

Freedom, foreknowledge, and betting

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Abstract

Certain kinds of prediction, foreknowledge, and future-oriented action appear to require settled future truths. But open futurists think that the future is metaphysically unsettled: if it is open whether p is true, then it cannot currently be settled that p is true. So, open futurists—and libertarians who adopt the position—face the objection that their view makes rational action and deliberation impossible. I defuse the epistemic concern: open futurism does not entail obviously counterintuitive epistemic consequences or prevent rational action.

KEYWORDS

open futurism, libertarianism, knowledge, probability, rationality, betting

1 | INTRODUCTION

Agency theorists should take the charge of bad epistemology seriously. Actions—especially free ones—should be guided by reasons.¹ I reach for my mug only if I believe that it's there. If I know it is impossible for me to reach the airport in time, I will stop attempting to get there. So, if a theory entails that I'm not able to appropriately assess a suitable range of reasons, then such a theory appears incompatible with free or responsible action.

Open futurists face this incompatibility charge. According to open futurism, the future is metaphysically unsettled. This unsettledness is not merely epistemic or linguistic. Rather, there is something about reality itself which is unsettled. Open futurists think that the future is (partially) metaphysically *up to us* in an important way—it is in our power to bring about or affect the future.

A common way of understanding this unsettledness or openness is in terms of the truth values of propositions about the future, also known as future contingents.² According to open futurists, if it is currently unsettled whether [The Mets win the World Series in 2024], then it cannot now be settled true that [The Mets win the World Series in 2024].³ For there is nothing determinate about the world now which would ground or account for the truth of such a proposition. Open futurists are thus motivated by a commitment to something like truth supervenes on being.⁴

According to open futurists, free actions, if there are any, cannot be given a simple counterfactual analysis (i.e., “I am able to perform action *A* iff it is possible that I perform *A*”), since this sort of counterfactual analysis is consistent with the future being perfectly settled or determined (see Lewis, 1981). And determinism precludes the open futurist’s robust notion of metaphysical openness. So, if future metaphysical openness includes free actions, open futurists must be libertarians: the history and the laws cannot presently necessitate an agent’s free choice.

Of course, this entailment does not run the other way; not all libertarians are open futurists. But open futurism is a highly appealing option for libertarians, given a few additional metaphysical assumptions. Suppose you think that there are no future objects or events, as well as truth supervenes on being. If you also think the truth values of propositions about what happens in the far future are settled, fatalism seems to follow. If it is true now that [Sally stands in 3034], then the truth of that proposition cannot currently supervene on either Sally or her decisions (see Rea (2006) for this objection in full).

Open futurists avoid these fatalist problems at the outset, as they deny that there are any true future contingent propositions. Propositions like [The Mets win the World Series in 2024] or [Sally stands in 3034] either lack a truth value or are false.

However, much of our future-oriented behavior appears to require future truth, or even some sort of foreknowledge. Consider my plans to meet a friend for lunch. My planning appears to require truths about what I will do (e.g., I tell my friend, “I will meet you at noon”). It also seems to require Moorean truths such as [The universe will continue to exist five minutes from now]. We count on these sorts of propositions and take ourselves to know them—at least if we’re to avoid global skepticism. And knowledge, in the words of Fantl and McGrath, is action-guiding: “If you know something, you can *take it for granted, assume it’s true, count on it, take it to the bank, and book it*” (2012, p. 441, italics theirs).

Open futurism, on the other hand, appears to entail that these Moorean truths are false. I can’t take anything for granted. It’s metaphysically possible, after all, that the universe suddenly ceases to exist. So, in order to perform future-oriented actions, the open futurist must act *as if* propositions which she thinks aren’t true actually are true. This internal incoherence appears necessary in order for the open futurist to act according to reasons.

This style of epistemic objection is significant, if successful. It’s not simply that the open futurist is making bad inferences in epistemology about what their evidence is or requires. It’s that their theory makes practical rational action or deliberation *impossible*. So, open futurism appears to be epistemologically non-viable.⁵ In order to secure free action in the face of problems such as fatalist puzzles, the open futurist appears to have jumped from the frying pan and into the fire.

In this paper, I answer the rationality concern. Such a concern has several guises—in terms of probabilities, Moorean truths of foreknowledge, and betting behavior—and I will explain and answer each in turn. Open futurists are able to rationally reason about the future; their view does not entail obviously counterintuitive epistemic consequences or prevent rational action. Should the closed futurist insist otherwise, they will fall prey to similar epistemic objections.

2 | UNDERSTANDING OPEN FUTURISM

Before delving into the objections, it is important to further explain the open futurist position. According to open futurists, (i) no future objects or events exist⁶ and (ii) truth supervenes on being. But if there are no future objects or events for contingent future truths to supervene on, one might wonder whether there are any true propositions about the future. And so, I should be

clear that *even if* no future objects or events exist, and *even if* truth supervenes on being, there may nonetheless be contingently true propositions about what is presently determined to happen at some future time(s): the truth of these propositions would supervene on the current state of the world and the laws of nature. Truths about what is presently determined to occur, then, are settled truths—hence, determinism is incompatible with a non-trivial notion of future openness.

Moreover, necessary truths about the future are also true, since they are about how things *must* be and thus skip the truth supervenes on being requirement. So, the open futurists' position is that future contingent propositions about undetermined events cannot be true; open futurists think there's not *now* a settled fact of the matter about future contingent propositions about undetermined events.

And libertarians insist that, by definition, free actions are undetermined. Libertarians want it to be within the agent's power to do otherwise than she does in the actual world, given the same history and laws up until the point of decision. So, libertarians who accept both that (i) no future objects or events exist and that (ii) truth supervenes on being are committed to open futurism. But as I have already suggested, open futurists face objections that (a) their view cannot account for knowledge we have about future contingents and that (b) their view entails that it is impossible for us to rationally perform certain future-oriented actions, such as deliberating and betting.

In order to understand why these objections are misguided, one first has to understand how open futurists interpret the 'will' that occurs in future contingent propositions, such as [Sally will stand tomorrow]. Open futurists believe there are no true future contingent propositions about the future. They think that if there is a settled fact of the matter about what will happen in the future—that is, if a proposition about the future is presently settled true—then the future is fixed with respect to the content of that proposition. It follows that if it is, say, presently determined that [Sally will stand tomorrow], then [Sally will stand tomorrow] is fixed or settled. If the future is metaphysically open with respect to Sally's standing, there is nothing about reality that determines or necessitates the truth of the proposition in question. (For all times t , proposition p is determined iff necessarily (the present and the laws $\rightarrow p$)). So, if it is currently unsettled whether Sally stands tomorrow, there is no actual future according to which Sally either does or doesn't stand. Rather, there are different possible futures which vary in whether they include or preclude her standing.

It may be tempting to understand statements with 'will' in them as indicative and as thus referring to *the* future—that is, the future among the set of possible futures which is the actual one. But this is exactly what the open futurist denies: they think there is no such thing as *the* future. Similarly, if the future is unsettled with respect to a particular event e , it cannot now be the case that e will occur.

After all, if the future is open, there isn't one particular future; instead, there is a non-empty, non-singleton set of presently possible futures. Given that this is so, open futurism treats 'will' as an operator which works like a necessity operator. According to this proposal, if [WILL: p] is true, then all possible futures are ones in which p is true. That is, it is settled that p is true; p must occur. If [WILL: $\sim p$] is true, then all possible futures are ones in which p is not true. The contradictory proposition to [WILL: p] is [\sim WILL: p]. [\sim WILL: p] is now true if not all futures include p .⁷ According to the open futurist, these WILL claims are actually about the present: what possible futures there are, what they're like, and, for any p , whether it's now the case that p must occur.⁸ This applies to free actions, as well. Are you free with respect to p ? If so, then in some possible futures you perform p and in some possible futures you perform $\text{not-}p$.

Open futurists agree that future contingents are not determinately true, but disagree on what this lack of truth entails. Some open futurists deny bivalence, arguing that future contingent

propositions simply do not have a truth value. Others—all-falsists—think that a lack of truth is simply falsity, and thus all undetermined future contingents are false.⁹

[Sally will stand], or [WILL: Sally stands] means that in every possible future, Sally stands. [Sally will not stand], or [WILL: ~Sally stands] means that in every possible future, Sally does not stand. [It is not the case that Sally stands], or [~WILL: Sally stands] means that not every possible future includes Sally's standing. So, it's possible to uphold bivalence by affirming [WILL: Sally stands or ~Sally stands] (that is, "Every possible future includes either Sally's standing or lacks Sally's standing"), while rejecting the move to push the operator inside so that either [WILL: Sally stands] or [WILL: ~Sally stands].

So, open futurists are able to either affirm or deny bivalence, depending on other metaphysical commitments. To target all open futurists, the epistemic objector must frame their objections in terms of undetermined future truths, which is what open futurists cannot provide. But given the open futurist's analysis of the truth value of WILL propositions, there is trouble on the horizon.

3 | PROBABILITY PROBLEMS?

One version of the epistemic objection is that open futurism, by definition, precludes motivation to act. Here I will frame the objection primarily in terms of the all-falsist position, in order to motivate the objection. The all-falsist position seems stark: future contingents are all false, and so every future-oriented claim seems to have a probability of zero! So, if the all-falsist has a reply to this objection, every open futurist has a reply.

Consider again a case of practical reasoning. I am planning to meet my friend for lunch. I've even told her, "I will meet you at noon". However, the all-falsist says that [WILL: I meet my friend at noon] is false. So, I've lied to my friend. But it gets worse. If [WILL: I meet my friend at noon] is false, how can I have any credence that I arrive at lunch, let alone on time? If someone knows [WILL: p] is false, it seems that there is no use trying to accomplish it. Even worse, the all-falsist also thinks that future contingents of the form [WILL: ~p] are also false. So, it looks like I should have no credence that I fail to arrive at lunch as well. (Ironically, I should be absolutely certain that I WILL fail to arrive at lunch.) In the words of Barnes and Cameron (2011), this "doesn't look like it results in the future being open, it looks like it results in it being settled that nothing will happen" (p. 15).¹⁰

To have no credence about whether I meet my friend—or to be certain I fail—is to misunderstand the nature of the open futurist's modal claims. [~WILL: I meet my friend at noon] doesn't necessarily entail [WILL: ~I meet my friend at noon]. Given that there are possible futures in which I do meet her at noon, I know that it's partially in my power to bring those futures about. (This power is, sadly, partial; the world at large must also cooperate. I can try my best to meet my friend, but the bus may break down.)

The all-falsist thinks that undetermined future contingents need not *remain* false. The truth value of [WILL: I meet my friend at noon] will become settled at noon, when I will either have arrived at the restaurant or not.¹¹ So, the falsity of these propositions presents no problems in addition to the mere lack of truth. Those who think that falsity is somehow worse than lack of truth appear to take the falsity of [Sally will stand] to mean [Sally can't stand]. But this doesn't hold if one takes falsity to simply be lack of truth (as the all-falsist does).¹²

If anything, open futurism *heightens* my sense of agency and motivation: if matters are still unsettled with respect to my meeting my friend, I am now actively doing what I can to bring about the desired subset of possible futures by grabbing my keys and heading out the door!

But a similar objection can be made in terms of probabilities: open futurists are committed to a paralyzing view, since they must believe that either (c) there are *no* probabilities regarding future events (since there is no fact of the matter) or (d) the probability of every future event is zero (since future contingents are all false). In either case, rational deliberation and future-oriented action is impossible. I must be able to generally tell what events are likely or unlikely if I'm to rationally deliberate about alternatives, even if I cannot make probabilistic judgments with fineness of grain. Again, I cannot deliberate about options that I do not believe are open to me.

Consider, again, the all-falsist position. There's, at best, something infelicitous about asserting both:

1. [Seabiscuit will win the race] is false (and thus has a probability of zero), and
2. [Seabiscuit will win the race] has a high probability (say, .7) of becoming true.

And when making decisions, I act on the assumption of propositions like (2). I believe there is a high probability that [Seabiscuit will win the race] becomes true; that's why I put money down at the racetrack. But why would I do this, if I believe something like (1)?

We must not mistake a proposition's being true with its potentially becoming true. The open futurist is entitled to assert, "It will not be the case that Seabiscuit wins and there is a 70% chance that it will be the case that Seabiscuit wins". Although the utterance initially appears to express a problematic proposition about the future, this is instead an issue regarding the ambiguities of English grammar. The utterance can be interpreted in one of two open-futurist-friendly ways. First:

[\sim WILL: Seabiscuit wins] & [70% of the possible futures include Seabiscuit's winning]

How do we get this interpretation? Here is a general strategy: "It will not be the case that x As" means "Not every possible future includes x 's A 'ing", that is, [\sim WILL: x As]. "There is a Q% chance that x will A " means "Q% of possible futures include x 's A 'ing", which is not a WILL proposition: it is a proposition about the present. But there is also a second way of interpreting the above:

[\sim WILL: Seabiscuit wins at t & WILL: there is a 70% probability at t -minus that Seabiscuit wins at t],

where t -minus is the moment of utterance and t is the deciding moment of the race. The above proposition can be true. Given the interpretation strategy of WILL, the right conjunct means:

Every possible future f is such that there is a 70% probability at t -minus that Seabiscuit wins at t .

If it is the case at t -minus that 70% of all possible futures include Seabiscuit's winning, then all possible futures include the truth that [the probability at t -minus that Seabiscuit wins at t is .7]. Thus, [WILL: there is a 70% probability at t -minus that Seabiscuit wins at t] is presently true.

The upshot is that we must pay careful attention to the scope of WILL. Proper reading of scope can be tricky business due to the ambiguity of English grammar, especially when combining operators and truth-functional connectives. Problems for practical action were supposedly generated by considering the probability of a proposition solely in terms of its truth value, rather than in

terms of the overall probability that the *content* of the proposition occurs. Ignorance of what ultimately occurs does not entail we are ignorant of the odds of an event's occurrence. (If this were so, the closed futurist would be in trouble as well: they think there is a settled fact of the matter about whether Seabiscuit wins the race.)

In fact, a certain kind of future-oriented ignorance seems important to compatibilists, as well. Deliberation about whether to perform *p* does not appear rational if I already know I will refrain from performing *p*. Knowledge of certain future truths, such as what we will do, appears disastrous for free choice (see Kapitan (1986) for a compatibilist argument to this effect and van Inwagen (2007) for an argument that even an omniscient being cannot know what they will do if the action in question is to be free).

4 | THE MOOREAN FOREKNOWLEDGE OBJECTION

Some future-oriented ignorance may be necessary for free action. But a more pressing concern is that open futurists have too *much* openness and ignorance. They cannot exclude possibilities which rationality demands be excluded from conversation or deliberation.

Future-oriented actions appear to require some settled truths about the future. In order to deliberate about what options are available to me, I must hold some things about the future fixed. And some of the propositions I assume are fixed appear almost Moorean in their flavor and vivacity. But given open futurism, these fixed facts appear to entail that I have foreknowledge about what *must* occur. Without this foreknowledge of settled future truths, I would be unable to go about my day.

Here is the *Moorean foreknowledge objection* in full: “There obviously *are* true future contingents, and I can correctly assert that certain events *will* come about. These are propositions that I believe, assert, and know. For instance, [the sun will rise tomorrow], [the world will exist five minutes from now], and so on. And this knowledge is central to my practical future-oriented action. My knowing that [the world will exist five minutes from now] makes it rational for me to plan to have lunch with my friend in an hour”.¹³

The objector insists that what they assert about the sun's rising is true *now*. Here, the open futurist has a quick reply: as mentioned earlier, not all propositions that *seem* to be about the future lack truth—indeed, we've seen that propositions like [It is not the case that I will meet my friend at noon] *are* true. According to the open futurist, [It is not the case that I will meet my friend at noon] turns out to be a proposition about the present (that is, given the way the present is, it is not the case that in all possible futures, I meet my friend). Likewise, propositions about what *must now* be the case are propositions about the present—they are about how the world is and how the world must continue to be.

Some propositions that we thought were future contingents could thus turn out to be propositions about the present. If, according to the present, some event (e.g., the sun's rising) *must* happen, then the proposition about that event—[the sun will rise tomorrow]—is true. This proposition is also about the present and settled. If it is presently settled that the world exists five minutes from now, then [WILL: the world exists five minutes from now] is also true. So, if there are Moorean truths about what *will* occur, these are good candidates for truths which are settled or presently determined to occur. If a proposition is obviously true, then the open futurist is able to account for it.

But if we take metaphysical openness seriously, it appears perfectly plausible that many future contingent propositions—which we're taking to be bedrock Moorean truths when deliberating

about the future—are those about which there is not uniform agreement amongst the possible futures regarding whether something occurs. Libertarians think free action requires some substantial openness. Now, suppose it is up to me whether I raise my hand in an upcoming vote. It is not enough for [WILL: I raise my hand] to lack truth. Propositions about what's causally presupposed for my ability to raise or refrain from raising my hand, such as those relating to atoms around my hand, must also lack truth.¹⁴

Current physical theories suggest it is possible that [all the atoms in the room suddenly migrate to the Northwest corner]. This is, of course, *highly* unlikely. But open futurists think that any possibility, no matter how unlikely, means that the future cannot be settled. So, open futurism appears to generate widespread skepticism (at best).

Many of us take ourselves to know propositions like [all the atoms in the room will not suddenly migrate to the Northwest corner] and would confidently assert them. Open futurists say such propositions cannot be true. So, not only does the committed open futurist appear to be lying when she makes such assertions—she undermines the very foundations of our reasoning. My deliberations *take for granted* such seemingly Moorean truths. My actions rely on claims like [all the atoms in the room will not suddenly migrate to the Northwest corner].

Thankfully, the open futurist is not without answer. Even if these seemingly Moorean statements are indeed false, it does not mean that when we *seem* to be asserting true future contingents, we're saying blatantly false things. Instead of asserting future contingents, open futurists can say we are actually asserting related statements about the present. For example, [Given the state of the world, it is incredibly probable that the sun will rise tomorrow]. And propositions about possible futures and probabilities, as we've seen, can be presently true.

Even if [the sun will rise tomorrow] is strictly speaking false, that's not the proposition we're asserting when we utter the words "The sun will rise tomorrow"—or at least it shouldn't be. This is something that even closed futurists should want to affirm. Technically, the sun doesn't rise at all. When we say, "The sun rises", we're not asserting something blatantly false; the asserted proposition needn't be identical to the English words used. Instead, we assert a truth consistent with Copernican theory.

Notice that the particulars of the asserted truth needn't be perspicuous; awareness of the fine-grained particulars of astronomy are not necessary for truthful assertions about the sun. If knowledge of the precise propositions we assert were required for our utterances, we wouldn't be allowed to say much at all.¹⁵

Open futurists can account for the looseness of our speech regarding the future. When we're speaking about the future, we often restrict the domain of the possible futures under consideration. Remember that open futurists treat 'will' as a necessity operator. The truth value of 'will' propositions is determined by the set of possible futures. What proposition is *expressed* by an utterance depends on the set of possible futures under consideration. The proposition expressed may relate to the entire set or class, or it may be a subset—which depends on conversational context.

There is no reason to assume that open futurism requires only assertions using an unrestricted WILL operator, wherein one would be continually forced to always consider every possible future. Much like cases of other operators, we can narrow the scope of our consideration.¹⁶ The scope restriction of the WILL operator is like the restrictions of possibility. The scope of 'WILL' claims can be restricted to futures which are highly probable, futures on which it is rational to plan, et cetera (with the restriction depending on context). "The sun will rise tomorrow" expresses expectation that the sun rises at *t*, where such expression may even be attitudinal.

We can restrict our consideration to probable futures, and knowing how to rationally plan was the original concern. The question, then, is whether [WILLprobably: the sun rises

tomorrow]—or rather, the appropriate proposition expressed by that still non-perspicuous turn of phrase—is true. And as I demonstrated in the previous section, the open futurist maintains propositions about probabilities can be true.

The open futurist can apply the scope-restriction solution to all of the potentially Moorean future-oriented truths: it is true that [WILLprobably: the world exists five minutes from now] and [WILLprobably: all the atoms in the room do not suddenly migrate to the Northwest corner]. This maneuver also applies to the non-Moorean cases which concerned us: given my character and dispositions, it is true that [WILLprobably: I will meet my friend at noon].

Imprecision of speech surrounding implicit restriction of the domain of quantifiers isn't unusual. Consider my responding to a query by saying "Everyone came to my party" or saying "There's no beer" to someone looking inside my fridge. There's a reason why we roll our eyes at a person responding to these statements by asking how the population of Bangladesh fit into my apartment or panicking at the prospect of a world-wide beer shortage. However, there are also easy ways to change the conversational restriction of the domain—if the previous conversation was about the population of Bangladesh, I'm unlikely to immediately restrict the domain of "everyone" and say, "Everyone came to my party".

So, in the face of the Moorean foreknowledge objection, open futurists have a two-fold response. First, if someone is actually asserting a future contingent, then what they assert is false. But if the objector insists that their proposition is both true and about what will happen, then the open futurist will insist back that any true 'WILL' proposition is not a future contingent but is instead a truth about the present.

A consequence of this response is that most people are not typically referring to future contingents in practical conversations or utilizing them in deliberations, even if they take themselves to be doing so. So, why did we take our assertions to be both Moorean and about future contingents?

A diagnosis: It is easy to conflate Moorean-style truths with the theoretical metaphysics that accounts for, grounds, or makes possible such truths.

Consider another candidate Moorean truth in free will debates: [I am sometimes free or responsible]. Compatibilists and libertarians alike will insist on the obviousness of this truth. While libertarians think that this Moorean truth entails truths about, say, the transfer of powerlessness under logical entailment, it would be a mistake to insist that these transfer principles or the arguments which utilize them are *themselves* Moorean. The libertarian may think compatibilists are making a logical mistake. But it is illegitimate for her to insist that compatibilists are denying obvious truths—especially since compatibilism is often motivated by a desire to hold onto seemingly Moorean truths about freedom.

I do not deny the force of certain kinds of Moorean objections in metaphysics. We can be wrong, and overly revisionist error theories should be avoided if possible. It is a tremendous cost to say that we're wrong about almost everything. Our metaphysics should not obliterate our basic understanding of our lives. We must be able to live with our theories.

But we can be generally correct about what is central to our theorizing while failing to understand technicalities. Consider another Moorean claim: [I am sitting at my desk now]. This claim seems obvious and is epistemically important—if it falls, so too do my general beliefs about the external world. This claim, however, does not obviously entail specific metaphysical truths about material objects. I cannot immediately conclude that [there are desks], as opposed to [there are particles-arranged-desk-wise]. For there are multiple, competing metaphysical theories which claim to account for my present experience. Van Inwagen (1990) paraphrases away apparent talk of tables and chairs; the open futurist can utilize a similar strategy.

Here I take weighty metaphysical positions to be akin to our understanding of certain positions in physics. We can have a general understanding of force and velocity—usually, marbles do not suddenly levitate on Earth—but our folk intuitions about what path a marble will take when exiting a downward spiral are generally mistaken.¹⁷ This isn't to say that metaphysical theories can't be revisionary; theories which entail that I do not exist (see Unger, 1979) appear revisionary indeed, and deny something in the neighborhood of Moorean truth. Part of a philosopher's job is to sort out what is revisionary from what is not.

It would be a problem if the open futurist could not account for future-oriented claims. Thankfully, the open futurist can provide appropriate understandings of such claims and are able to provide paraphrases for seemingly true future contingents. It is also important to note that Moorean objections are not generated solely by considering open future accounts. The amount of potential skepticism depends on how *much* openness there is. As such, those who balk are objecting not to the view itself, but the conjunction of the view with the amount of openness to which they subscribe. Those who think it is currently determined that [the sun rises tomorrow], that [I exist five minutes from now], and that [all the atoms in the room do not suddenly migrate to the Northwest corner] are likely to be unconcerned here. There are good questions about how the open futurist can properly know that she knows such truths, but questions of second order knowledge will apply to everyone attempting to account for future-oriented truth.

Indeed, it would be surprising to discover that Moorean truths entail that open futurism is obviously false. For open futurism appears to account for our behavior when considering (or ignoring) future possibilities.

5 | PRACTICAL ACTION, LOTTERIES, AND BETTING

The open futurist analysis can help make sense of our behavior when discussing future events, such as whether I will win a lottery. I've both bought a lottery ticket, and told my friend "I know I will lose".

This behavior seems bizarre. Why did I buy a ticket if I claim such knowledge? My friend presses me on just this point, at which I admit, "Okay, I don't know I will lose. There's a slight chance I win".

The open futurist analysis can account for every part of this narrative. The lottery winner is currently unsettled. So, [WILL: I lose the lottery] is false. Hence, someone buys a ticket—it's a dollar, why not. But I can know [it is highly unlikely that I win the lottery], and thus [WILL-probably: I lose the lottery]. The latter claim appears to be what is most often asserted in casual conversation when someone claims they will lose (the reasons for which may have to do with probability, rational action with respect to the future, et cetera). The likelihood of a lottery-loss, which I know, entails that it is not rational for me to make plans on the assumption that I win.

When a conversational partner makes salient the proposition with the unrestricted WILL operator, speakers most often back off and say something to the effect of "Yes, but it's highly unlikely that I win", or "Yes, but I shouldn't plan on winning", or "I'm still not going to buy a ticket". This indicates that we are aware of the wide-scope, unrestricted use of WILL, which considers all possible futures, though it is not always used.

The open futurist says the reason that we are hesitant to say things like "I will lose the lottery" is that either (e) we are referring to the widest scope WILL proposition, which we see to be false or (f) even if we mean something else ("It is highly likely that I'll lose", "I am not planning my life around the possibility that I win", et cetera), our interlocutor has made salient relevant possible

futures. If the lottery isn't rigged, there is a set of possible futures, no matter how small, in which I win. Lottery cases make the restriction of possible futures difficult, even when I know it's likely I lose. Open futurists are thus not only able to answer the Moorean objection—they can account for our behavior in lottery cases without having to say that assertions like [WILL: I lose the lottery] are true or that knowledge varies according to practical interests.¹⁸

But more is needed to account for our future-oriented actions. Betting (and prediction) might seem to *require* true contingent propositions. General concerns related to betting apply broadly to most cases of practical action. When I agree to meet my friend for lunch, I informally make predictions and bet on certain outcomes, such as the buses being in working order, a lack of traffic accidents, that I remain in good health, et cetera.

In making plans, we all appear to be soothsayers of a sort. And it seems plausible to think that soothsayers can get things right—or wrong. Further, we can hold people responsible for what they predict or bet on.

Not all cases of betting and prediction will allow for us to simply narrow our considered scope to futures we think are probable, since we can (sometimes rationally) bet on outcomes we think are highly improbable.¹⁹ Betting, and prediction more generally, seem to *require* true contingent propositions, says the objector. Consider the following:

The case of the bookie: Sheila decides to supplement her income with a little extra cash—she decides to take bets on whether or not the Colts will win an upcoming football game. I bet that they will. I say, “The Colts will win at *t*” and Sheila takes my bet. As it turns out, the Colts win at *t*! But when I come to Sheila for my windfall, she denies me payment. “The Colts will win at *t*” wasn't true when you made the bet, and that's what you bet—they could have won or they could have lost, and so the proposition you uttered either lacked a truth value or was false. Sorry, there's no way you could have won.”²⁰

Something has gone wrong here—but what? The open futurist should deny that betting requires future-oriented truths, because then she could only bet on things that are determined and someone could still deny payment over a dispute regarding whether it was determined. But how do we account for the fact that betting behavior appears to involve making claims about future contingents and their outcomes?

The claims we make about the future in betting scenarios cannot require that, when betting, the odds we play are entirely to do with the truth value of the proposition regarding the actual outcome. Otherwise, lotteries would be rigged even according to closed futurists. Suppose a closed futurist plays the lottery and predictably loses. The probability of the *proposition* that [the closed futurist loses the lottery] is 1, and was 1 when the closed futurist bought their ticket (at least, according to their theory). But the closed futurist cannot complain to the lottery commission that the lottery was fixed simply because the probability of [the closed futurist loses the lottery] is 1.

Here, it makes sense to follow a suggestion from Belnap and Green (1994): acts of betting and prediction are declaring a stake in a certain sort of future outcome, come what may. They write,

Assertion therefore involves a quantification over histories *not* in the sense that an assertion of *A* is an assertion that *A* is historically possible or settled true. Rather assertion involves a quantification over histories in the sense that it is an act that has implications for the speaker no matter how things eventuate. (p. 383, italics theirs)

When we plan, deliberate, and promise, it can be difficult to know what future scenarios we can hold fixed, even on a closed future view. When I commit to meet my friend for lunch, my assertion that “I will meet you at noon” appears to have an implicit hedging to the effect of “unless something unanticipated happens”. (Our inability to predict what happens is perhaps good reason to avoid making certain kinds of vows that we *must* fulfill, come what may.) Some people make this implicit addition explicit in their future-oriented assertions, such as those who utter “God willing” or “Inshallah” after utterances of promises or plans.

What should we be expected to anticipate and when should we be held responsible for our acts of betting and future-oriented calculations of the odds? These are good questions for another day. For now, I have shown that it is rational for the open futurist to bet on her own theory when reasoning about the future.²¹

ENDNOTES

¹This insight is the heart of reasons-responsiveness theories, which require that an agent appropriately form, assess, and respond to a suitable range of potential reasons (see McKenna, 2022).

²This is also consistent with van Inwagen’s (1983) notion of freedom as the ability to render a proposition false. Given the analysis of open futurism provided in section two, this notion of freedom can be understood as the ability to render a proposition true.

³Propositions are indicated with brackets for ease of explication.

⁴Here I suppress a detail: the commitment is more fully “contingent truth supervenes or depends on being”. Since necessary truths *must* be true by definition, they are not subject to this requirement. Contingent truths do not have to be true, and so something about reality must account for why they are true—or so the intuition goes. Motivations here can be stronger than simple supervenience claims, but the more minimal requirement will work for present purposes.

⁵Criticisms of bad epistemology are nothing new in the free will debates. Fischer (2016) gives perhaps the most famous criticism of libertarians who would abandon their incompatibilism were they to learn determinism is true, arguing that they unacceptably “flip-flop”, though Vargas (2007) levels a similar concern. For responses to the flip-flopping objection, see Bailey and Seymour (2021), Cain (2019), and O’Connor (2019). The epistemic objections tackled in this paper are stronger than Fischer’s, since the open futurist isn’t simply charged with bad epistemology. Rather, the complaint is that the view makes practical action impossible.

⁶More accurately, open futurists hold that no *determinate* future objects or events exist. According to Barnes and Cameron (2009, 2011), it is possible that the future is “open” even though future objects and events exist given that some future objects and events exist indeterminately. In order to simplify discussion in what follows, I will refrain from including the qualification “determinate”; in the present context, nothing of significance hinges on this. The epistemic and practical objections addressed in this paper are generated by the lack of determinate future truths—without determinate truth, the objector thinks we lack the ability to rationally reason about the future. So, these objections—and the replies—also apply to views which understand future openness in terms of indeterminacy.

⁷The open futurist’s treatment of ‘WILL’ follows a standard metaphysical treatment of necessity. Consider three propositions about a semi-feral cat I used to own:

- (1) Necessarily, my cat is ill-tempered.
- (2) Necessarily, my cat is not ill-tempered.
- (3) It is not the case that: Necessarily, my cat is ill-tempered.

Propositions (1) and (2) make far stronger claims about the nature of the cat than (3). (1) says that my cat was necessarily ill-tempered, which is false. She could have been very sweet, had she received the care she needed as a kitten. (2) is obviously false, since my cat was ill-tempered in the actual world. The contradictory claim of both (1) and (2) is (3), and (3) is true: my cat needn’t have been so ill-tempered. And note that determining the truth values of (1)-(3) requires witnessing either the entire set or class of possible worlds ((1) and (2)) or some subset (3).

- ⁸ Propositions like [WILL: p] can change in truth value, depending on what happens. The possibility of change of this sort is the heart of open futurism, since not everything which is presently unsettled must remain so. As Seymour (forthcoming) notes, “A-theorists about time should not be in principle opposed to propositions with changing truth values. Once the descriptive content of a proposition like [WILL: p] is settled, then the proposition will be true thereafter. Suppose a coin c lands heads at a time t . Then, all possible futures will be such that coin c landed heads at time t ; that is, [WILL: coin c lands heads at time t]” (p. 5).
- ⁹ This view is defended by Hartshorne (1964, 1965), Prior (1968), Markosian (2012), Rhoda (2011), Seymour (2015), and Todd (2016), among others. Prior labeled the view ‘Piercianism’, as he credited the view to Charles Sanders Pierce. Todd calls the view ‘Russellian’, since this brand of open futurist treats falsity in a similar manner to Bertrand Russell. I prefer the label ‘all-falsism’, since it most perspicuously labels the view on which all future contingent propositions are false. Multiple authors have defended the view, and so it deserves its own label—much like we discuss bivalence denial in those terms, rather than labeling the view ‘Aristotelianism’ after its most famous defender.
- ¹⁰ This objection can be put to bivalence deniers in skeptical terms: for any possible action I could freely perform, there is no fact of the matter about whether I accomplish it, so I should form no credences at all. The bivalence denier should answer the objection in a similar manner: the fact that there is no fact about whether I perform an action does not entail that I cannot perform it.
- ¹¹ This claim that the proposition “will become” true is indeed perspicuous according to open futurism. For, it is perfectly rational to assume that time will progress and noon will arrive, at which time I will have arrived or failed to arrive. So, [WILL: Either I meet my friend or I fail to meet my friend at noon] and [WILL: propositions about whether I meet my friend at noon are settled at or before noon] are truths about the present. Here, you might complain that we have no guarantee that [WILL: time progresses], especially according to open futurism. The world might cease to exist; perhaps a deity annihilates us all. If such scenarios are metaphysically possible, we are blocked from making even these basic sorts of claims about the future. To make this complaint is to give the Moorean objection, which I address in the following section.
- ¹² It’s important to note that we typically don’t have this incredulous reaction to other modal claims; we don’t take the falsity of [Sally necessarily trips] or even the falsity of [Sally trips] to entail Sally *can’t* trip. Such a modal confusion would lead us into fatalism, according to which it is a logical impossibility for agents to do otherwise than they in fact do.
- ¹³ Will I exist five minutes from now? Some open futurists have insisted that there is no problem here: once five minutes have passed, it will then be true that it *was* the case that I will exist five minutes from now (see Barnes and Cameron (2009), Belnap and Green (1994), and MacFarlane (2003, 2005) for different versions of this kind of response). But retroactive ascriptions of truth or knowledge are of no help to the person reasoning about what is presently unsettled—that is, to the person five minutes ago who wondered if they would still exist five minutes later, and whose deliberation presupposed it.
- ¹⁴ If all of those propositions are presently settled true and I’m still free, we have a commitment to compatibilism of the sort described in Lewis (1981), rather than open futurism.
- ¹⁵ See van Inwagen (1990, p. 103ff) for use of this general strategy about what we actually assert in potentially tricky metaphysical contexts, which I adopt wholesale here. (Though the application to future contingents and scope is my own.)
- ¹⁶ Compare: it would be no objection to a modal theory if someone could not distinguish between broadly logical necessity and the narrowed scope of nomological or historical necessity.
- ¹⁷ The answer which seems intuitive to many is that the marble’s path will continue to be curved, while the correct answer is that the marble’s path is straight, see McClosky, Caramazza, and Green (1980).
- ¹⁸ Open futurism thus has the potential to positively contribute to the debates about whether knowledge depends on practical interests. Pragmatists use our behavior in lottery cases, as well as cases where we claim knowledge in low stakes but not high stakes contexts, to argue that knowledge depends on interests (see Hawthorne (2004) and Roeber (2018)). The open futurist appears to provide a non-pragmatist solution to this debate, but further discussion of this point is beyond the scope of this paper.
- ¹⁹ Suppose the opportunity cost is subjectively right: the odds are good enough that I could spend a dollar to win big if an unlikely dark horse wins, and I can afford the loss of a dollar.
- ²⁰ A hiccup: this is not quite right. Sheila and I could argue over whether it was determined at the moment of my utterance that the Colts win at t . But it would be an odd consequence of open futurism if we could only bet

on things that we take to be determined (and thus could only make bets on what cannot be verified in many situations). In these situations, it is still unclear when the bookie should pay out, if ever.

²¹This paper began as a series of conversations with Peter van Inwagen and Mike Rea, back when I was in graduate school. (A sign of how long it's been: our initial debates were about the probability of [Obama will win the election].) And arguments in this paper appeared in my dissertation. As a result, I am indebted to many people for their input over the years. Thanks to Peter and Mike for their conversation, and especially to Mike for his incisive and generous comments. Thanks also to the rest of my dissertation committee: Jeff Speaks, Meghan Sullivan, and Dean Zimmerman, as well as to Paddy Blanchette. I'm grateful to audiences at the 2013 American Catholic Philosophers Association, Notre Dame, Fordham, and the 2014 New York Pragmatist Forum, and particularly to Phil Woodward for his comments. I'm also grateful to Nathan Ballantyne for helpful written comments, and my special thanks to Alicia Finch for providing exceptionally generous feedback. Finally, my deep thanks to Michael McKenna and Carolina Sartorio for their help and encouragement regarding this paper.

REFERENCES

- Bailey, A. M., & Seymour, A. (2021). In defense of flip-flopping. *Synthese*, 199(5–6), 13907–13924.
- Barnes, E., & Cameron, R. (2009). The open future: Bivalence, determinism, and ontology. *Philosophical Studies*, 146(2), 291–309.
- Barnes, E., & Cameron, R. (2011). Back to the open future. *Philosophical Perspectives*, 25(1), 1–26.
- Belnap, N., & Green, M. (1994). Indeterminism and the thin red line. *Philosophical Perspectives*, 8, 363–388.
- Cain, J. (2019). Free will, resiliency, and flip-flopping. *Southwest Philosophy Review*, 35(1), 91–98.
- Fantl, J., & McGrath, M. (2012). Précis of Knowledge in an Uncertain World. *Philosophy and Phenomenological Research*, 85(2), 441–446.
- Fischer, J. M. (2016). Libertarianism and the problem of flip-flopping. In D. Speak & K. Timpe (Eds), *Free will and theism*. Oxford University Press. 48–61.
- Hartshorne, C. (1964). Deliberation and excluded middle. *The Journal of Philosophy*, 61(16), 476.
- Hartshorne, C. (1965). The meaning of 'is going to be'. *Mind*, 74(293), 46–58.
- Hawthorne, J. (2004). *Knowledge and lotteries*. Oxford University Press.
- Kapitan, T. (1986). Deliberation and the presumption of open alternatives. *The Philosophical Quarterly*, 36(143), 230–251.
- Lewis, D. (1981). Are we free to break the laws? *Theoria*, 47(3), 113–21.
- MacFarlane, J. (2003). Future contingents and relative truth. *The Philosophical Quarterly*, 53(212), 321–336.
- MacFarlane, J. (2005). The assessment sensitivity of knowledge attributions. In T. S. Gendler & J. Hawthorne (Eds), *Oxford Studies in Epistemology*, (1), 197–233.
- Markosian, N. (2012). The truth about the past and future. In F. Correia & I. Iacona (Eds), *Around the tree: Semantic and metaphysical issues in the philosophy of time*, 127–141.
- McClosky, M., Caramazza, A., & Green, B. (1980). Curvilinear motion in the absence of external forces: Naïve beliefs about the motion of objects. *Science*, 210(4474), 1139–1141.
- McKenna, M. (2022). Reasons-responsiveness, Frankfurt examples, and the free will ability. In D. K. Nelkin & D. Pereboom (Eds), *The Oxford Handbook of Moral Responsibility*, 27–52.
- O'Connor, T. (2019). How do we know that we are free? *European Journal of Analytic Philosophy*, 15(2), 79–98.
- Prior, A. (1968). *Papers on time and tense*. Oxford University Press.
- Rea, M. (2006). Presentism and fatalism. *Australasian Journal of Philosophy*, 84, 511–524.
- Rhoda, A. (2011). The fivefold openness of the future. In W. Hasker, D. Zimmerman, & T. J. Oord (Eds), *God in an open universe: Science, metaphysics, and open theism*, 69–93.
- Roeber, B. (2018). The pragmatic encroachment debate. *Nous*, 52(1), 171–195.
- Seymour, A. (2015). Presentism, propositions, and persons: A Systematic Case for All-falsism, PhD Thesis. South Bend, IN: University of Notre Dame.
- Seymour, A. (forthcoming). An open future is possible. *Journal of Analytic Theology*.
- Todd, P. (2016). Future contingents are all false! On behalf of a Russellian open future. *Mind*, 125(499), 775–798.
- Unger, P. (1979). I do not exist. In G. F. Macdonald (Ed.) *Perception and Identity*, Cornell University Press.
- van Inwagen, P. (1983). *An essay on free will*. Oxford University Press.
- van Inwagen, P. (1990). *Material beings*. Cornell University Press.

- van Inwagen, P. (2007). What Does an Omniscient Being Know About the Future? *Oxford Studies in Philosophy of Religion*, 1, 216–230.
- Vargas, M. (2007). Revisionism. In J. M. Fischer, R. Kane, D. Pereboom, and M. Vargas (Eds), *Four views on free will*. Blackwell. 126–165.

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