically open (settled).

$C \rightarrow (O \equiv P)$: Necessarily, if the future is causally open, then the future is ontically open (settled) if and only if it is also providentially open (settled).

We can combine these into a single principle:

$C \rightarrow (O \equiv A \equiv E \equiv P)$: Necessarily, if the future is causally open, then it is either ontically, alethically, epistemically, and providentially open or ontically, alethically, epistemically, and providentially settled.

Because these principles are applicable only on the condition that C is true, they can be ignored by theological determinists. But free will theists ought to admit them unless they bite a bullet and reject either KET, TSB, NPF, the idea that God is essentially fully acquainted with all of reality, or the standard theistic doctrine of creation.⁴¹ Since the first three of those assumptions are highly plausible independently of theism, and the last two are highly plausible given theism, it's pretty tough to avoid the conclusion that $C \rightarrow (O \equiv A \equiv E \equiv P)$. And if that's right, then one cannot consistently be a free will theist *and* affirm either an ontically or alethically open future without also being an open theist, which I define as broadly classical theism plus C , E , and P .⁴² It also means that a successful argument from C to *any* of O , A , E , or P automatically gives us the rest. Accordingly, let's see what we might be able to derive from C .⁴³

41. KET grounds the inference from $A \rightarrow E$; TSB and NPF ground the derivation of $C \rightarrow (O \supset A)$; God's being essentially fully acquainted with reality grounds the inference from $E \rightarrow O$; and the doctrine of creation grounds the inference from $P \rightarrow O$. $E \rightarrow P$ is true by definition of providential openness. From there we can derive all of the symmetry principles.

42. In Rhoda, "Generic Open Theism" I proposed defining open theism in terms of broadly classical theism, C , and E . I now wish to add P to that set of requirements.

43. In what follows I am not seeking to give airtight arguments to establish that C entails O , A , E , or P . It would take several papers to explore those issues in adequate depth. Instead, I am simply pointing out that there are *prima facie* plausible reasons for thinking that C entails one or more of O , A , E , and P .

THE IMPLICATIONS OF CAUSAL OPENNESS

Let's begin by considering whether C entails A. Suppose that a fair coin has just been flipped and that the world, immediately after the moment of its toss, is perfectly indeterministic (50/50) with respect to whether the coin lands heads or tails. Suppose that a few moments later the coin lands heads. Call the time at which the coin is flipped F. Call the time at which it lands L. Now consider this question: Was it true *at F* that the coin was going to land heads at L? There are two plausible answers.⁴⁴ According to the "Ockhamist" proposal, $\langle X \text{ will obtain at } t^* \rangle$ is true at all times prior to t^* and just in case X obtains at t^* . With respect to the coin, therefore, it all depends on what happens *at L*. Since the coin did land heads at L, it was true at all previous times (and thus at F) that it was going to land heads at L. According to the contrasting "Peircean" proposal, $\langle X \text{ will obtain at } t^* \rangle$ is true *at t* just in case sufficient grounds for its truth obtain *at t*. With respect to the coin, therefore, it all depends on what obtains *at F*. Since *ex hypothesi* sufficient grounds were not in place at F for the coin to land heads at L, it was not true then that it was going to land heads at L.

Clearly, C entails clause (i) of the definition of alethic openness if the Peircean semantics is correct.⁴⁵ (Recall that the definition has two clauses: clause (i) concerns truth *at a time*; clause (ii) concerns truth *simpliciter*.) Thus, C entails that for some possible state of affairs X and future time t^* , X's obtaining at t^* is a future contingent. This entails that sufficient grounds are not *now* in place either for X's obtaining at t^* or X's non-obtaining at t^* , from which it follows by the Peircean semantics that neither $\langle X \text{ will obtain at } t^* \rangle$ nor $\langle X \text{ will not obtain at } t^* \rangle$ is now true.

Moreover, there are reasons for thinking that the Peircean semantics is correct. Here is an argument from elimination:⁴⁶

1. Either the Peircean or the Ockhamist semantics is correct.
2. The Ockhamist semantics is incorrect.
3. The Peircean semantics is correct. (from 1 and 2)

44. The distinction between the following semantic proposals comes from Arthur Prior, "The Formalities of Omniscience," in *Papers on Time and Tense*, Per Hasle *et al.*, eds. (Oxford: Oxford University Press, 2003) 39–58.

45. I assume that whether the Peircean or Ockhamist semantics is correct is not a contingent matter.

46. I develop an independent argument for the Peircean semantics in Alan Rhoda, "The Philosophical Case for Open Theism," *Philosophia* 35 (2007) 301–11.

Premise (1) is very plausible. The Ockhamist and Peircean semantic traditions have each had a long history and many able defenders (though not generally under those labels, of course).⁴⁷ Apart from recent attempts to construct a hybrid semantics,⁴⁸ there are no other serious proposals. Sure, one *could* pick a time (or a set of times) distinct from either F or L as the relevant moment of evaluation for determining whether <The coin will land heads at L> is true at F, but why? If anyone thinks there is a defensible alternative, the burden of proof is on them to explain why we should take it seriously.

As for premise (2), if the Ockhamist semantics is correct, then the only way the future can be alethically settled is for it to be ontically settled. In short, $\sim A \rightarrow \sim O$. This is because, on the Ockhamist semantics, propositions about the future depend for their truth on *future* states of affairs. By NPF, if some future states of affairs obtain, then a complete series of obtains. By TSB, this series must be unique, else it wouldn't suffice to ground the unique "complete true story" of the future required for alethic settledness. Hence, $\sim A$ entails $\sim O$ given the Ockhamist semantics, TSB, and NPF.⁴⁹ $\sim A \rightarrow \sim O$, in turn, entails $O \rightarrow A$, which (by $A \rightarrow E$) entails

47. The Peircean semantic tradition goes back at least as far as Aristotle (*De interpretatione* 9), and was the received view in antiquity. Jonathan Barnes, *Truth, etc.* (Oxford: Oxford University Press, 2007) notes of a recognizably Peircean semantic proposal that it was accepted "by Plato, by Aristotle, by Epicurus, by the Stoics; and no doubt by everyone else" (*ibid.*, 72). Modern champions of the Peircean semantics include Arthur Prior ("The Formalities of Omniscience") and Charles Hartshorne ("The Meaning of 'Is Going to Be,'" *Mind* 74 [1965] 46–58). The Ockhamist tradition, in contrast, is more or less the received view among modern philosophers, but was very rare in antiquity. The earliest known proponent seems to have been Carneades (214–129 BC), a Platonist of the skeptical or "new" Academy. See Cicero, *De fato* 32–33, and Barnes, *Truth, etc.* 27–29, 71–72.

48. Sophisticated hybrid positions have been proposed by J. R. Lucas, *The Future: An Essay on God, Temporality, and Truth* (Oxford: Basil Blackwell, 1989); and by John MacFarlane, "Future Contingents and Relative Truth," *The Philosophical Quarterly* 53 (2003) 321–36. One problem with such accounts is that they render the notion of "truth" systematically ambiguous. Thus, Lucas distinguishes between "predictive" and "vaedictory" truth. The first behaves in a Peircean manner; the second in an Ockhamist manner. Similarly, MacFarlane relativizes the truth of propositions about the future to the evaluator's temporal standpoint vis-à-vis the putative future event. Prior to the event, truth values are assigned in a Peircean fashion. Afterwards, they are assigned in an Ockhamist fashion. On either proposal, it becomes unclear how to talk about what is true *simpliciter*, and that's what we need to do when dealing with questions concerning God's knowledge, which is inherently absolute and non-relative.

49. Again, I assume that whether the Peircean or Ockhamist semantics is correct is not a contingent matter. For a related argument from Ockhamism to $\sim O$, see Finch and

$O \rightarrow E$. But the latter is *false* unless C is a necessary truth. After all, given $\sim C$ God could know with certainty exactly how the future will turn out even if no future states of affairs obtain. On any version of broadly classical theism, however, C is not a necessary truth, for God could have created a fully deterministic world if he had wanted to. Broadly classical theists, therefore, should conclude that the Ockhamist semantics is false because it entails something false.

However, while the above considerations may suffice to show that C entails clause (i) of the definition of alethic openness, they don't suffice to show that C entails A . That would require also showing that C entails clause (ii) of the definition. Arguably, it doesn't. Given $\sim O$, either $\langle X \text{ does obtain at } t^* \rangle$ or $\langle X \text{ does not obtain at } t^* \rangle$ would be true *simpliciter* for all states of affairs X and future times t^* *even if C was true*. Hence, C does not entail A (unless there is some way of showing that $\sim O$ is necessarily false).

Let's now consider whether C entails E . The obvious strategy for arguing that it does is to show that exhaustive divine foreknowledge (understood so as to imply $\sim E$) is incompatible with future contingency (which implies C). Given an Ockhamist semantics, such a strategy may look unpromising, for Ockhamism entails a distinction between "hard facts" and "soft facts" that seems to resolve the incompatibilist worry. Roughly, a *soft fact* relative to time t is one that is a future contingent relative to the world state at t and thus is true at least partly in virtue of states of affairs that are future relative to t . Conversely, a *hard fact* relative to time t is one that is either not contingent or not even partly about the future relative to the world state at t ; hence, sufficient grounds for its truth are given by states of affairs that are past, present, or otherwise non-future relative to t . Given Ockhamism, it follows that past truths about future contingents are soft facts. So if I freely drive to work tomorrow, then it was a soft fact 200 years ago that I will drive to work on that date. Since that soft fact is past I cannot now change it, but this poses no difficulty for my freedom

Rea, "Presentism and Ockham's Way Out." I should add that William Hasker and I have vigorously disagreed on this issue in correspondence. A self-professed TSB-affirming presentist and semantic Ockhamist, Bill maintains that propositions like $\langle X \text{ will obtain} \rangle$ do not require for their truth the existence of a *future state of affairs* which includes X , but rather the *future existence* of a state of affairs which includes X . I maintain that his position is incompatible with the combination of TSB and presentism. On presentism, future existents have *no metaphysical status*, and so are not available as bases for truths to supervene upon or as relata in a correspondence relation.

because the only reason it was a fact 200 years ago is because I freely drive to work tomorrow. So far so good. The Ockhamist semantics reconciles creaturely freedom with *foretruth*. But arguments for the incompatibility of God's *foreknowledge* or infallible *forebelief* and creaturely freedom are not so easily parried.⁵⁰ Several authors, notably Nelson Pike and William Hasker, have argued that *God's past beliefs* qualify as hard facts.⁵¹ If that's right, then $C \rightarrow E$ even if an Ockhamist semantics be granted.⁵² From there, along with $E \rightarrow O$, $E \rightarrow A$, and $E \rightarrow P$, we can derive $C \rightarrow (O \wedge A \wedge E \wedge P)$.

Now let's consider whether C entails O . Unfortunately, I know no simple argument for this result that is likely to meet with wide acceptance.⁵³ Establishing $C \rightarrow O$ would require defending a robust causal theory of time according to which time flow consists in the absolute becoming of new world states as a result of prior world states. The details of such an argument are too complex to pursue here.⁵⁴ Instead, I'd like to consider the weaker claim that C *materially implies* O , i.e., $C \supset O$. This result may be obtained via $C \rightarrow E$ and $C \rightarrow (O \equiv E)$, but there is an independent line of reasoning worth exploring. It is an inductive argument, one that appeals to explanatory considerations, in order to show that O is more plausible, given C , than is $\sim O$. Suppose, then, that C is true. To make matters definite, let's consider a setup similar to that in the famous EPR experiment.⁵⁵ A source emits at time t a pair of electrons, A and B , moving in opposite directions. The electrons are in a state of quantum entanglement, such

50. For discussion of Ockhamist responses to incompatibilist arguments see John Martin Fischer, ed., *God, Foreknowledge, and Freedom* (Stanford, CA: Stanford University Press, 1989).

51. Nelson Pike, "Divine Foreknowledge and Voluntary Action," *Philosophical Review* 74 (1965) 27–46; William Hasker, *God, Time, and Knowledge*.

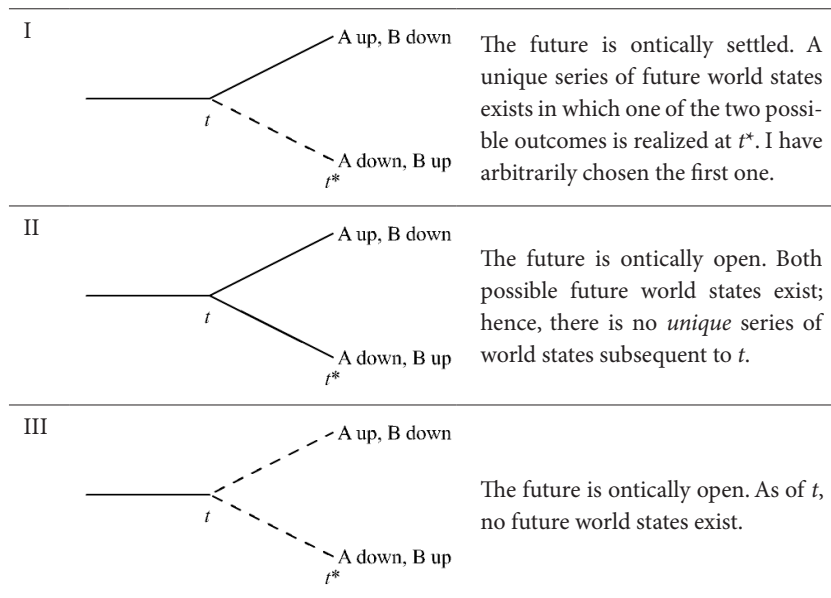
52. Of course, if the Ockhamist semantics is *false*, as I have argued above, then the incompatibilist's case is strengthened. Appeal to divine timelessness may help to parry the incompatibilist's argument. As Linda Zagzebski has pointed out, however, it's not clear that we could have the power to bring about what God timelessly knows. Cf. Linda T. Zagzebski, "Recent Work on Divine Foreknowledge and Free Will," in *The Oxford Handbook of Free Will*, Robert Kane, ed. (Oxford: Oxford University Press, 2002) 45–64.

53. Obviously, any eternalist who wants to affirm a causally open future will reject the entailment.

54. But see Michael Tooley, *Time, Tense, and Causation* (Oxford: Oxford University Press, 1997) for a sophisticated argument along these lines.

55. For a helpful account of the EPR (Einstein–Podolsky–Rosen) argument, see Arthur Fine, "The Einstein–Podolsky–Rosen Argument in Quantum Theory," *The Stanford Encyclopedia of Philosophy* (Summer 2004 Edition), Edward N. Zalta, ed. Online: <http://plato.stanford.edu/archives/sum2004/entries/qt-epr/>.

that a measurement on one of them to determine its spin instantly correlates to an opposite spin on the other electron, regardless of their distance apart. Prior to measurement, the quantum system has two possible outcomes: $\{(A - \text{spin up}, B - \text{spin down}), (A - \text{spin down}, B - \text{spin up})\}$, and it cannot be predicted which will obtain. In short, the world state at t causally underdetermines which of two possible successor states obtains at t^* . Now, how should we model this situation? There seem to be three possibilities:



All other things being equal, it seems that (III) is the best model. (III) is preferable to (I) because, like (II), it preserves symmetry between the possible outcomes. The empirical data give us no reason for thinking that either possible outcome is privileged in advance as the “actual” outcome. Second, (III) is preferable to (I) and (II) for reasons of parsimony. Positing future world states does no explanatory work because it is only *when the measurement occurs* that the nature of the world state at t^* becomes settled. The direction in which the quantum system collapses is not explained by future world states; rather, it is the collapse of the quantum system that explains which possible future world state becomes actual. At any rate, either (II) or (III) would give us an ontically open future. In the absence of other considerations favoring $\sim O$, therefore, it seems that C gives us

good reason for accepting O . Given $C \supset O$, along with $C \rightarrow (O \equiv A)$, $A \rightarrow E$, and $E \rightarrow P$, we can derive $C \supset (O \wedge A \wedge E \wedge P)$.

Finally, let's consider $C \rightarrow P$. This claim could be established by first arguing for $C \rightarrow E$ and combining that with $E \rightarrow P$. But there is an independent line of argument that stands a good chance of being sound. The strategy is simply to refute Molinism. It is widely agreed that Molinism offers the only real hope for reconciling meticulous providence ($\sim P$) with future contingency (C).⁵⁶ If that's right, and if Molinism fails, then $\sim P$ entails $\sim C$, which gives us $C \rightarrow P$. Moreover, Molinism is subject to several well-known objections that threaten the very coherence of the position.⁵⁷ Length considerations prohibit us from exploring this line of argument. Suffice to say, while Molinism has its share of earnest defenders,⁵⁸ they haven't made much headway toward convincing non-Molinists that the objections can be satisfactorily answered. If this strategy works, then we get $C \rightarrow P$. From there, along with $P \rightarrow O$, $C \rightarrow (O \equiv A)$, $A \rightarrow O$, and $A \rightarrow E$, we can again derive $C \rightarrow (O \wedge A \wedge E \wedge P)$.

RECAP AND CONCLUSIONS

Let's review the major results. That knowledge entails truth (KET) gave us $A \rightarrow E$. From the thesis that God is essentially fully acquainted with all of reality, we got $E \rightarrow C$ and $E \rightarrow O$. From those and $A \rightarrow E$ we derived $A \rightarrow C$ and $A \rightarrow O$. The definition of providential openness gave us $E \rightarrow P$. The thesis that God essentially knows all truths then gave us $E \rightarrow A$, which allowed us to derive $A \leftrightarrow E$. From the theistic doctrine of creation, we derived $P \rightarrow O$. From there, with the additional assumptions that truth su-

56. Both Bill Hasker (a prominent anti-Molinist) and Tom Flint (a prominent Molinist) agree that if meticulous providence and future contingency are desired, then Molinism is "the only game in town." See William Hasker, "Response to Thomas Flint," *Philosophical Studies* 60 (1990) 117–26; and Thomas P. Flint, *Divine Providence: The Molinist Account* (Ithaca, NY: Cornell University Press, 1998) ch. 3.

57. Chief among these is probably the "grounding objection," the charge that Molinism violates TSB when it comes to counterfactuals of creaturely freedom (CCFs). Another important charge is vicious explanatory circularity: My free decisions would seem to be explanatorily prior to the truth values of my CCFs, which truth values, in turn, would seem to be explanatorily prior to God's decision to create me, which decision would seem to be explanatorily prior to my free decisions. For detailed discussion of all of the issues surrounding Molinism, see Flint, *Divine Providence*; and William Hasker, David Basinger, and Eef Decker, eds., *Middle Knowledge: Theory and Applications* (Frankfurt: Peter Lang, 2000).

58. Notably, Flint, *Divine Providence*; and Alfred J. Freddoso, "Introduction."

pervenies on being (TSB) and that there can be no partial futures (NPF), we derived $(O \wedge C) \rightarrow A$, $(O \wedge C) \rightarrow E$, and $(O \wedge C) \rightarrow P$, from which (along with previous results) we derived $C \rightarrow (O \equiv A \equiv E \equiv P)$. Finally, I argued that there is at least a *prima facie* plausible case to be made on behalf of $C \rightarrow E$, $C \supset O$, and $C \rightarrow P$. If any *one* of those is correct, then from $C \rightarrow (O \equiv A \equiv E \equiv P)$ we can derive $C \rightarrow (O \wedge A \wedge E \wedge P)$, or at least $C \supset (O \wedge A \wedge E \wedge P)$. Either way, it follows that if the future is causally open then it is open in all five respects.

From this we see that there are several routes to open theism, defined as a commitment to broadly classical theism, C, E, and P:

- d) If a broadly classical theist accepts C and O, then he is committed to A (by $(O \wedge C) \rightarrow A$), and thus to E (by $A \rightarrow E$) and P (by $E \rightarrow P$).
- e) If a broadly classical theist accepts C and $C \rightarrow E$, then he is committed to E and thus to P (by $E \rightarrow P$).
- f) If a broadly classical theist accepts C and $C \supset O$, then he is committed to E (by $(O \wedge C) \rightarrow E$), and thus to P (by $E \rightarrow P$).
- g) If a broadly classical theist accepts C and $C \rightarrow P$, then he is committed to P and thus to E (by $P \rightarrow O$ and $(O \wedge C) \rightarrow E$).
- h) If a broadly classical theist accepts A, then he is committed to E (by $A \rightarrow E$), P (by $E \rightarrow P$), and C (by $A \rightarrow C$).
- i) If a broadly classical theist accepts E, then he is committed to P (by $E \rightarrow P$) and C (by $E \rightarrow C$).

These entailments can, of course, be blocked if one is prepared to jettison theses like KET, TSB, NPF, God's exhaustive acquaintance with reality, God's knowledge of all truths, and the standard theistic doctrine of creation. But the first three of those theses have high intuitive plausibility independently of theism, the next two seem to follow from the idea that God is the greatest possible being, and the last is a core commitment of theism. Non-open theists are thus left with a choice between biting a bullet by denying one or more of those theses and denying C, O, or both. If all six of those theses be granted, the options are few. Theological determinists deny C, but pay a price by setting themselves up for an especially difficult time with the problem of evil.⁵⁹ Non-open free will theists, on the

59. For discussion of theological determinism in relation to the problem of evil, see William Hasker, *Providence, Evil, and the Openness of God* (London: Routledge, 2004) ch. 7.

other hand, are committed to **C**, so we would expect them to deny **O**, as well as **A**, **E**, and **P**.⁶⁰ The tenability of the resulting position $\{C, \sim O, \sim A, \sim E, \sim P\}$ depends on being able to block all inferences from causal openness to the other four. Interestingly, however, many non-open free will theists affirm *both* **C** and **O**.⁶¹ If my arguments are right, then they *have* to reject either **KET**, **TSB**, or **NPF**. Otherwise, we can use those to derive $(O \wedge C) \rightarrow A$ and $(O \wedge C) \rightarrow E$ and generate an inconsistency. For similar reasons, versions of open theism that affirm **C**, **E**, and **P**, but deny either **A** or **O**, are problematic. Hasker, for example, accepts **C**, **O**, **E**, and **P**, but denies **A**. Accordingly, he must deny $(O \wedge C) \rightarrow A$, and along with it one or more of **KET**, **TSB**, or **NPF**. In addition, he has to deny that God essentially knows *all* truths (otherwise we could derive $E \rightarrow A$ and generate an inconsistency).⁶² What Hasker can (and does) say is that God knows all that *can* be known while admitting that there are truths about which future contingents “will” or “will not” obtain that cannot be known. But in the absence of a compelling account of how there can be truths that are in principle unknowable *even for God*, qualifying divine knowledge in this way puts open theists at a polemical disadvantage vis-à-vis their competitors.⁶³ Moreover, it’s not at all clear why the qualification is necessary. Whatever reasons we have for thinking that “will” or “will not” (or “does” and “does not”) propositions about future contingents are not knowable are also reasons for thinking that they are *not true*. After all, given **C** and **O**, there is no combination of states of affairs—past, present, or otherwise—upon which such truths could supervene. Recognizing this allows the open theist to restore polemical parity by arguing that it is precisely *because* God believes all and only truths that the future is epistemically open for God. Open theists, then, are much better off if they affirm **A** and **O** in addition to **C**, **E**, and **P**.

In closing, I would like to comment briefly on the significance for theists of the $C \supset (O \wedge A \wedge E \wedge P)$ thesis. If this is right then the theist’s

60. Given $C \equiv (O \equiv A \equiv E \equiv P)$, **C**, and $\sim O$, it follows that $\sim A$, $\sim E$, and $\sim P$.

61. See, for example, Craig, *Time and Eternity*; and DeWeese, *God and the Nature of Time*.

62. Similarly, open theists who deny **O** would have to deny God’s exhaustive acquaintance with reality. Otherwise, we could generate an inconsistency from $E \rightarrow O$.

63. Critics of open theism, like Bruce A. Ware, *God’s Lesser Glory: The Diminished God of Open Theism* (Wheaton, IL: Crossway, 2000) often charge that the God of open theism is not *really* omniscient and is therefore a “diminished God,” or not even a God at all.

options are limited to open theism and theological determinism. The first option commits one to the fivefold openness of the future—causal, ontic, alethic, epistemic, *and* providential—and with it a dynamic world of open-ended possibilities in which the shape of things to come is, in some respects at least, yet to be decided. The story is only partially written and it is one to which we, if we have libertarian freedom, have the privilege of contributing a chapter. The second option, in contrast, commits one to a future that is settled in *at least* causal, alethic, epistemic, and providential respects.⁶⁴ It may still be ontically open, but not open-ended. In such a world, the shape of things to come is already fully present in its causes. The story is fully written; there remains only to play it out and to enjoy it along the way—assuming, one hopes, that is part of the script.⁶⁵

64. Given the falsity of Ockhamism and the non-necessity of *C*, there is no entailment from $\sim C$, $\sim A$, $\sim E$, and $\sim P$ to $\sim O$. (And if *C* were necessary it would be a trivial entailment, since a necessary falsehood entails anything and everything.)

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