

Explanation and the A-theory (draft: April 13, 2021) ¹

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1. Introduction

Propositional temporalism is the view that there are temporary propositions: propositions that are true, but not always true. Factual futurism is the view that there are futurist facts: facts that obtain, but that will at some point not obtain.² For instance, it is now raining. The proposition that it is raining is now true, and the fact that it is raining now obtains. But (on these views) once it stops raining, that proposition will cease to be true and that fact will cease to obtain. Most A-theoretic views in the philosophy of time are committed both to propositional temporalism and to factual futurism (Cameron 2015, Deasy 2015, Sullivan 2014).

Mark Richard (1981, 2003), Jeffrey King (2007) and others have argued that temporary propositions are not fit to be the contents of propositional attitudes, or to be the semantic values of natural language utterances (cf. Evans 1985, Partee 1973; for discussion see Sullivan 2014). Their arguments provide an important challenge for the temporalist's view that there are any such propositions. However, these discussions have overlooked another role that the A-theorist's posits struggle to play: the role of facts in *explaining* other facts. This paper presents the challenge that explanation poses for factual futurism, then brings the challenge to bear against propositional temporalism and the A-theory more generally.

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² There are many similar definitions of 'propositional temporalism' in the literature, which tend to differ slightly from mine and from each other. See: Deasy 2014, 28 (cf. Deasy 2015, 2078); Sullivan 2014, 474; Russell 2017, 167; Dorr, Cian, *Counterparts* (draft, February 7, 2015), p. 2. The terms 'factual futurism' and 'futurist fact' are mine.

In my view, explanation is forever. To illustrate what I mean, suppose it is raining now (at 3 o'clock) and it will have stopped raining by 5 o'clock. At 3, the fact that it is raining explains why my clothes are getting wet. On my view, that very fact – which we can denote at 3 using the phrase 'the fact that it is raining' – will still explain at 5 why the clothes were getting wet at 3. And that fact will explain at all later times why the clothes were getting wet at 3. We can capture the claim that explanation is forever in a slogan: any fact that explains why something is the case will always explain why that thing was the case. Since the fact in question will need to obtain to explain anything (explanation is factive),³ the claim that explanation is forever yields an important conclusion: any fact that explains why something is the case will always obtain. So no futurist fact explains why anything is the case.

So far I have given you no reason to believe that explanation is forever. In fact, for the present paper (and for my case against the A-theory) it will suffice to defend only a restricted form of that claim. I will argue that if a fact explains someone's action by being among her reasons for acting, that fact will always explain her action.⁴ We can conclude that if a fact explains someone's action by being among her reasons for acting, that fact will always obtain. Futurist facts are not fit to explain actions by being agents' reasons.

Explanation of action by reasons is an especially difficult case for the futurist. A futurist might initially accept the general claim that explanation is forever, and simply insist that futurist facts exist but do not explain anything. However, that response is revealed as untenable when we focus on reasons explanation of actions. Futurists will surely think we can know futurist facts, and it would be bizarre if we could not act on that knowledge. For instance: if I know the futurist fact that it is raining, I can act on that knowledge by fetching my umbrella. In this example, my reason for fetching the umbrella is the futurist

³ I discuss this factivity assumption further at the end of section 2.

⁴ The phrase 'her reasons' here picks out what are often called 'personal reasons' or 'motivating reasons.' A personal reason is a reason for which someone does something, as opposed to a reason why she ought to do something (a normative reason). For more on different kinds of reason, see Alvarez 2016.

fact that it is raining. And the futurist fact that it is raining explains why I am fetching the umbrella. If factual futurism is true, futurist facts surely sometimes explain our actions by being reasons for acting.⁵ I will develop an example in detail to argue that futurist facts never explain our actions in this way. Factual futurism is therefore false.

Before turning to the argument, let me address readers who wonder whether there is anything substantive at issue in these disputes about facts and propositions (cf. Deng 2018). To see that there is, it helps to compare the A-theoretic view about time with a widely held view about modality. Let 'w-BIDEN' denote a possible world at which Biden is the 46th US President (say, the actual world). And let 'w-NOTBIDEN' denote a world at which he is not. Suppose we have a list of all the necessarily true propositions, and a list of all the facts that obtain necessarily. These lists will include the proposition and the fact that Biden is the 46th US President at w-BIDEN, and the proposition and the fact that Biden is not the 46th US President at w-NOTBIDEN.⁶ It is natural to think these lists miss something important. It is not simply the case that Biden is the 46th US President at some worlds and not others. In addition, he *is* the 46th US President. More generally, one possible world is distinguished by its being actualized. Of all the ways things might have been, there is one way things in fact are.⁷

This natural view concerning modality requires there to be propositions that are true but not necessarily true, and facts that obtain but do not obtain necessarily. That is, it requires there to be contingent

⁵ Also: I take it factual futurists will think we frequently state futurist facts using ordinary sentences like 'it is raining' (cf. Deasy 2015, 2078-2079). The facts we state using those sentences are surely sometimes our reasons for doing things, such as uttering those sentences.

⁶ You might think there is no such thing as the fact that Biden is not the 46th US President at w-NOTBIDEN, on the grounds that there are no negative facts. I ignore this complication for simplicity: it's not important for the present point.

⁷ The preceding two sentences will not communicate the widely held view concerning modality (as I intend them to) if 'actualized' and 'in fact' are indexicals like 'here'. That was David Lewis's view of 'actual' (Lewis 1986, 97-101). But the non-indexical use of 'actualized' (and 'in fact') should be sufficiently familiar for my sentences to convey the view I intend.

propositions and contingent facts – like the proposition and fact that Biden is the 46th US President, and the proposition and fact that world w_{BIDEN} is actualized.

A central A-theoretic thought about time is that the present instant (or interval) is like the actual world in this respect (Cameron 2015, Deasy 2015, Sullivan 2014). Let ‘ t_{2021} ’ denote some instant in March 2021, and ‘ t_{2050} ’ denote some instant in March 2050. It was always and will always be true that Biden is President at t_{2021} and (presumably) that he is not President at t_{2050} . But A-theorists usually think that if we simply have a list of propositions that are always true and a list of facts that always obtain, we miss something important: that Biden *is* President. More generally (they think), one instant is distinguished by its being present. Their view requires there to be temporary propositions and futurist facts – like the proposition and fact that Biden is President, and the proposition and fact that instant t is present. At some point, these propositions will not be true and these facts will not obtain.

A-theoretic views fill out the metaphysics in various ways, but they usually share the commitment to the existence of futurist facts and temporary propositions.⁸ On my (B-theoretic) view, there are no futurist propositions or temporary facts. The present instant is not distinguished in anything like the way we ordinarily think the actual world is.

I have said that temporary propositions (if they exist) are true but not always true, and that futurist facts (if they exist) obtain but do not always obtain. Throughout this article, I intend ‘true’ and ‘obtain’ to pick out monadic properties possessed by propositions and facts, rather than the relational properties of truth-at-a-time or obtaining-at-a-time. I take no stand on whether temporary propositions and futurist facts *also* have these relational properties, in addition to the monadic properties. If the propositional

⁸ For different approaches to rendering the A-theorist’s position more precise, see Deasy 2015 (2073-2074) and Dorr, Cian, *Counterparts* (draft, February 7, 2015), pp. 4-8. Deasy defends the “moving spotlight theory”, which has received considerable attention recently, and which is clearly committed to factual futurism and propositional temporalism. See also Cameron 2015 and Skow 2015. (Cameron accepts the theory, and Skow rejects it.)

temporalist is correct, it might be that throughout March 2021, the proposition that Biden is President was both true-at- t_{2021} *and* true simpliciter. (On such a view, that proposition will always be true-at- t_{2021} , but will one day cease to be true simpliciter.) But it is the monadic property of truth (simpliciter) and the monadic property of obtaining (simpliciter) that are needed to characterize the A-theoretic views I dispute.⁹

My argument against factual futurism occurs in sections 2 and 3. Section 2 presents the problem that action explanation poses for factual futurism, and section 3 considers how the futurist might respond. Sections 4 and 5 address two supplementary matters. Depending on how you think facts and true propositions relate, you might find it obvious that my argument tells against propositional temporalism as much as against factual futurism. But I would prefer to remain neutral on the fact-true proposition relation. Retaining that neutrality, section 4 argues that if we reject factual futurism on the basis of my argument, we should also reject propositional temporalism.

Finally: Jonathan Schaffer has argued persuasively that the anti-temporalist arguments from Richard, King and others have equally strong parallel arguments against propositional contingentism, the view that there are contingently true propositions (Schaffer 2012). Like most philosophers, I accept propositional contingentism. And I am inclined to think Schaffer's parallel arguments provide a *reductio* of these anti-temporalist arguments. It is important, then, that my argument has no plausible parallel that challenges propositional contingentism. Section 5 seeks to show that this is so, by exploiting differences between

⁹ For helpful discussion of monadic truth, see Cappelen and Hawthorne 2009, esp. 1-5. Ross Cameron (2015, 5-6) and Daniel Deasy (2015, 2078) (who both defend versions of the A-theory) make it explicit that they are concerned with monadic truth (truth simpliciter). Meghan Sullivan (another A-theorist) does not use the phrases 'monadic truth' or 'truth simpliciter', but it seems to be monadic truth she is concerned with (Sullivan 2014, 474-476). By contrast, Berit Brogaard (2012, e.g. 170-173) apparently defends the view ("temporalism") that there are propositions that are true-at-some-times but not true-at-others. Responding to Brogaard's book, John Hawthorne (2015, 617-618) distinguishes between (what I call) propositional temporalism and the doctrine Brogaard defends. See also Dever (2015, 606-607), who argues that there is "no serious or resolvable dispute" between Brogaard's "temporalism" and her opponent's position.

explanatory relations across times and explanatory relations across worlds. We can therefore head off the threat of a Schaffer-inspired reductio. Section 6 concludes by relating the focus on reasons for action to my broader contention that explanation is forever.

2. Against factual futurism

I said above that if factual futurism is true, futurist facts sometimes explain our actions by being among our reasons for acting. I will suppose in a particular case that a futurist fact explains someone's action in this way. This supposition leads to a contradiction, and so should be rejected. We can generalize the conclusion to any case in which someone supposedly acts with a futurist fact as her reason. Since futurist facts never explain our actions by being among our reasons, factual futurism is false.

Imagine Anna is heading to a meeting when it begins to rain. She would ordinarily walk, but because of the rain she hails a taxi. Suppose (towards contradiction) that her reason for hailing the taxi is the *futurist fact* that it is raining. This fact – call it 'R' – obtains for as long as it is raining, but once it stops raining the fact ceases to obtain. Anna knows R, and acts on it as her reason (or one of her reasons). It continues to rain throughout the time she is hailing the taxi.

Bernard knows all the facts of the situation. While Anna is hailing the taxi, Bernard utters the following sentence:

(S1) Anna's reason for hailing the taxi is that it is raining.

The factual futurist will presumably think Bernard's utterance of (S1) could express that Anna's reason for hailing the taxi is R. After all, we are supposing that R *is* her reason. Surely we can express that thought in English, and (S1) provides an obvious way to do that.

Later, it has stopped raining and Anna has been to her meeting. Bernard is thinking back to the time of his utterance of (S1), when Anna was hailing the taxi, and utters the sentence:

(S2) Anna's reason for hailing the taxi was that it was raining.

The factual futurist should think that Bernard's utterance of (S2) could (in the appropriate context) express that Anna's reason for hailing the taxi was R.¹⁰ After all, we are supposing that R *was* her reason. So surely Bernard can express in grammatical English the thought that R was Anna's reason. And it is not clear how he could do that other than by uttering (S2). For instance, he could not say (once it has stopped raining):

Anna's reason for hailing the taxi was that it *is* raining.

Instead, he would have to utter (S2). It seems that 'it is raining' in (S1) changes to 'it was raining' in (S2) simply so that the verb in the embedded clause ('is' / 'was') agrees in tense with the main verb of the sentence ('was' in (S2)).¹¹ Of course, Bernard might be able to use (S2) in some contexts to express thoughts other than that R was Anna's reason. But all I need is for there to be a possible context in which

¹⁰ This way of expressing my claim concerning the semantics of (S2) is not ideal, since it involves using the context-sensitive simple past 'was' in the metalanguage. But I trust the reader can resolve the context sensitivity appropriately. Clearly, I intend 'was' to pick out the same time Bernard picks out by 'was' – that is, the time of his utterance of (S1).

¹¹ The word 'was' in the embedded clause of (S2) apparently involves a semantically vacuous past-tense morpheme, in that the time the embedded clause describes is not prior to the time the matrix clause describes when it says 'Anna's reason ... *was* ...'. In this way, the move from (S1) to (S2) seems to involve something like the Sequence of Tense (SOT) phenomena observed in English and some other languages, which have been extensively discussed in contemporary semantics. The central example of SOT concerns indirect speech reports. Suppose Janet said yesterday, "John is at the store". Today I might say, 'Janet said, "John is at the store"'. Alternatively, I might report the *same speech act* via an indirect speech report: 'Janet said that John *was* at the store' – again, the 'is' changes to a 'was' (Kusumoto 1999, 38-73). I am not sure whether to assimilate the phenomenon exhibited by (S2) to SOT. One relevant piece of evidence comes from Polish and Japanese. Unlike English, these languages *do not* exhibit the SOT for indirect speech. However, they pattern with English in utterances like that of (S2), in that (very roughly) the equivalent of 'it is raining' in (S1) changes to the equivalent of 'it was raining' in (S2). But however the phenomenon I identify for 'reasons' reports relates to SOT, it seems natural to read the embedded clause of (S2) as involving a vacuous past-tense morpheme. Thanks to Natalia Karczewska, Yuuki Ohta and Andrés Soria Ruiz for helpful discussion of these points.

Bernard's utterance of (S2) expresses that Anna's reason for hailing the taxi was R. And the futurist should concede that there is such a context.

Suppose that in that context, immediately after uttering (S2), Bernard says:

(S3) If Anna's reason for hailing the taxi was that it was raining, then the fact that it was raining explains why she was hailing the taxi.

Given the setup of the case so far, Bernard's utterance of (S3) seems to express a claim whose antecedent is that Anna's reason for hailing the taxi was R. Some evidence that this is so is that Bernard could express a valid argument by uttering the following conclusion with (S2) and (S3):

Therefore, the fact that it was raining explains why Anna was hailing the taxi.

If Bernard's utterance of (S2) expresses that Anna's reason was R, then his utterance of (S3) expresses a claim whose antecedent is that Anna's reason was R – unless he is committing a fallacy of equivocation, which he surely is not. Again, the claim I need concerns what Bernard's utterances *could* express. Specifically, the futurist should think there is a context in which Bernard could utter (S2) and (S3), and in which the claim that Anna's reason was R *both* is expressed by the utterance of (S2) *and* is the antecedent of the claim expressed by the utterance of (S3).

Now consider the *consequent* of the claim expressed by Bernard's utterance of (S3). Given the setup of the case, I suggest that the consequent is that R explains why Anna was hailing the taxi. Combining my claims about Bernard's utterance of (S3), we can say the utterance expresses that: if Anna's reason for hailing the taxi was R, then R explains why she was hailing the taxi.

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We are now in a position to derive the contradiction from Anna's case. Recall the latter two sentences Bernard utters:

(S2) Anna's reason for hailing the taxi was that it was raining.

(S3) If Anna's reason for hailing the taxi was that it was raining, then the fact that it was raining explains why she was hailing the taxi.

I have made two claims concerning the case described:

Bernard's utterance of (S2) expresses that Anna's reason for hailing the taxi was R.

Bernard's utterance of (S3) expresses that: if Anna's reason for hailing the taxi was R, then R explains why Anna was hailing the taxi.

It seems that Bernard speaks truly in uttering (S2) and (S3). So it seems that at the time of Bernard's utterances the following claims were true, concerning Anna's earlier action of hailing the taxi:¹²

Anna's reason for hailing the taxi was R.

(From my claims concerning the utterance of (S2))

If Anna's reason for hailing the taxi was R, then R explains why Anna was hailing the taxi.

(From my claims concerning the utterance of (S3))

¹² As I noted above, the use of the context-sensitive simple past 'was' to make these claims is not ideal, but the reader should easily be able to resolve the context-sensitivity. The time I intend the claims to pick out is the time of Bernard's earlier utterance (S1), when Anna was hailing the taxi.

Therefore, R explains why Anna was hailing the taxi.

At the time of Bernard's utterances of (S2) and (S3), R explains why Anna was (earlier) hailing the taxi. So at the time of his utterances, R obtains (because explanation is factive). But that contradicts the initial assumption that R *does not* obtain when it is not raining, since it is not raining at the time of Bernard's later utterances. So it seems the assumption that Anna acts with a futurist fact as her reason produces a contradiction.

The argument just stated relies on a particular factivity claim: that if R explains why Anna was hailing the taxi, then R obtains. The word 'factive' is more commonly applied to verb phrases like 'explains why,' rather than to explanation itself.¹³ Still, it is (I claim) a feature of explanation itself that underlies the factivity of 'explains why.' The fiction or non-obtaining fact that the Moon is covered with cheese does not explain anything. But the fact that the Moon orbits Earth does explain some things, like facts about the tides. The important difference is surely that the former fact (call it 'M') does not obtain, whereas the latter fact does. It is obtaining facts that explain, rather than fictions or non-obtaining facts. (Likewise, it is obtaining facts that are explained, rather than fictions or non-obtaining facts. But that further claim is not needed for my argument.)

Return to Anna's case. Once it has stopped raining, R (on the futurist's view) is like M: it does not obtain. As such, R is no more fit to explain anything than M is. M would have obtained if the Moon had been covered with cheese. M *would* then have been fit to explain other facts. Similarly (on the futurist's view), R did obtain when it was raining. R *was* then fit to explain other facts. But at the later (rainless) time and at the actual world, neither M nor R obtains. So neither M nor R is fit to explain.

¹³ It is generally accepted that 'explains why' and other phrases we use to state explanations (like 'because') are factive. Jonathan Dancy (2000, 132-133) claims that some explanation-stating phrases are not factive, but retracts that claim in Dancy 2014 (89-90).

Here is another consideration in favor of my factivity claim. It seems plausible that ‘explains why’ is factive *because* it is obtaining facts that explain, rather than fictions or non-obtaining facts (cf. Hyman 2015, 147-148). ‘Explains why’ is factive in the following way:

If an utterance of the sentence ‘that φ explains why ψ ’ is true, then utterances of each of the sentences ‘ φ ’ and ‘ ψ ’ would also be true.

(Whenever ‘ φ ’ and ‘ ψ ’ stand in for declarative sentences, and ‘ φ ’ and ‘ ψ ’ are interpreted uniformly across their occurrences.)¹⁴

If I truly utter the sentence ‘that she is hungry explains why she is ordering food,’ then it would also be true to utter the sentence ‘she is hungry.’ (Given that ‘she is hungry’ is interpreted uniformly: so that, for example, ‘she’ picks out the same person in both occurrences of ‘she is hungry.’) Plausibly, the truth of the former utterance requires the truth of the latter because what explains the action is the *fact* that she is hungry. If it could be a fiction or a non-obtaining fact that explains the action, it is unclear why the utterance of ‘she is hungry’ would need to be true. There is, then, good reason to think fictions or non-obtaining facts do not explain anything. If R explains why Anna was hailing the taxi, then R obtains.

Note that there is nothing special about the time of Bernard’s utterances, as long as they occur once Anna is no longer hailing the taxi. We could situate his utterances at any arbitrary time that meets this condition, and argue in the same way that R obtains at that time. And presumably whether Bernard’s utterances actually occur makes no difference to whether R obtains. So it seems that R obtains forever after Anna’s action: R is not a futurist fact. But that contradicts the initial assumption that R *is* a futurist fact. Moreover,

¹⁴ The claim about ‘ ψ ’ is not needed for my argument, given that my focus is on facts that explain rather than facts that are explained.

there is nothing special about Anna's case. We could pose the same problem for any case in which someone supposedly acts with a futurist fact as her reason.

If the assumption that someone acts with a futurist fact as her reason produces a contradiction, then nobody ever does act with a futurist fact as her reason. And (I argued above) if nobody ever acts with a futurist fact as her reason, there are no such facts. Factual futurism is false.

3. A dilemma for the futurist

The obvious futurist responses to my argument involve Bernard's utterance of (S3).

(S3) If Anna's reason for hailing the taxi was that it was raining, then the fact that it was raining explains why she was hailing the taxi.

I argued that there is good reason for the futurist to think that utterance expresses the proposition (I'll now call) S3-SIMPLE:

S3-SIMPLE: If Anna's reason for hailing the taxi was R, then R explains why she was hailing the taxi.

(Recall that R is the futurist fact that it is raining.)

There are two escape routes relating to (S3). The first is to accept my suggested semantics (provided by S3-SIMPLE) but deny that Bernard speaks truly in uttering (S3). The second is to provide an alternative semantics for his utterance of (S3).

I take it that the alternative semantics will identify some fact distinct from R that explains at the time of (S3)'s utterance why Anna was hailing the taxi. The details are up to the futurist. Letting 'R*' denote a fact of the futurist's choice, the alternative semantics is that (S3) expresses S3-ALTERNATIVE:

S3-ALTERNATIVE: If Anna's reason for hailing the taxi was R, then R* explains why she was hailing the taxi.

If the alternative semantics is to help the futurist, R* had better obtain (by the futurist's lights) at the time of the utterance – after it has stopped raining. For instance, R* might be the always-obtaining fact that it is raining at t (the time at which Anna hails the taxi). Or it might be a fact that begins to obtain only after it has stopped raining, and is (according to the futurist) expressible in an appropriate context by the sentence 'it was raining.'

The present section will present a dilemma the futurist faces *whichever* of the two escape routes she picks. But first it is worth noting that each escape route has costs of its own. The cost of denying that Bernard speaks truly is clear: the utterance seems quite clearly true. As for the alternative semantics, it is considerably less natural than my suggested semantics in at least two respects. Firstly, the claim that Bernard's utterance of (S3) expresses S3-SIMPLE provides an elegant explanation of why that utterance seems trivially true. The consequent of the claim Bernard expresses follows from the antecedent in part because they involve the same fact: R. But if the utterance of (S3) expresses S3-ALTERNATIVE, that elegant explanation is unavailable, because the antecedent and consequent involve different facts: R and R*. Perhaps the futurist can give an alternative explanation, but it will be rather less straightforward than the explanation my suggested semantics facilitates.

Secondly, Bernard could apparently restate the claim he makes using (S3) by employing anaphora. He could say:

(S3*) If Anna's reason for hailing the taxi was that it was raining, then that fact explains why she was hailing the taxi.

The most natural account of his utterance of (S3*) is that 'that fact' in the consequent denotes some fact that has been introduced in the antecedent. The only relevant fact in the antecedent is R. So the consequent of the claim expressed by Bernard's utterance of (S3*) is that R explains why Anna was hailing the taxi. And if Bernard's uttering (S3*) is simply a way to restate the claim he made using (S3), then his utterance expresses a claim whose consequent is that R expresses why Anna was hailing the taxi.

The proponent of the alternative semantics for Bernard's utterance of (S3) will also need an alternative semantics for his utterance of (S3*). My point is not that such a semantics is impossible, but only that it will be considerably less natural than my suggested semantics. Presumably the referent of 'that fact' in (S3*)'s consequent relates in some way to R, given that R is the contextually relevant fact in the antecedent. It might be that R* and R are so tightly related that 'that fact' gets to denote the former even though it is the latter that figures in (S3*)'s antecedent. Or perhaps (altering the alternative semantics a little) 'that fact' in (S3)'s consequent denotes a *type* of fact of which both R and R* are tokens. The claim expressed by the utterance of (S3*) might then be true just in case some fact of this type explains why Anna was hailing the taxi. In any case, the futurist will have to do some work to make sense of (S3*), and her alternative semantics will likely be complicated. By contrast, the semantics I have presented explains (S3*) easily and elegantly.

All the advantages of my suggested semantics (provided by S3-SIMPLE) over the alternative (provided by S3-ALTERNATIVE) are advantages of the *non-futurist's* semantics. Of course, the non-futurist will not think that (S3) expresses S3-SIMPLE if 'R' is supposed to denote a futurist fact. According to the non-futurist, there are no futurist facts. But S3-SIMPLE's advantages arise because the same fact figures in both the antecedent and the consequent, and the non-futurist's semantics will have the same feature.

For example, in place of R it might have the always-obtaining fact that it is raining at t (the time at which Anna hails the taxi). So one way of avoiding the costs of the alternative semantics – other than denying that Bernard speaks truly – is simply to reject factual futurism.

The futurist could deny that Bernard's utterance of (S3) is true, or she could provide an alternative semantics for that utterance. Each escape route faces its challenges, but we can push the attack further against both. Suppose the futurist denies that the utterance is true. She then needs an explanation of why it seems so obviously true. Most plausibly, the explanation will be that there is some truth (or truths) close to what the utterance expresses. I suggest that the futurist will need to accept the truth of S3-ALTERNATIVE, for some relevant R* (such as the always-obtaining fact that it is raining at t) – even if (S3) does not express S3-ALTERNATIVE.

S3-ALTERNATIVE: If Anna's reason for hailing the taxi was R, then R* explains why she was hailing the taxi.

Of course, there are other truths in the vicinity – most notably, that if Anna's reason for hailing the taxi was R, then R *explained* (at the time of action) why she was hailing the taxi. But the futurist also needs to say something about what later *explains* (at the time of (S3)'s utterance) why Anna was hailing the taxi. It would be very odd if there were no longer any explanation of her action, or if the explanation no longer includes facts about the rain.

One way of bringing out that oddness is to consider that facts about the rain seem to explain facts about subsequent matters *by* explaining Anna's action. For example, suppose a thief snatched Anna's phone while she was distracted hailing the taxi. He later takes the phone home and puts it on his dresser, where it sits at the later time when Bernard utters (S3). It seems that the fact that it was raining explains (together with other facts) why Anna's phone is later on the thief's dresser. And the fact that it was raining explains

the phone's position *because* it explains the fact that Anna was hailing the taxi, which in turn explains the fact that the thief managed to take her phone. It is hard to see how the fact that it was raining could explain (at the later time) why the phone is on the thief's dresser, unless that fact explains (at the later time) why Anna was hailing the taxi.

Of course, if the futurist denies that Bernard's utterance of (S3) is true, she will not think 'the fact that it was raining' in the preceding sentences picks out R. But she should accept that *some* relevant fact R* (such as the always-obtaining fact that it is raining at t) later explains why Anna was hailing the taxi. There is, then, surely a truth close to what the utterance of (S3) expresses that concerns the later explanation. And it seems that truth will be S3-ALTERNATIVE, for some relevant R*.¹⁵

Whichever escape route the futurist takes – whether she denies that Bernard's utterance of (S3) is true, or provides an alternative semantics for that utterance – she should accept that S3-ALTERNATIVE is true (for some R*). And that lands her with a dilemma. Either R* was among Anna's reasons for hailing the taxi, or it was not. Suppose firstly that it was not. In that case, it appears that the explanation of Anna's action at the later time of Bernard's utterances is rather different in structure from the explanation at the time of her action. At the time of her action, the explanation includes *her reason* for acting (i.e., R). But at the later time, this reason drops out of the explanation and is replaced by a fact that *was not* her reason (i.e., R*). The later explanation therefore seems to miss something. The explanation at the time

¹⁵ The focus of the present paper is on facts that explain, rather than on facts that are explained. As such, it does not matter for my purposes which fact(s) the phrase 'she was hailing the taxi' picks out in S3-ALTERNATIVE. Still, it is plausibly the case that a merely former fact cannot be explained any more than it can explain. If that is so, the futurist will need 'she was hailing the taxi' to pick out a fact that still obtains at the later time, like the always-obtaining fact that Anna is hailing the taxi at t.

of action includes a fact that explains why Anna was hailing the taxi *by having been one of her reasons* for hailing the taxi. The later explanation includes no such fact.¹⁶ That looks like an unattractive result.

The second horn of the dilemma seems more appealing. The futurist can claim that R* *was* among Anna's reasons for acting, as well as R. R drops out of the explanation once it ceases to obtain, but R* does the explanatory work required for there to be no gap in the later explanation. It will help to illustrate this suggestion. R is the futurist fact that it is raining, which ceases to obtain once it stops raining. R* could then be the non-futurist fact that it is raining at t (the time at which Anna hails the taxi). The latter fact continues to obtain even after it has stopped raining. It is not crazy to think R* was also among Anna's reasons for hailing the taxi. Perhaps she acted on R and R* under the same guise, so she did not need to consider each separately. At the later time, R* explains why Anna was hailing the taxi *by having been among her reasons* for hailing the taxi. And R and R* are plausibly related closely enough such that there is no objectionable gap in the later explanation.

The futurist who takes the second horn will have to make this move for any case in which someone (supposedly) acts with a futurist fact as her reason. In any such case, she will hold, among the agent's reasons is some non-futurist fact that does the work of the futurist fact in the later explanation. Call this view *pre-established harmony (PEH) futurism*. I think the best futurist response to my argument will embrace PEH futurism. But in embracing PEH futurism, the futurist must forgo some of the most influential arguments in favor of factual futurism – and in favor of propositional temporalism and the A-theory in general.

¹⁶ Of course, other facts might have been among her reasons for hailing the taxi – such as the fact that she dislikes getting wet. And maybe some of these facts figure in the later explanation. But that would not fill the gap in the later explanation left by R.

One such argument originates with Arthur Prior. Suppose I take consolation from the fact that my party is still to come. I celebrate that fact by exclaiming, “Thank goodness the party is still to come!”¹⁷ Typical A-theorists will claim that I am celebrating the futurist fact that the party is still to come, and *not* any fact that will obtain forever – such as the fact that the party occurs after the time of my utterance. And they will take this to be an advantage of factual futurism: why *would* I celebrate the latter fact (Prior 1959, 17)? Presumably these A-theorists will also claim that my reason for celebrating is the futurist fact that the party is still to come, and not any fact that will obtain forever. But that claim cannot be made under PEH futurism. If the futurist fact that the party is still to come is among my reasons, then so is some closely related non-futurist fact – such as the fact that the party occurs after the time of my utterance. The PEH futurist then faces the same problem as the B-theorist: that of explaining why this non-futurist fact is among my reasons for celebrating.

In another influential sort of case in favor of the A-theory, a person loses track of time. Suppose Clare fails to realize that it is now noon. It might seem she can know the futurist fact that the meeting is now *without* knowing the non-futurist fact that the meeting is at noon (cf. Sullivan 2014, 493-494). If she can know one fact without knowing the other, that might provide reason for thinking *there are* futurist facts in addition to non-futurist facts. But the PEH futurist cannot appeal to this sort of case either. Suppose Clare acts on her knowledge that the meeting is now by leaving her office in a hurry. Her reason for leaving is (supposedly) the futurist fact that the meeting is now. But if PEH futurism is true, among her reasons for leaving is a non-futurist fact such as that the meeting is at noon. It is odd that this fact is

¹⁷ I have altered Prior’s case so it applies directly to factual futurism, but my version captures the same phenomenon as his. For a recent defense of Prior’s argument, see Pearson 2018.

among Clare's reasons if she does not know (or believe) it.¹⁸ So there is pressure on the PEH futurist to think Clare *does* know the non-futurist fact.

Clare's case points to a more general issue that the PEH futurist turns out to share with her B-theorist opponent (cf. Sullivan 2014, 493 fn. 13). Suppose this time that Clare knows the meeting is at noon, and loses track of time. At noon her colleague tells her, "the meeting is now!". She hurries to the meeting. B-theorists – who reject factual futurism and propositional temporalism – need some way of explaining Clare's action, and the sense that she *learns* something new from her colleague. A standard B-theoretic solution is to say that when the colleague speaks, Clare comes to know the non-futurist fact that the meeting is at noon *under a new guise* (she knew that fact already, but under some other guise). For instance, the new guise might be associated with the English sentence 'the meeting is now.' And it is Clare's coming to know the fact *under this guise* that explains her action.

Appealing to guises in this way seems to be a reasonable way for the B-theorist to go.¹⁹ But it saddles her with a rather more complex theory than the A-theorist, who can simply say Clare comes to know a different fact – namely, the futurist fact that the meeting is now – and that her learning this fact explains her action.

However, the PEH futurist will face problem cases of her own that require machinery similar to B-theorist's. Imagine Anna has left some clothes hanging outside to dry. On the basis of the futurist fact that it is raining, she comes to believe (and know) the futurist fact that the clothes are getting wet. Presumably the futurist will think we can reason from one futurist fact to another in this way. In this case, Anna's reason for concluding that the clothes are getting wet is the futurist fact that it is raining. So

¹⁸ Indeed, Hyman 1999 argues that some fact is someone's reason only if she knows it. See also Hawthorne and Stanley 2008, 579.

¹⁹ Of course, it is not the *only* way for her to go – but she will need some such machinery to deal with cases like Clare's.

under PEH futurism, among her reasons for concluding that the clothes are getting wet is some corresponding non-futurist fact – most plausibly, the fact that it is raining at *t*. But Anna is an excellent reasoner. It is hard to see how that non-futurist fact rationalizes her forming a belief in the *futurist* fact that the clothes are getting wet, without the further premise that *t* is present.²⁰

To solve the problem, it seems the PEH futurist will need to say something like the following: the non-futurist fact rationalizes Anna's conclusion because she grasps it under a special present-tense guise, such as one associated with the English sentence 'it is raining (now).' Anna can reason well from the non-futurist fact to a futurist fact, as long as she grasps the former under the appropriate guise. That is a reasonable response for the PEH futurist, but it saddles her with a kind of complexity usually associated with the B-theory – and so removes an apparent advantage of the A-theory.

In summary, there seem to be two viable futurist responses to the argument in section 2. Both claim that there is some non-futurist fact that serves to explain Anna's action at the later time, in place of the futurist fact that it is raining. The first response denies that Bernard's utterances are all true, and the second denies the semantics I suggest for those utterances. There are costs associated with each response. And both face the dilemma I have presented in this section. It appears that the futurist will either be left with a problematic gap in the later explanation of Anna's action, or she will need to forgo some of the most influential considerations in favor of futurism and the A-theory.

Whichever option the futurist takes, Anna's case reveals something of the price of futurism. As is often the case in philosophy, whether that price is worth paying will depend on many considerations. For instance, some will insist that futurist facts are required to capture the nature of change (see Sullivan

²⁰ Note that this particular puzzle case does not arise for the non-futurist (B-theorist). The non-futurist denies that there are any futurist facts (or temporary propositions), so there won't be any cases in which someone comes to know or believe one.

2014, 476). If they are right, perhaps we should accept one of the futurist responses to my argument and pay the associated price. In my view, the price is not worth paying. Either way, my argument saddles the futurist with commitments concerning reasons and explanation that did not obviously fall out of the A-theory at the outset.

4. Factual futurism and propositional temporalism

Recall:

Factual futurism: there are facts that obtain, but that will at some point not obtain (futurist facts).

Propositional temporalism: there are propositions that are true, but not always true (temporary propositions).

Propositional temporalists tend also to be factual futurists. For instance, they tend to think there is a fact about which instant is present. Let 't' denote the present instant (say, 6pm on October 25, 2019). Propositional temporalists will usually think it is a fact that t is present, and that this fact will cease to obtain once t is not present (Sullivan 2014, 476, 481; Deasy 2015, 2078; Cameron 2015, 1-3). So the fact that t is present is (on these views) a futurist fact.

Still, we might wonder whether someone could reject factual futurism on the basis of my argument and still accept propositional temporalism. Call the combination of propositional temporalism with the denial of factual futurism 'non-futurist temporalism.' The present section argues that non-futurist temporalism is at best bizarre, or worse, inconsistent.

For the sake of argument, suppose that non-futurist temporalism is true. Propositional temporalism is then true, so either (1) there are true propositions that *will* at some point not be true, or (2) there are true

propositions that *were* once not true. Take option (1) first. I take it that some true proposition will cease to be true only if there will be some change in the totality of facts that obtain (relative to the facts that now obtain).²¹ Presumably such a change in the facts will involve *either* some fact that does not (now) obtain beginning to obtain, *or* some fact that (now) obtains ceasing to obtain. Non-futurist temporalism holds that factual futurism is false. So the change has to involve some fact(s) *beginning* to obtain, without any ceasing to obtain.

The same is plausibly true under option (2). To get that result, we need something stronger than the denial of factual futurism:

Always, there are no facts that obtain but will at some point not obtain.

(That is: there are never any futurist facts.)

Section 2's argument supports the stronger principle, since it does not turn on anything special about the time that happens to be present. So consider option (2). I take it that some true proposition was once not true *only if* there was at some point a change in the totality of facts that obtained. Presumably that change involved either some fact(s) beginning to obtain or some fact(s) ceasing to obtain. By the stronger anti-futurist principle above, the change did not involve some fact(s) ceasing to obtain. So it involved some fact(s) beginning to obtain. Therefore, whichever of the two options we take, non-futurist temporalism requires that some fact at some point begins to obtain (even though no fact ever ceases to obtain).

Now, suppose the fact that φ is a fact that at some point begins to obtain (where ' φ ' stands in for a declarative sentence). Here is a plausible claim: before the fact that φ begins to obtain, the fact that it is

²¹ As I explained above, throughout this paper I am concerned with the monadic properties of truth and obtaining – not relational properties like truth-at-t and obtaining-at-t (where 't' picks out a time).

not the case that φ obtains. And once the fact that φ begins to obtain, the fact that it is not the case that φ ceases to obtain. So there is at some point a futurist fact: the fact that it is not the case that φ . But non-futurist temporalism requires that there are never any futurist facts, so the view turns out to be inconsistent.

To avoid inconsistency, a non-futurist temporalist might deny the plausible claim (stated in the previous paragraph) that before the fact that φ begins to obtain, the fact that it is not the case that φ obtains. To illustrate how this denial might work: she could say that before the fact that it is raining begins to obtain, the fact that it is *not* raining nevertheless does *not* obtain. Neither fact obtains. Maybe that is because there are no negative facts, like the fact that it is not raining. But even if non-futurist temporalism can escape inconsistency through such a move, the view strikes me as bizarre.

Non-futurist temporalism requires that some fact at some point begins to obtain, but that no fact ever ceases to obtain. It is unclear why we would believe in such an asymmetry. Perhaps the A-theory's strongest appeal is that it captures the intuition that the facts change. For example, it is now raining. It was not raining earlier, and will not be raining later. It is natural to think with the A-theorist that the *fact* that it is raining now obtains, and that this fact did not obtain earlier and will not obtain later. But the non-futurist temporalist has to say that the fact in question will obtain forever after it stops raining – and given that, it seems bizarre to insist that the fact nevertheless did *not* obtain before it began to rain. Of course, the non-futurist temporalist can agree with the B-theorist about *this* case. She can say that the fact in this example (that it is raining) always obtained, and will always obtain. ('The fact that it is raining' could denote the always-obtaining fact that it is raining at t , where ' t ' denotes the rainy time at which the phrase is uttered.)

But the non-futurist temporalist will need to disagree with the B-theorist about *some* fact, given that on her view some fact at some point begins to obtain. And it is hard to see how her asymmetric view will

avoid something like the oddness described above. Take an example that looks congenial to the non-futurist temporalist's view: the fact that it has at some point rained. The non-futurist temporalist could plausibly say *this* fact has obtained ever since it first rained (and will obtain at all later times), but did not obtain beforehand. But examples like this also reveal non-futurist temporalism's oddness. Take the fact that it will at some point rain. Given the non-futurist temporalist's view about the fact that it *has* at some point rained, we might expect her to say that the fact that it will at some point rain will not obtain after the last time it rains. But of course, the non-futurist temporalist cannot say that.

I am inclined to think non-futurist temporalism is inconsistent. But even if it is not, I doubt many readers will think it a serious alternative to the ordinary (futurist) A-theoretic package. If we reject factual futurism on the basis of my argument, we should also reject propositional temporalism.

5. A challenge for propositional contingentism?

Jonathan Schaffer (2012) has argued persuasively that most arguments against propositional temporalism translate into equally good arguments against *propositional contingentism*, the view that there are contingently true propositions. We should therefore ask whether there is an argument parallel to mine in the modal case: one that challenges propositional contingentism as well as factual contingentism, the view that there are contingent facts. I accept propositional and factual contingentism (like most philosophers; see Schaffer 2012, 120), and I am tempted to think any modal parallel would provide a reductio of my argument.

Fortunately, it seems there is no similarly challenging argument in the modal case. We can see this by trying to construct one. In the amended case, it does not rain while Anna is heading to the meeting. But if it had rained Anna would have hailed the taxi, and her reason for doing so would have been that it was

raining. In the relevant counterfactual scenario at which it rains, Bernard might utter the following sentence:

(S1') Anna's reason for hailing the taxi is that it is raining.

In this counterfactual scenario, we can suppose, it is a contingent fact that it is raining. Call that fact R'. We can suppose that Bernard's utterance of (S1') would have expressed that Anna's reason for hailing the taxi is R'. At the actual world it does not rain. Bernard (at the actual world) considers the counterfactual scenario in which it rains, and says:

(S2') Anna's reason for hailing the taxi would have been that it was raining.

(S3') If Anna's reason for hailing the taxi would have been that it was raining, then the fact that it would have been raining explains why she would have hailed the taxi.

To construct the modal argument, we first need the claim that Bernard's utterance of (S2') expresses that Anna's reason for hailing the taxi would have been R'. That seems plausible. The second claim we need is that the utterance of (S3') expresses that: if Anna's reason for hailing the taxi would have been R', then R' explains why she would have hailed the taxi. To assess this second claim, it will help to compare (S3) in the temporal argument:

(S3) If Anna's reason for hailing the taxi was that it was raining, then the fact that it was raining explains why she was hailing the taxi.

I claimed that Bernard's utterance of (S3) expresses that: if Anna's reason for hailing the taxi was R, then R explains why she was hailing the taxi. An initial difference to note between (S3) and (S3') is that (S3) involves the phrase 'it was raining' at the relevant point of both the antecedent and the consequent. (S3')

has ‘it was raining’ in the antecedent, but ‘it would have been raining’ in the consequent. My semantic claim concerning (S3) seems to have a slight advantage here over the parallel claim for (S3’).²²

But perhaps this difference is a quirk of English that we should not take too seriously. Consider secondly, then, the argument from anaphora. I previously introduced a paraphrase of (S3):

(S3*) If Anna’s reason for hailing the taxi was that it was raining, then that fact explains why she was hailing the taxi.

I suggested that on the most natural semantics for Bernard’s utterance of (S3*), ‘that fact’ denotes the futurist fact R that (I granted the temporalist) figures in the antecedent.

We might try a similar paraphrase for the modal case:

(S3’*) If Anna’s reason for hailing the taxi would have been that it was raining, then that fact explains why she would have hailed the taxi.

It is far from clear to me that (S3’*) can be used to paraphrase (S3’). And even if we assume that it can, it is not clear that ‘that fact’ could denote the contingent fact R’ that we are supposing figures in the antecedent. Indeed, I struggle to get a coherent reading of (S3’*) at all – except, perhaps, the irrelevant reading on which ‘that fact’ denotes the fact that Anna’s reason for hailing the taxi would have been that it was raining.

²² Of course, there is another sentence Bernard might have uttered that does not have this feature:

(S3'') If Anna’s reason for hailing the taxi would have been that it was raining, then the fact that it was raining explains why she would have hailed the taxi.

But in uttering (S3'') he would surely say something false.

The third reason for thinking there is no equally compelling modal argument will take more space to explain. At three points in presenting the temporal argument, I relied on the claim that Bernard's utterance of (S3) seems trivially true. Firstly, I argued on that basis that it is costly for the futurist to deny the truth of the utterance. Secondly, I argued that my semantics for the utterance of (S3) explains why it seems *trivially* true. Thirdly, I argued that the futurist who denies the truth of the utterance needs to explain why it seems true. And to do that, she needs to accept S3-ALTERNATIVE.

However, I do not think the utterance of (S3') in the modal case sounds trivially true. Recall:

- (S3) If Anna's reason for hailing the taxi was that it was raining, then the fact that it was raining explains why she was hailing the taxi.
- (S3') If Anna's reason for hailing the taxi would have been that it was raining, then the fact that it would have been raining explains why she would have hailed the taxi.

We can bring out the difference between the utterance of (S3) and that of (S3') by considering why the former sounds trivially true. I suggest that it is because the claim (S3') expresses falls out of a more general principle:

For any fact X: If someone's reason for *F*-ing was (at some time *t*) X, then X explains why she was *F*-ing.

Now consider the parallel principle in the modal case:

For any fact X: If someone's reason for *F*-ing would have been X (relative to some counterfactual supposition), then X explains why she would have *F*-ed.

But the modal principle looks suspicious. Here is an apparent counterexample. Smith and Jones are suspects in a famous unsolved murder case. Two crucial facts of the case are that Smith's wallet was found at the scene of the crime, and that Jones's fingerprints were found at the scene of the crime. There are two authoritative books on the case, which present the same facts in a slightly different light. I read book A and come to the conclusion that Jones committed the murder. My reason for concluding that Jones did it is that his fingerprints were found at the scene of the crime. If I had read book B, I would have concluded that Smith committed the murder. My reason for concluding that Smith did it would have been that his wallet was found at the scene of the crime.²³

The preceding sentence expresses for some X that my reason for concluding that Smith did it would have been X. X could be the fact that Smith's wallet was found at the scene, or the fact that Smith's wallet *would have* been found at the scene. Remaining neutral between these alternatives, it appears that the modal principle under discussion produces one of the following conclusions:

The fact that Smith's wallet was found at the scene explains why I would have concluded that Smith committed the murder.

The fact that Smith's wallet would have been found at the scene explains why I would have concluded that Smith committed the murder.

Neither of these seems true to me. Various facts explain why I would have concluded that Smith did it, had I read book B – that the facts of the case are presented in a different light in the two books, and so on. But the fact that Smith's wallet was found does not seem relevant to explaining why I would have

²³ Or: that fact would have been *among* my reasons. This distinction does not matter for the present case.

concluded that he did it. That fact *would have* been relevant to explaining my conclusion that he did it, if I had read book B and concluded that. But that is a different matter.

Now consider the temporal parallel. I read book A and conclude that Jones did it. My reason for concluding that Jones did it is that his fingerprints were found at the scene of the crime. Ten years ago, I had read book B. (Suppose that in the intervening period I've forgotten that I read book B, and have forgotten all the things I learned or concluded from B.) Back then, I concluded that Smith committed the murder. My reason for concluding that Smith committed the murder was that his wallet was found at the scene. Applying the temporal principle above to the case, we can conclude:

The fact that Smith's wallet was found at the scene explains why I concluded (10 years ago) that Smith committed the murder.

And this seems true.²⁴ If the temporal principle is true and the modal principle false, that substantiates the sense that the utterance of (S3') is rather less obviously true than that of (S3). The truth of the (S3) utterance plausibly falls out of a more general principle, whereas the truth or otherwise of the (S3') utterance will likely depend on the substantive details of the case.

The utterance of (S3') does not seem trivially true. As a consequence, it will be easier for the contingentist to resist the argument at the three points mentioned above. Firstly, it is less costly for the contingentist simply to deny that the utterance of (S3') is true. Perhaps the fact that it would have been raining *would have* explained why Anna had hailed the taxi, just as the fact that Smith's wallet was (or would have been) found at the scene *would have* explained why I concluded that Smith committed the murder. But it is open to dispute whether the fact that it would have been raining *explains* why Anna would have hailed the taxi.

²⁴ Keep in mind throughout that the fact cited need only be *part* of the explanation of my concluding as I did.

Secondly, a semantics for (S3') that parallels my simple semantics for (S3) would hold that the same fact figures in the antecedent as in the consequent – it would say (S3') expresses that: if Anna's reason for hailing the taxi would have been R, then R explains why she would have hailed the taxi. But there is no good argument for this semantics from the claim that (S3') seems trivially true, because (S3') does *not* seem trivially true.

And thirdly, there is less pressure to accept any analog of S3-ALTERNATIVE in the modal case. In the temporal case, the futurist who claims that Bernard speaks falsely needs to accept S3-ALTERNATIVE to explain why he seems to speak truly. That is, she needs to accept that there is some fact R* that obtains at the later time and that fills in for R in the later explanation of Anna's action. R* needs to be closely related to R to play that role. For instance, it could be the always-obtaining fact that it is raining at t. But there is less pressure on the contingentist to think there is some fact R*' that obtains at the actual world and that fills in for R in any actual world explanation. It might be that facts to do with the rain in the counterfactual scenario *would* explain why Anna had hailed the taxi, but that no such fact *explains* why she would have hailed the taxi. And even if there happens to be a relevant R*' in Anna's case, it seems doubtful that this feature will generalize to all cases in which people act with contingent facts as their reasons.

I conclude that the parallel argument against factual contingentism (and propositional contingentism) is significantly less compelling than the argument I have presented against factual futurism (and propositional temporalism). My argument is safe from the threatened reductio.

6. Conclusion

A final comment. My argument draws a conclusion concerning the metaphysics of time from premises about people and their (personal) reasons for action.²⁵ That might seem odd: surely (we might think) if the phenomenon I have identified is genuine, it is not restricted to cases in which people act for reasons. I agree. I think the argument reveals merely a fragment of a broader phenomenon, which I mentioned at the start of the paper: explanation is forever. Any fact that explains why something is the case will always explain why that thing was the case. Once a fact explains, it will continue to explain. And because explanation is factive, a fact will always explain only if it will always obtain. I think Anna's example brings this phenomenon into sharper focus for the special case of personal reasons. And to make my argument against the A-theory, it is enough to focus on that special case.

The argument I have presented reveals something of the price of factual futurism, as well as propositional temporalism and the A-theory more generally. And it seems there is no parallel modal argument that presents a similar challenge to factual contingentism. The argument saddles the factual futurist with surprising commitments concerning reasons, facts and explanation. The futurist might accept those commitments and pay the price. The alternative – which I prefer – is to reject factual futurism, and with it the A-theory.

²⁵ For the phrase 'personal reason,' see fn. 6 above.

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