

Future Contingents, Openness, and the Possibility of Omniscience: Defending an Argument Against Relativism and Supervaluationism

Todd and Rabern (2021) mount an argument that – *contra* both Thomason’s (1970) supervaluationism and MacFarlane’s (2014) relativism – an “open future” view is incompatible with the principle they call “Retro-closure”, according to which today’s rain implies that yesterday it was true that it would rain a day later. In a recent piece, MacFarlane replies.¹ This paper has two aims. First, I argue that MacFarlane’s response to Todd and Rabern is unsuccessful on its own terms. Second, I attempt to clarify Todd and Rabern’s overall argument, and explain how MacFarlane’s replies should be construed within the overall dialectic. The intended result: if you want an “open future”, then one’s best option is a modified Peirceanism (Todd 2021); if one wants Retro-closure, one’s best option is one on which there is a determinate “Thin Red Line” (a view sometimes called “Ockhamism”). However, one cannot have what supervaluationism and relativism both promise, *viz.*, a view that preserves both.

1. Todd and Rabern’s argument

Todd and Rabern claim that there is no plausible way to vindicate both the openness of the future – here construed as the thesis that future contingents are never true² – and what they call *Retro-closure*:

$$p \rightarrow \mathbf{Was}n\mathbf{Will}np.^3$$

Following Todd and Rabern, let us call the conjunction of the open future thesis and Retro-closure *Open-closure*.⁴ As MacFarlane notes, their argument appeals – in a certain kind of way – to the possibility of an omniscient being. The basic thought is just that, once we see what the combination of these two views predicts about the beliefs of an omniscient being, we’ll see that this combination of views is unworkable. And Todd and Rabern claim that it would be illicit to

¹ MacFarlane (2024). MacFarlane’s piece is part of a symposium on Todd 2021. I do not take up the issues discussed in this essay in my replies (Todd 2024). For a different reply to Todd and Rabern (which I hope to address in future work), see De Florio and Frigerio 2023.

² What are future contingents? Todd and Rabern’s gloss: “roughly, statements saying of causally undetermined events that they will happen.” (2021: 102)

³ Here I adopt Prior’s metric tense operators (1957: 11-12), where **Was** n stands for “It was n units of time ago that p ”, and “**Will** n ” stands for “It will be n units of time hence that p ”.

⁴ Both supervaluationism and relativism are meant to vindicate Open-closure; here I bypass the explanation of how these views do so – but see Todd and Rabern 2021: 104 - 107.

respond to this problem by saying that this is a problem for the possibility of an omniscient being, *not* a problem for the relevant combination. Of course, there may be no omniscient being, but this is not an appropriate way of *showing* that there isn't. More on this shortly.

But what is the problem? First, let's assume that omniscience implies every instance of the schema Todd and Rabern call "omni-accuracy": p iff God believes p . Now, the problem is that the combination of the open future, together with Retro-closure, *and* the existence of an omni-accurate being ("God")⁵, seemingly predicts the following ("Dialogue 2"):

Us: God, do you anticipate a sea-battle tomorrow?

God: It is not true that I do.

Us: Do you anticipate peace tomorrow?

God: It is not true that I do.

Us: So, the future is open?

God: Precisely.

[... *a day passes, and a sea-battle rages*]

Us: God, did you anticipate this sea-battle?

God: Yes, of course I did. (Todd and Rabern 2021: 109)

And this dialogue makes God look like a revisionist historian. In short, the open future appears to license God's failure to have an anticipation regarding a sea-battle tomorrow, despite being omni-accurate. But Retro-closure implies that yesterday it was true that there would be a sea-battle today – and thus if God was omni-accurate yesterday, then he should have yesterday anticipated a sea-battle today. Hence the problem. Schematically, we can represent Todd and Rabern's argument as follows:

Argument 1

1. The semantic facts, together with indeterminism, should be neutral on the existence of an omni-accurate being.
2. Open-closure is not neutral in this way. So,
3. Open-closure is false.⁶

⁵ As MacFarlane notes, "Technically, God could be omniscient just for an instant, but the traditional theological view is that God is eternally and necessarily omniscient" (9) It is omniscience in *this* sense, we can assume, that is at stake here.

⁶ Todd and Rabern do not explicitly formulate what I am calling *Argument 1* – and, in fact, what they say is that the semantic facts, together with indeterminism, should be neutral on the existence of an *omniscient* being. They go on to provide two different characterizations of "omniscience", one on which

MacFarlane considers a way of denying (2), but ultimately seems more sympathetic to a denial of (1). I take each in turn.

2. MacFarlane on Denying (2)

In defense of a denial of (2), MacFarlane questions “whether God has been given the right lines in this play,” and suggests that – on his view, and the assumption that God is omni-accurate – God should simply remain *silent*:

Us: God, do you anticipate a sea-battle tomorrow?

God: ...

Us: So it’s not the case that you anticipate a sea-battle tomorrow?

God: ...

Us: You’re not answering because the future is open?

God: Precisely. I’m omniscient, and because the facts aren’t settled, it isn’t yet settled what I believe now.

[... *a day passes, and a sea-battle rages*]

Us: God, did you anticipate this sea-battle?

God: Yes, of course I did.

Us: Was it settled yesterday that you did?

God: No; just as the fact was not settled, neither was my belief. (2024: 12)

MacFarlane claims that this modified dialogue “does not seem incoherent” (11). But I disagree. This dialogue *does* seem incoherent. But first we must set aside what is plausibly a red herring. As MacFarlane notes, in defense of the incoherence of Dialogue 2, Todd and Rabern appeal to

Settledness of Belief: If S believes p , it is settled that S believes p .

omniscience requires omni-accuracy, and the other on which omniscience requires “omni-correctness” (i.e., for God to satisfy that schema TRUE(p) iff God believes p); more on this below. They then suggest that the open-closurist faces problems on either construal. I try to reconstruct their overall line of thinking below; but for now, we can treat *Argument 1* simply as an independent argument.

And MacFarlane notes that the full generality of this principle has been challenged – on semantic externalist grounds – by Jackman 1999.⁷ But no amount of semantic externalism is really going to solve the problem here; *Settledness of Belief* is in fact a far stronger thesis than is required for our purposes. What we need is merely:

Settledness of Belief for Settled Content: If the meaning of p is settled, then if S believes p , it is settled that S believes p .

As Jackman writes, “The meanings of many, if not most, of our terms may be independent of how things turn out in the future. ... a term’s extension can be ‘settled’ at a moment if the term has the same extension in every history passing through that moment. The meanings of many of our terms may be settled in this fashion.” (1999: 163) With the plausible claim that the meaning of ‘sea-battle’ (etc.) is settled in just this way, then, yes, the dialogue does seem incoherent, even granting a Jackmanian kind of temporal externalism.

But let’s back up and review the problem. The problem is that, if we get a sea-battle, then God is going to claim that all along he had anticipated the sea-battle. But if we get peace, then God is going to claim that all along he had had anticipated peace – and no sea-battle at all. One and the same set of circumstances could eventuate in the accuracy of *either* of these speeches. That is wild. Whether you count as currently anticipating a sea-battle, or instead peace, does not depend on what the future has not yet settled.⁸

More generally, note that this dialogue is just one illustration of what presumably would be happening *all the time* in a thoroughly indeterministic world in which there is also an omniscient being. There are millions of random, chance events. And yet, each time, according to MacFarlane’s suggestion, God (truly!) says: I anticipated this! I knew this would happen! The inevitable impression we would get from taking this supposition seriously is the following: here is a being for whom the indeterminism in the world is no epistemic barrier; this being knows, as if by magic, or as if by a crystal ball, how indeterministic processes are going to get resolved. And yet this is *not* what MacFarlane can genuinely countenance: when God faces the open future, God too is confronted by the absence of determinate facts about what is to come, and this absence renders God *silent*.

By way of illustration, say we’ve flipped an indeterministic coin 10,000 times in a row; each time God claims to have known which way it was going to land. “Yes,” he says, “I

⁷ And more recently, I might add, by Ball (2018, 2020) and Ball and Huvenes (2021).

⁸ Cf. Todd 2013 (a) and 2013 (b).

anticipated this heads” – or tails, as the case may be. We are about to flip the coin again, and we say: tell us which way it is going to land! You’ve been able to know in advance which way it was going to land 10,000 times before (apparently nothing can surprise you) – so tell us this time which way it is going to be! (Or perhaps don’t tell us, but write it down *clearly and legibly* [no duck/rabbit nonsense] on this sheet of paper, and lock it away.) But now MacFarlane’s God is struck dumb with silence. He’s done the trick 10,000 times before, he says, but when pressed to do it again, he can’t. He’s reduced to saying, “I’m either anticipating heads or anticipating tails; we’ll have to wait to see which. If we get heads, then I was always anticipating heads, but if we get tails, I was always anticipating tails.” This isn’t going to work.

3. Credence

There is perhaps, however, a more straightforward way of bringing out the problems here (unmentioned by Todd and Rabern) – a way that relates to a different set of issues (regarding credence) raised by elsewhere by MacFarlane (2014: 233 – 236, 2024: 12 - 14). Suppose we do not ask God whether he anticipates a sea-battle tomorrow. Suppose we instead ask God what the *probability* is of a sea-battle tomorrow. On *this* question, MacFarlane’s God presumably needn’t (indeed, can’t) remain silent:

Us: God, what’s the objective probability of a sea-battle tomorrow?

God: .9.

Us: And peace?

God: .1. (of course).

Us: And so what is your credence that there will be a sea-battle tomorrow? That is, how confident are you that there will be a sea-battle tomorrow?

God: .9. (I am not irrational, and I do not disobey the Principal Principle.)

Us: Got it. And so your confidence that there will be peace tomorrow is low – that is, it is .1?

God: Of course. I am very confident that there will not be peace tomorrow.

This much should be perfectly acceptable to MacFarlane.⁹ But now suppose – as must of course happen sometimes – that the objectively improbable happens, and there is peace after all. In virtue of granting both omni-accuracy *and* Retro-closure, we still get the following:

Us: God, did you anticipate yesterday that there would be peace today?

God: Yes, of course I did.

Us: So yesterday you anticipated peace today, despite yesterday having a .1 credence that there would be peace today – despite yesterday saying “I am very confident that there will not be peace tomorrow”?

God: Yes. Yesterday I was very confident that there would not be peace today, but yesterday I did know that there would be peace today.

But this is impossible – or at any rate deeply implausible. If yesterday God’s credence in the claim that there would be peace today was .1, it is first of all impossible that yesterday God could have *believed* that there would be peace today (having a .1 credence in p is presumably not consistent with *believing* that p), and second of all impossible that God could have *known* that there would be peace today. With Todd and Rabern, I conclude – minimally – that combining the open future with Retro-closure cannot be made consistent with the existence of an omni-accurate being.

4. Neutrality

But here is where matters become, to my mind, substantially more confusing. Recall the argument under consideration:

⁹ An anonymous referee, however, suggests that if one accepts that an omniscient being should remain silent about whether he anticipates a sea-battle, an omniscient being should likewise remain silent on what his *credence* is concerning a sea-battle. As the referee notes, given a threshold view of belief, silence about belief will go hand in hand with silence about credence. But one challenge for this type of view is the following. Everyone, I think, is prepared to admit that the sea-battle, right now, has (or certainly could have) a determinate objective probability. (Where that comes from is of course hard to say, but it has something to do with the laws of nature, the current arrangement of things, and so on.) It should be uncontroversial that, if there is such an objective probability, then an omniscient being would have to know what it is. For instance, if we have a certain kind of atom, and the fundamental physics says that there is a 50 percent objective probability that it decays within an hour, then this is a fact that an omniscient being would have to know. But it is also plausible that an ideal knower obeys the Principal Principle. This would imply that God’s credence in the sea-battle (etc.) isn’t indeterminate, but is instead based on perfect knowledge of the objective probabilities at issue. This is why God – at least presumably! – can’t remain silent on his credence; he can’t because that is determined by the objective probability, and the objective probability is something he is perfectly positioned to calculate. If this presumption is itself mistaken, it is a challenge for MacFarlane to specify how.

Argument 1

1. The semantic facts, together with indeterminism, should be neutral on the existence of an omni-accurate being.
2. Open-closure is not neutral in this way. So,
3. Open-closure is false.

We have been concerned with the possibility of denying (2), but it seems like MacFarlane's preferred response to the above is not to defend the result that, in an indeterministic universe, there *can* be an omni-accurate being. Rather, his preferred response is to deny (1), and to say that it is legitimate to maintain that, in an indeterministic universe, there *cannot* be an omni-accurate being (2024: 11). However, someone sympathetic to Todd and Rabern's argument might complain that this is not an argument of the right *kind* against the existence of an omni-accurate being, even assuming indeterminism. In other words, the assumption of indeterminism should, in conjunction with the semantic facts, be *neutral* on the existence of such a being.

This seems right to me. However, my sense is that this "neutrality" thesis is not the core thesis that Todd and Rabern really needed for the success of their argument (if reconstructed as *Argument 1*). The core issue, as I am seeing it, is simply that the relevant dialogues employ a rhetorical device – the responses of an omni-accurate being – to reveal a problem that was latent in these views all along. To complain about the rhetorical device is somehow just to miss the point.

Perhaps I can try to make the point this way. To posit an omni-accurate being is simply to posit the existence of a being whose mind is a mirror of the truth. In the setting of tense-logic, to posit an omni-accurate being is simply to posit a being whose beliefs mirror, in the relevant way, the tense-logical facts. If tense-logic tells us that from the fact that it will be in two days that p , it follows that tomorrow it will be that p a day later, then we conclude that if the omni-accurate being anticipates its being the case that p in two days, that being anticipates tomorrow anticipating that p a day later. So far, so good. Now, MacFarlane has given us his preferred combination of tense-logical axioms, and in an indeterministic setting, the result is that though future contingents are neither true nor false, Retro-closure is nevertheless true – anything that happens was always going to happen. We point out that this combination would predict a totally bizarre set of responses from an omni-accurate being (Dialogue 2, or MacFarlane's modification). MacFarlane then faults, not the axioms, but the assumption that, in an indeterministic world, there could be such a being!

Why would this response be inadequate? The best I can do is to say the following. MacFarlane’s response is like faulting, not the thing reflected, but the existence of the thing doing the reflection. In other words, we hold up a mirror to MacFarlane’s view, and he doesn’t like what he sees. But rather than abandon his view, MacFarlane faults the existence of the mirror. (If we could just “restrict” the mirror in some way – blemish it here, crack it there – then the problem wouldn’t arise.¹⁰) But the mirror wasn’t the problem. The problem was the view, and the mirror simply made salient the problem with it that was there all along.

5. Extending the Argument

Once we set aside the possibility of *preserving* omni-accuracy together with Open-closure – i.e., once we “restrict” omniscience in exactly the way countenanced by MacFarlane – Todd and Rabern (2021: 119) observe that Open-closure ultimately predicts the following. It allows us to say that *looking forward*, God isn’t ignorant (indeed, is fully omniscient) – but then Retro-closure forces us to say, implausibly, that *looking backward*, God had been ignorant (wasn’t omniscient after all). If this result is implausible, they contend, then the combination of the open future and Retro-closure is itself implausible. Open-closurism, they say, gives rise to the problem of “revoking omniscience”; schematically, the argument seemingly goes as follows:

Argument 2

1. On open-closure, we get the possibility of revoking omniscience.
2. This result is implausible. So,
3. Open-closure is false.

First an observation. Todd and Rabern appear not to notice that the role of omniscience in *this* argument is redundant; rather than talking about “revoking omniscience”, we could make the same point more simply in terms of *retroactive ignorance*.

Argument 3

1. On open-closure, we get the possibility of retroactive ignorance.
2. This result is implausible. So,

¹⁰ MacFarlane (13) alludes to the familiar idea that the notion of “omnipotence” is often *restricted* in some key way – so that omnipotence doesn’t imply the ability to do “anything”, but (say) anything that is *logically possible*. The thought: if we similarly accept that omniscience should be “restricted”, then the problem here doesn’t arise. To my mind, however, this doesn’t address the core of the problem.

3. Open-closure is false.

In other words, Todd and Rabern's point could be made equally well as follows, involving exchanges between ordinary human mortals:

Smith: Do you believe that there will be a sea-battle tomorrow?

Jones: No.

Smith: Do you believe that there will be *no* sea-battle tomorrow?

Jones: No.

Smith: So you are, at least in this respect, ignorant: for either there will be or won't be, but you admit that you don't know which.

Jones: Well, I admit that that's a natural thought. But I don't concede that I am *ignorant* – for to be ignorant is to fail to know a truth, and there is no truth to be known here. Yes, either there will be a sea-battle tomorrow or there won't be. But both such claims are neither true nor false. Because it is neither true nor false that there will be, and neither true nor false that there won't be, you can't accuse me of *ignorance* solely on grounds that I don't *know* whether there will be or won't be. Neither such claim is true! And it is not *ignorance* to fail to know what isn't true.¹¹

Smith: OK, got it. In fact, you've convinced me. Just because you don't know whether there will be a sea-battle tomorrow, it doesn't follow that you are ignorant. You don't know, but this isn't ignorance – it is failing to know what isn't “there” to be known.

Jones: Exactly! Thank you.

[*time passes, and a sea-battle rages*]

Smith: Yesterday, did you believe that there would be a sea-battle today?

Jones: Well, as I said yesterday, No. Yesterday I didn't know – indeed, I didn't even believe – that there would be a sea-battle today.

Smith: So you were ignorant yesterday! Exactly because yesterday you didn't know that there would be a sea-battle today. [Obvious result, given Retro-closure]

Jones: Well, wait. You are being unfair – and absurd. Remember: these were the words out of your mouth yesterday: “You aren't ignorant today, even though today you don't

¹¹ This speech should be acceptable to MacFarlane, once we “restrict” omniscience (i.e., non-ignorance) in the way he suggests. In other words, if non-ignorance just requires what Todd and Rabern call *omni-correctness*, then Jones' speech here is vindicated. More on this below.

know whether there will be a sea-battle tomorrow”. But now you are trying to tell me that after all I *was* ignorant yesterday?

Smith: Yes. I was right yesterday when I said “You aren’t ignorant today”, and I am right today when I say “You were ignorant yesterday”.

Jones: I’m sorry, but that makes no sense. If you were right yesterday when you said “You aren’t ignorant today”, then it can’t be that you are right now to say “You were ignorant yesterday”. That’s just not how this works. I wasn’t ignorant yesterday, even though yesterday I didn’t believe that there would be a sea-battle today. That is because – as you yourself granted yesterday – it wasn’t true yesterday that there would be a sea-battle today, even though there is indeed a sea-battle today.

Jones – who has hereby denied Retro-closure – could leave the matter there, but if he were in a metaphysical mood, he might add:

The unfolding of time can’t have this effect – the effect of stuffing more truths back there into the past to make it so that I started off not being ignorant at t , and then later became such that I *was* ignorant at t . This is revisionist history.

The point here is simple. Insofar as Smith grants that Jones isn’t *ignorant*, despite not believing either that there will be a sea-battle, nor that there will not be a sea-battle, then Smith should therefore be prepared to *deny* – rather than insist on – the core implication of Retro-closure, viz., that yesterday Jones was indeed ignorant. To insist on the latter (today) while having granted the former (yesterday) is patently unfair.

6. The Dilemma

It seems to me that we can re-state Todd and Rabern’s overall argument in the following way. We have two possible ways of construing “ignorance”, and the supervaluationist/relativist runs into trouble no matter which way we go. First, we could construe ignorance as follows:

(IGN) S is ignorant about p =def. p and S does not know that p .

Since a subject S is ignorant about whether p iff S is ignorant about p or S is ignorant about $\neg p$, it

follows on this understanding that Jones (in the dialogue above) is ignorant about whether there will be a sea-battle. Why? According to supervenience this is true:

(1) (There will be a sea battle and Jones doesn't know there will be a sea battle) or (There will not be a sea battle and Jones doesn't know there will not be a sea battle)

So this is true:

(2) Jones is ignorant that there will be a sea battle or Jones is ignorant that there will not be a sea battle.

And so:

(3) Jones is ignorant whether there will be a sea battle.

But in the context of supervenience – where one has the means of distinguishing “It is true that p ” from “ p ” (or, in other words, in a context where it is denied that p iff TRUE(p)) – there is space for a second and non-equivalent definition of “ignorance” (cf. Todd and Rabern’s two definitions of omniscience):

(IGN*) S is ignorant about p =def. TRUE(p) and S does not know that p .

Now, on this understanding, Jones is not ignorant. There is not a *truth* about the sea battle that he fails to know.¹²

If the supervenience/relativist construes “ignorance” as in IGN, then the core problem is that now *even God* will turn out to be ignorant. IGN, in other words, is equivalent to the thesis that in order not to be ignorant, you need to be omni-accurate. But as we have shown above, the supervenience/relativist cannot allow that in an indeterministic universe, a being can be omni-accurate. Insofar as we may have been prepared to accept that indeterminism alone should not imply the impossibility of non-ignorance, this is a problem for supervenience/relativism.

¹² There is no such *truth*, because the sea-battle doesn't take place in *every* history. In other words, it isn't *settled*. For more on this point, see Todd and Rabern 2021: 105.

On the other hand, if the supervaluationist/relativist construes “ignorance” as in IGN*, we encounter the problem of retroactive ignorance. In other words, Jones isn’t ignorant today, despite the fact that he knows neither that there will be a sea-battle tomorrow, nor that there will not be a sea-battle tomorrow. However, in order to respect the intuitions underlying retro-closure, we have to say that anyone who yesterday didn’t anticipate today’s sea-battle was ignorant yesterday. And this combination seems unworkable. It is not plausible that though one cannot be fairly accused of being ignorant at t , it is inevitably going to be the case that one is fairly accused of having been ignorant at t . Why are you saying that I am not ignorant today, if tomorrow you are inevitably going to say that I had been ignorant the day before?

It is worth expanding on these latter points by way of considering the following reply to the problem of retroactive ignorance. In response to this problem, one might say the following.¹³ Jones can accept that it was true yesterday that there would be a sea-battle today – but still insist that he was not ignorant yesterday. In response to Smith’s charge that he was ignorant yesterday, Jones can respond:

No I wasn’t. Yesterday, there was no truth to be known. That it was true that there would be a sea-battle became the case at the very moment at which the sea-battle became the case – today! To put it more metaphysically, the past truth about the present sea-battle came into existence at the same time at which the sea-battle came into existence, viz., today. You cannot accuse me of not knowing yesterday what was not yesterday out there to be known.

The problem with this reply is that what it grants with one hand, it takes back with the other.

According to this reply, we are entitled to say “Yesterday, there was no truth to be known”. And yet – because we accept Retro-closure – we *also* concede that yesterday it was true that there would be a sea-battle today. But now consider the implications of this commitment. Someone who makes this reply is seemingly committed to the following:

(?) Yesterday, there was no truth that there would be a sea-battle today, although yesterday it was true that there would be a sea-battle today.

¹³ I am grateful to an anonymous referee for this journal for this reply – which I hereby reproduce (more or less) verbatim.

We say the first thing in order to escape the charge of past ignorance – but we say the second in order to accommodate Retro-closure. But this combination seems unintelligible. Indeed, it sounds just like saying:

(#)Yesterday, it wasn't true that there would be a sea-battle today, although yesterday it was true that there would be a sea-battle today.

And that is to say that there was a contradiction yesterday. In this connection, it is notable that Todd and Rabern observe that proponents of Open-closure are seemingly committed to a form of “Cambridge-change” for the past (2021: 106) – and it is worth considering whether the view under consideration can be made more palatable if an appeal to that kind of change is made salient. Thus, consider:

(??) Yesterday, it wasn't true that there would be a sea-battle today – but ... wait for a moment ... that has now changed: it was true that there would be a sea-battle today.

But again: is this claim intelligible? To me, it does not seem intelligible.¹⁴ Moreover, we can directly challenge the thought that Jones can accept that it was true yesterday that there would be a sea-battle today, but *also* maintain that he was not ignorant yesterday. Consider:

(???) Yesterday, it wasn't true that there would be a sea-battle today (which is why none of us were ignorant yesterday, despite not knowing whether there would be a sea-battle today) – but ... wait for a moment ... that has now changed: it was true that there would be a sea-battle today.

But if that is indeed the view under consideration, then that natural thing to think is that one's past status as *non-ignorant* would *also* change: one would start out non-ignorant at *t*, and then become such that one was after all ignorant at *t*:

¹⁴ Consider the referee's “metaphysical” suggestion: the past truth that there would be a sea-battle came into existence *with the occurrence of the sea-battle*. But how could the occurrence of something today bring into existence a truth *in the past*? The past is over and done with! Note: it may be that the occurrence of a sea-battle today explains why there *always was* a truth to the effect that there would be a sea-battle today (for discussion, see Todd and Fischer 2015) – but this claim is to be distinguished from the claim that, though for a while it hasn't been true that there would be a sea-battle today, *now*, with the occurrence of a sea-battle, it indeed was all along true that there would be a sea-battle today.

(???) Yesterday, it wasn't true that there would be a sea-battle today (which is why none of us were ignorant yesterday, despite not knowing whether there would be a sea-battle today) – but ... wait for a moment ... that has now changed: it was true that there would be a sea-battle today, and since none of us knew yesterday that there would be a sea-battle today, we were ignorant yesterday, viz., of the fact that in one day there would be a sea-battle. So for a while we weren't ignorant yesterday, but now the past has changed: we were ignorant yesterday.

But again: this view has every appearance of granting with one hand what it takes back with the other, and it is unclear how such a view could be rendered intelligible.

Consider, finally, the following contention:

There is a unified solution to the omniscience challenge and retrospective ignorance challenge. An omniscient being believes all that is supertrue (settled); an ignorant being fails to believe at least some of what is supertrue (settled). If it was not settled yesterday that the sea-battle would be the case today, then neither a human nor God can be accused of past ignorance based on the fact that the sea-battle took place today.¹⁵

But on this view, neither can be accused of past ignorance, despite the fact that it was true that there would be a sea-battle today! And this is the problem. In other words, one can easily maintain that neither humans nor God were ignorant yesterday, if today it remains the case that yesterday it wasn't true that there would be a sea-battle today. In other words, one can easily maintain this result, if one simply denies Retro-closure.

Again, the problem comes once one combines this view with the admission of Retro-closure. And the problem is that this view tells us that Retro-closure is valid – but at the same time tries to strip this admission of what would seem to be its ordinary significance. What is the point – what is the significance – of saying that it was true yesterday that there would be a sea-battle today, *unless* this implies that anyone yesterday who didn't anticipate a sea-battle today was ignorant yesterday? In order to respect the intuitions motivating Retro-closure, we must admit that failure to anticipate what would be the case today amounts to ignorance. Thus: while the suggested solution is indeed a solution, it is not a solution that respects the motivations behind Retro-closure.

¹⁵ Again, I am grateful to an anonymous referee for this challenge.

There is, of course, a concession we might make here. We could distinguish between *ignorance* and *criticizable ignorance* – or between not knowing what could have been known and not knowing what was in principle unknowable. The point I am making is simply that Retro-closure must imply that anyone yesterday who didn't anticipate what would happen today was ignorant yesterday. It is not that Retro-closure must imply that anyone yesterday who didn't anticipate what would happen today was criticizably ignorant yesterday – or failed yesterday to know something that could have been known yesterday. Perhaps yesterday it couldn't have been known that there would be a sea-battle today (precisely because yesterday it wasn't *settled* that there would be a sea-battle today). But if yesterday it was *true* that there would be a sea-battle yesterday, then what this amounts to is that ignorance was unavoidable yesterday – not that no one was ignorant yesterday.

7. Conclusion

Let me back up. The dialectic between Todd and Rabern and MacFarlane, in my judgment, amounts to the following. We first consider IGN. MacFarlane *tries* to show how, even if we assume IGN, God (an ideally perfect knower) will not count as ignorant, even given indeterminism. (In other words, MacFarlane tries to show how God can still be omni-accurate, despite indeterminism.) This strategy, however, is not promising. If ignorance is construed as IGN, then even God – that is, even a perfect knower – will count as ignorant. The question, then, is whether this result is acceptable.¹⁶ However, we could construe “ignorance” as in IGN*; in other words, we could, as MacFarlane (implicitly) suggests, restrict “ignorance” so that one will only count as ignorant if there is a (determinate, settled) *truth* of which one is ignorant. (Non-ignorance will only require omni-correctness, not omni-accuracy.) In this case, we can preserve God's non-ignorance – and Jones' – but the result is the problem of retroactive ignorance.

My sense is that the best option for the supervenientist/relativist is to accept IGN and accept the result that non-ignorance is impossible given indeterminism. Now, one question is simply whether this result is acceptable in itself. But another question is more dialectical in nature. The question is whether this result respects the core motivations of those who might be attracted to an “open future” view in the first place. Note that, on this view, our failure to know whether there will be a sea-battle tomorrow is, again, simple *ignorance*: in histories where there is a

¹⁶ As I noted above, one could also try to say that the assumption of an omni-accurate being (merely as a thought experiment) somehow directly reveals something counterintuitive about open-closure.

sea-battle, we are ignorant that there will be a sea-battle, and in histories where there is no sea-battle, we are ignorant that there will not be a sea-battle. One of those histories is our history; we are therefore ignorant no matter which one it is. This result, of course, is not implausible in itself. But one might have thought that an “open future” view would have allowed us to escape the charge of *ignorance*, solely on grounds that we don’t know, in advance, the outcome of a genuinely indeterministic process.¹⁷ On supervenience/relativism, this turns out not to be the case. Whether these views thus should count as views on which the future is not only not determined, but also *open* in some crucial further sense, is a question we must leave for another occasion.¹⁸

References

- Ball, Derek. 2018. “Lewisian Scorekeeping and the Future,” *Croatian Journal of Philosophy* 18: 375 – 383.
- Ball, Derek. 2020. “Relativism, Metasemantics, and the Future,” *Inquiry* 63: 1036 – 1086.
- Ball, Derek and Torfinn Huvenes. 2021. “A puzzle about accommodation and truth,” *Philosophical Studies* 179: 759 – 776.
- De Florio, Ciro and Aldo Frigerio. 2023. “Retro-Closure Principle and Omniscience,” *Dialectica* 77: 1 – 28.
- Hare, Caspar. 2011. “Obligation and Regret When There Is No Fact of the Matter about What Would Have Happened if You Had not Done What You Did”. *Nous* 45: 190–206.
- Jackman, Henry. 1999. “We Live Forwards but Understand Backwards: Linguistic Practices and Future Behavior,” *Pacific Philosophical Quarterly* 80: 157–77.
- MacFarlane, John. 2014. *Assessment Sensitivity: Relative Truth and Its Applications*. Oxford: Oxford University Press.
- MacFarlane, John. 2024. “Why Not All Future Contingents are False,” *Analytic Philosophy*.

¹⁷ Compare a similar view about counterfactuals (Todd 2021: Ch: 4): one might have thought that we can escape the charge of *ignorance*, solely on grounds that we don’t know how a fair, indeterministic coin would have landed had it been flipped (cf. Hare 2011: 193).

¹⁸ For helpful comments and discussion, I wish to thank two anonymous referees for this journal, John MacFarlane, and especially Brian Rabern.

<https://doi.org/10.1111/phib.12334>

Prior, A.N. 1957. *Time and Modality*. Oxford: Oxford University Press.

Todd, Patrick. 2013. (a) “Soft Facts and Ontological Dependence,” *Philosophical Studies* 164: 829–44.

Todd, Patrick. 2013. (b) “Prepunishment and Explanatory Dependence: A New Argument for Incompatibilism About Foreknowledge and Freedom,” *The Philosophical Review* 122: 619–39.

Todd, Patrick and John Martin Fischer. 2015. “Introduction”. In John Martin Fischer and Patrick Todd, eds., *Freedom, Fatalism, and Foreknowledge*. Oxford: Oxford University Press, 1–38.

Todd, Patrick. 2021. *The Open Future: Why Future Contingents are All False*. Oxford: Oxford University Press.

Todd, Patrick. 2024. “Defending the Open Future: Replies to MacFarlane, Green, Wasserman, and Bigg & Miller,” *Analytic Philosophy*.
<https://doi.org/10.1111/phib.12327>

Todd, Patrick and Brian Rabern. 2021. “Future Contingents and the Logic of Temporal Omniscience,” *Nous* 55: 102 – 127.

Thomason, Richmond. 1970. “Indeterminist Time and Truth Value Gaps,” *Theoria* 36: 264–281.