**On the idea that all future tensed contingents are false**

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1. Introduction

In “The Open Future” (2021) Patrick Todd argues that the future is open, and that as a consequence all future contingents are false (as opposed to the more common view that they are neither true nor false). Very roughly, this latter claim is motivated by the idea that (a) presentism is true, and so future (and indeed past) things[[1]](#footnote-1) do not exist and (b) if future things do not exist, then the only thing that could ground there being future tensed facts, and hence make those future tensed claims true, is the present and the laws of nature. But (c) the present and the laws of nature cannot ground there being future tensed facts because they do not necessitate there being any such fact. Hence future tensed claims are all false. Todd then goes on to present a semantics for his version of the open future on which all future contingents are false. In what follows we take up two strands of Todd’s view. First, we begin, in Section 2, by outlining Todd’s argument that future contingents are all false. We suggest that the considerations that Todd adduces for this conclusion do not support this being so. Then in Section 3 we consider the semantics that Todd offers, and argue that it yields implausible consequences.

1. The Falsity of Future Contingents

Let’s begin with a recap of why Todd thinks that future contingents are all false. We start with some assumptions about our world. In particular, we begin with the assumption that (a) presentism is true and (b) causal indeterminism is true. Thus, we assume that future states of affairs do not exist and that the present state of the world, in conjunction with the laws of nature, does not entail what will be the case at any future time.[[2]](#footnote-2) Next, Todd articulates a core intuition that grounds much of what comes later in the book. The idea is that the present and the laws *produce* the future, and given this, they are what ground there being future tensed facts, if such facts there be (Todd, 2021: 18-19). Thus, if the laws are indeterministic, then there can be no future tensed facts. This is because the existence of any such facts would be intolerably arbitrary, as these facts would not be necessitated by what is supposed to ground them.[[3]](#footnote-3).And the existence of facts which are not strictly required by their would-be explanans, Todd calls “mysterious and bizarre” (ibid. 19). Hence, since there are no such facts, the future is open. Moreover, since there are no such facts, we should conclude that future tensed contingents are false. For what it would be for there to be true future tensed contingents is for there to be future tensed facts, and there are none of these. It is the fact that the present and the laws *can* bring about a sea battle tomorrow that, according to Todd, entails that the proposition <*It will be the case that there is no sea battle tomorrow>* is false. *Mutatis mutandis*, the present and the laws, jointly, likewise have the power to bring it about that there is *no* sea battle tomorrow. And what is true of sea battles is true of all future contingents, hence these are all false.

To reinforce this intuition, Todd draws a parallel between fiction and the future. Todd argues that it would be objectionably arbitrary to suppose that there are certain facts of the matter about, say, Harry Potter (and his ilk) if those facts are not grounded in facts about the Harry Potter fiction. For instance, the fiction remains silent on whether Harry’s juice on some day contains pulp.[[4]](#footnote-4) Given that the grounds of that fact do not obtain, it would be peculiar to suppose that there is, nevertheless, some fact about the presence or absence of pulp. We are supposed to have the same intuition with regard to future tensed facts. It would be objectionably arbitrary to suppose there to be such facts, if the ground of those facts does not obtain, and the ground does not obtain because the only ground there could be (conditional on presentism being true) are the laws and the present.

We can locate our key disagreement with Todd by considering an argument that appears analogous to the one Todd offers. We will present that argument and then note that it is surely not sound. We will then argue that reflecting on why it is not sound also sheds light on what has gone wrong with Todd’s argument.

Suppose that there is, as of tomorrow, a sea battle. We know that said sea battle would be a product of (what is today) the present and the laws. No doubt the sea battle would be an *indeterministic* product of (what is today) the present and the laws – that is, the explanation of why the sea battle is occurring will make reference to the (now) present and the laws, but the fact *that* an explanatory connection holds between them will itself be a brute fact.[[5]](#footnote-5) But the (now) present and the laws are consistent not only with bringing it about that a sea battle occurs tomorrow, they are *also* consistent with bringing it about that there is *no* sea battle tomorrow. Thus, the existence, tomorrow, of a fact of there being a sea battle – a fact partly explained by the (now) present and the laws; a present and laws which might also have produced *no* sea battle – would be intolerably arbitrary. Hence, the (now) present and the laws cannot feature in an explanation tomorrow of a sea battle, on pain of arbitrariness. And since the would-be sea battle would be produced (if produced at all), by the (now) present and the laws, there could be no fact, tomorrow, of there being a sea battle. Moreover, what’s good for there being a sea battle tomorrow, is good for there being *no* sea battle tomorrow. So not only will there be no fact, tomorrow, of there being a sea battle, there will be no fact, tomorrow, of there being *no* sea battle. In essence, since the present and the laws can produce a sea battle, *and* an absence of a sea battle, the presence, tomorrow, of a sea battle fact should strike us as “mysterious and bizarre”.

Clearly, something has gone wrong here. *If* this second argument were sound, there could not be, tomorrow, a sea battle *or* the absence of a sea battle. But of course, if time passes from today to tomorrow, we will indeed wake up either to a sea battle or to no sea battle. So, if this argument is sound, time itself could not pass.[[6]](#footnote-6)

Here is what went wrong. This argument has made a move from the *failure* *of necessitation* of tomorrow’s sea battle, to the *failure of an explanatory connection* between tomorrow’s sea battle and the (now) present and the laws (since, given the failure of necessitation, the existence of an explanatory connection would be intolerably arbitrary). But, since the arguer recognises that *were there* a sea battle, it *would be* explained by the (now) present and laws (albeit indeterministically), the argument concludes that there can be no sea battle tomorrow.

But this move is illegitimate *precisely because*, when the would-be fact at question would be produced *indeterministically*, if produced at all, the failure of necessitation of the fact by its would-be explanans generates no reason to think the fact cannot obtain, or that *were* it to obtain, there would exist intolerable arbitrariness. After all, it is built into indeterminism that some facts will obtain without any (necessitating) explanation. Thus, our hypothetical argument against the occurrence of a sea battle tomorrow is a bad argument.

Todd’s argument is, in essence, the same argument as that just presented above except that the argument above talks about tomorrow’s sea battle while Todd’s talks about the future tense fact that there *will be* a sea battle tomorrow.

The above argument fails because it falsely relies on the idea that it is intolerably arbitrary to explain the sea battle by the (now) present and the laws. Todd makes a similar assumption. He maintains that the future tense fact that there *will be* a sea battle (or that there *will be no* sea battle) would have to be explained by the present and the laws, and that that explanation, if it actually obtained, would be indeterministic (non-necessitating)[[7]](#footnote-7), and that, therefore, there would exist intolerable arbitrariness if the present and the laws explained one rather than the other of the aforementioned future tense facts. But the same reasons exist to reject this argument as exist to reject the argument against the occurrence tomorrow of a sea battle. Namely, when explanations *would be* indeterministic, there is no intolerable arbitrariness in one obtaining, but not the other.

Moreover, there is no room to retreat by saying that indeterminism implies that indeterministic outcomes *have no explanation at all.* Consider what this would look like in the context of our analogous argument. Suppose we shed the assumption that the sea battle would be a product of the (now) present and the laws and say that if it occurs, it would have *no explanation at all* – not even one partly in terms of the (now) present and the laws. Now suppose we argue as follows. Were there to be a sea battle tomorrow, it would have no explanation at all. But a fact which had no explanation at all would be intolerably arbitrary. Hence, there will not be a sea battle tomorrow. Moreover, what’s good for there being a sea battle tomorrow, is good for there being *no* sea battle tomorrow. So not only will there be no fact, tomorrow, of there being a sea battle, there will be no fact, tomorrow, of there being *no* sea battle.

This new argument is even worse. If it succeeds, it shows that indeterminism *per se* leads to intolerable arbitrariness. Thus, Todd cannot amend his argument in an analogous manner, lest he fall foul of the same problem. That is, he cannot maintain that a fact that there *will be* a sea battle tomorrow would have no explanation at all *and* that facts with no explanation are intolerably arbitrary, since this combination of views would undermine causal indeterminism.

What then of the alleged parallel between fiction and the future? Well, for simplicity let’s suppose that the fiction is the product of authorial intentions. Given this, it’s plausible that it is an essential property of authorial intentions that they necessitate their effects. Thus, it is an essential property of Rowling’s creative intentions that there be a fact that Harry Potter’s name is ‘Harry’. Thus, the juice-pulp facts are necessitated by the authorial intention facts, in a way that the laws of nature and the present facts do not necessitate any future facts. Thus, the parallel between fiction and future tensed facts does not hold: where one plausibly involves the necessitation of the relevant facts (in the case of fiction) the other clearly does not (in the case of future facts). And the only reason given to suppose that the present and the laws do not ground there being future tensed facts is just that they fail to do any necessitating of future facts.

Suppose, however, that authorial intentions produced some of their effects *indeterministically*, that is, suppose one thought, say, that Rowling’s actual creative intentions, though they happen to have brought about the fact that Harry’s name is ‘Harry’, are such that the *very same intention* might have, by chance, brought it about that Harry’s name is ‘John’, or even that he had no name at all.

 If that were true, could we argue that there cannot be a fact about Harry’s juice’s pulp content, on the grounds that Rowling’s actual intention fails to *necessitate* any such fact? Surely not. Once you allow that authorial intentions can generate certain effects indeterministically, this claim is no longer plausible. For if it could be that Rowling’s authorial intentions indeterministically ground there being such a fact (even if as a matter of fact, they do not). But our intuitions about these cases are the relevant ones to consider here. They are the cases that parallel the one about future facts. After all, Todd denies that it is an essential property of the present and the laws that they produce their effects deterministically (after all, he thinks they produce them indeterministically). If, however, we consider the correct parallel between fiction and the future, namely one in which necessitation obtains in *neither* case, our intuitions about the fiction case no longer provide us with any motivation to think that there are no future tensed facts.

 So, we think, there are reasons to be suspicious of Todd’s argument to the conclusion that all future tensed contingents are false. Moreover, in what follows we argue that the semantics that accompanies this claim, in particular, the semantics for the WILL operator, are implausible. So, if this is the best semantics for the view that future tensed contingents are all false, then this is another reason to reject that claim.

1. The Semantics of WILL

In what follows we first set out Todd’s semantics for WILL, before moving on to argue that this semantics is implausible.

Here is Todd’s proposal in a nutshell. A *causally available* *future* is any complete, possible way that our timeline could unfold from the present moment, which is consistent with the facts about the present, the past, and the laws of nature. According to Todd’s proposed semantics for the WILL operator, a sentence of the form WILL(p) is true iff p obtains at some point in time on every causally available future, and is false otherwise. Similarly, a sentence of the form WILLn-units(p) is true iff p obtains in exactly n-units of time on every causally available future, and is false otherwise.

If causal determinism is true, then there is only one causally available future, and hence it will trivially be the case that WILL(p) is true (if p obtains in the single causally available future) or WILL(p) is false (if p fails to obtain in the single causally available future).

If, however, causal indeterminism is true, then there are *multiple* causally available futures. Suppose that Freddie has libertarian free will, and that it is up to him whether or not he raises his paw in the next ten minutes.[[8]](#footnote-8) Then, there are causally available futures in which Freddie raises his paw, and causally available futures in which Freddie does not raise his paw. As such, given Todd’s semantics, the sentences WILL(Freddie raises his paw) and WILL(Freddie does not raise his paw) are *both* false. They are false because it is not the case on *all* futures either that Freddie raises his paw, or that he does not raise his paw.[[9]](#footnote-9)

Consider the following metaphysical possibility. First, causal indeterminism is true. Secondly, not only is the future not determined, but whether or not time marches forwards – whether or not time will pass from the present moment to the next – is *itself* an indeterministic matter.[[10]](#footnote-10) That is, the world faces the possibility that time will continue past this moment, and the possibility that it will not. Call this possibility *temporal passage indeterminism.* Temporal passage indeterminism seems possible.[[11]](#footnote-11) If time passes, then it can either be the case that at any present moment, there *will* exist another moment after that, or it can be the case that at some present moment, there will exist *no* further moment. That, surely, is beyond doubt: time can be finite or infinite. If so, then in some possible world, it can surely be an indeterminate matter whether or not the present moment will be the last.[[12]](#footnote-12) Thus, temporal passage indeterminism is possible. Assume, then, that temporal passage indeterminism is true. How is the truth of a sentence like WILL(p) to be evaluated on Todd’s semantics?

Of course, we know the answer to this question – check whether p obtains on *every* causally available future. But, given that indeterminism holds with respect to the passage of time itself, it is not determined whether there will even *be* a future after the present moment. How are we to make sense of this?

 One possibility is that among the causally available futures, there is a *null* future. A sort of ‘empty’ future with no content, which serves to represent the possibility that time ends with the present moment.[[13]](#footnote-13) In what follows we present Todd with a dilemma. Either there is nothing which plays the role of a null future, or there is, and in either case we are led to contradiction.

Suppose, first, there is no null future. Then, when evaluating the sentence WILL(p), we look only at those causally available futures on which there exist moments of time subsequent to the present. No matter what proposition is selected for *p*, on all such futures, *p or ~p* will be true and so WILL(p or ~p) will come out true. Letting the present be denoted by ‘t’, on all such futures, WAS(t is present) will be true, so WILL(WAS(t is present)) will also come out as true. But *both* of these sentences – WILL(p or ~p) and WILL(WAS(t is present)) – entail that the present moment is *not* the last moment of time. This is because there are truths about how the world *will* go. Moreover, there are truths about the present moment being past relative to some future time. But if it were currently the last moment of time, then there would be nothing *after* the present. As such, it would not be the case that it *will* be the case that p or ~p, and it would not be the case that it *will* be the case that it was once today. Therefore, since there obtain certain facts which are inconsistent with it presently being the last moment of time, then it is not the last moment of time.

This means, however, that the present and the laws are sufficient to entail that there will be a moment of time after the present. But, *ex hypothesi*, temporal passage indeterminism is true, and hence the present and the laws are *not* sufficient to entail that there will be a moment of time after the present. This is a contradiction. Hence, we cannot suppose, on Todd’s semantics, that the causally available futures include only those futures on which there exist times after the present.

This leads to the second horn of the dilemma. On this horn, among the causally available futures there is something akin to a null future which encodes the possibility that the present moment is the last moment of time.

The existence of the null future among the causally available futures will ensure that *p or ~p*, and *WAS(t is present)* are not true on *all* of the causally available futures, and hence that WILL(p or ~p) and WILL(WAS(t is present)) are not now true. This avoids the objectionable results obtained above, but it raises a new set of concerns.

Indeed, for *any* proposition *p*, the sentence WILL(p) will be false. But this seems to entail that it *is* the last moment of time. To see this, notice that *what it is* for it to be the *first* moment of time is for there to be no past tense facts. That is, for it not to have been the case that p, for any p. i.e., for all p, WAS(p) is false. But the state of its being the last moment of time and the state of its being the first moment of time differ only in the relevant tenses involved. Whilst its being the first moment in time concerns the absence of any past tense facts, its being the last moment of time concerns the absence of any *future* tense facts. Since, given the presence of the null future among the causally available futures, all future tense sentences (even those involving tautologies like *p or ~p*) come out false, it will be the case that there are no future tense facts *at all*. Hence, it will be the last moment of time.

This means that the present and the laws entail that there will *not* be a moment of time after the present. But, *ex hypothesi*, temporal passage indeterminism is true, and hence the present and the laws do *not* entail that there will not be a moment of time after the present (nor that there will be). This is a contradiction. Hence, we cannot suppose, on Todd’s semantics, that the causally available futures include anything like a null future.

Moreover, one cannot escape the result of contradiction on the second horn by denying the equivalence between its being the last moment of time, and there being no future tense facts; and this for two reasons. Firstly, such a denial would introduce an intolerable asymmetry between the metaphysics of its being the first moment of time and its being the last moment of time. But more importantly, it seems that the equivalence is a conceptual truth. To see this, consider that the denier of this equivalence needs to deny this conditional: If there are no future tense facts, then it is the last moment of time. But that conditional is equivalent to the conditional (by contraposition) that if it is *not* the last moment of time, then there *are* future tense facts. But this latter conditional (and hence the former) is unimpeachable. For suppose that it is *not* the last moment of time. Then there *will* be some *other* time. And moreover, if there *will* be some other time, and if we know *a priori* that tautologies are always true at all times, then it *will* be the case that p or ~p is true at some other time. In other words, WILL(p or ~p). Similarly, if it is not the last moment of time, then the current moment of time will once *have been* (otherwise, the passage of time would change history). In other words, if it is not the last moment of time, then WILL(WAS(t is present)) is true. But these results just go to show that if it is *not* the last moment of time, then there are at least *some* future tense facts. But this is equivalent to the claim that if there are *no* future tense facts, then it *is* the last moment of time. Thus, one cannot avoid the contradiction of the second horn by denying that conditional.

It is important to note at this point that the contradictions we derived above ensue only given Todd’s semantics, and are not inherent in temporal passage indeterminism itself. This is because on Todd’s semantics, unlike Ockhamism, the truth value of all WILL statements supervenes on the distribution of causally available futures, which in turn supervene on the present and the laws.[[14]](#footnote-14) Thus, the present and the laws *necessitate* the WILL truths, and it was precisely this necessitation that led to contradiction. On Ockhamism, the very same present and laws, and hence the very same set of causally available futures (on indeterminism at least) are consistent with different truth values for the WILL statements.

Of course, Todd might argue that since his semantics is correct, and since it results in contradictions in worlds where temporal passage indeterminism is true, then temporal passage indeterminism must not be possible after all. But, we think, Todd will not want to say this, and nor should he. He should not say this because this would be to derive robust metaphysical implications from a theory of semantics. Todd has argued extensively (and convincingly) that a theory of semantics should not have metaphysical implications. And indeed, we agree that it would be surprising if we could draw sweeping metaphysical conclusions from purely semantic facts.

So, we argue, there is strong reason to think that Todd’s semantics for WILL is false. In turn, if this is the best semantics for a view of the open future on which all future contingents are false, it seems to us that we should deny that all future contingents are false.

1. Conclusion

Let us briefly take a look at the bigger picture which we think generates our concerns with Todd’s model of the open future. The core error, as we see it, is that this model makes indeterminism with respect to the future *inconsistent* with the facts *about* the future being brute. *Prima facie*, this is very odd. One might naturally think that it is precisely *because* the present and the laws do not determine the future, that the facts about the future *must* be brute. After all, the present and the laws do not determine whether or not Freddie raises his paw. So plausibly, the fact that Freddie *does* raise his paw (say) is brute.[[15]](#footnote-15) Todd, by contrast, thinks that, *independent* of the truth of causal indeterminism, the facts about the future are decisively settled by the present and the laws (there can be no duplicates of our world, alike in regards to the present and the laws, which have different future tense facts). Whilst this thought fits naturally with a deterministic outlook on the world, it seems to us to sit somewhat uncomfortably with a view of the world as fundamentally chancy. Therefore, in our judgement, the best hope for a viable model of the open future is to be found either in Ockhamism, or Supervaluationist Indeterminism.

There is much to like about Todd’s book. In the end, though, we were unconvinced by the picture he presented on which the future is open, and all future contingents are false. We’ve argued, instead, that there are (at least) two good reasons to reject the idea that all future contingents are false.

References

Todd, P. (2021). *The Open Future: Why Future Contingents are all False*. OUP.

1. Objects, properties, states of affairs, etc. [↑](#footnote-ref-1)
2. Or indeed at all past times. [↑](#footnote-ref-2)
3. Here, as above, we use the language of grounding. Nothing hangs on this; we could instead talk of what explains what. [↑](#footnote-ref-3)
4. Given that in the fiction they mostly seem to drink pumpkin juice, and given that it’s hard to imagine drinking pumpkin juice with pumpkin pulp in it, at least one of the authors actually feels pretty sure that if the juice in question is pumpkin, there is a fact of the matter here. But let’s just imagine there is a day where they are drinking orange juice. [↑](#footnote-ref-4)
5. And either that is all that an explanation would involve, and it would be the case that the explanatory connection fact (i.e. the fact that the (now) present and laws explain the sea battle) is brute and inexplicable, or else, the explanation of the sea battle would involve the (now) present and the laws and *some additional brute facts*. [↑](#footnote-ref-5)
6. We are assuming, with Todd, that presentism is true, and hence that time passes. [↑](#footnote-ref-6)
7. Of course, Todd’s view is that, necessarily, the present and the laws explain the future tense facts *deterministically*. But this does nothing to undermine our parody. For ours is a parody not of his view, but of his *argument* for it. And Todd’s argument on behalf of his own view is a *reductio* of the alternative. Hence, for argumentative purposes, he must presuppose *indeterministic* explanation of the future tense facts by the present and the laws. [↑](#footnote-ref-7)
8. Freddie is a labradoodle. [↑](#footnote-ref-8)
9. Of course, on all futures, the *disjunction* that Freddie raises his paw or that he does not raise his paw is true. As a result, the sentence WILL(Freddie raises his paw or Freddie does not raise his paw) is true. [↑](#footnote-ref-9)
10. Remember, we are assuming, along with Todd, that time is dynaical, because presentism is true, and hence assuming that time does in fact pass in this manner. (At least one of us does not, in fact, believe this to be so). [↑](#footnote-ref-10)
11. Here, we mean metaphysically possible not just logically so. [↑](#footnote-ref-11)
12. Just imagine that all of the deterministic causal powers have ‘run out’, and that the only hope for temporal passage is the exercise of an indeterministic causal power which may or may not be actualised. [↑](#footnote-ref-12)
13. An important note. A null future would not be a future where nothing exists. That would be to misconstrue the nature of indeterministic temporal passage. We are not concerned with the possibility that there *will be a future* of ‘nothingness’ – no people, no planets, no cosmos, nothing. Rather, a null future would simply be some formal object (in the same way that all causally available futures must be formal objects, given presentism) with zero content that encodes the possibility that the present moment is the last moment in time. [↑](#footnote-ref-13)
14. Technically, on the present and the laws *and the past*. But this detail does not affect our argument. [↑](#footnote-ref-14)
15. Or the fact that Freddie’s deliberations explain his paw raising is itself brute. [↑](#footnote-ref-15)