**Tensed Facts and the Fittingness of our Attitudes[[1]](#footnote-2)**

Abstract

We direct different attitudes towards states of affairs depending on where in time those states of affairs are located. Call this *the type asymmetry*. The type asymmetry appears fitting. For instance, it seems fitting to feel guilt or regret only about states of affairs that are past, and anticipation only of states of affairs that are future. It has been argued that the type asymmetry could only be fitting if there are tensed facts, and hence that since it is fitting, there are tensed facts. In this paper I argue that tensed facts are not necessary to ground the fittingness of the type asymmetry, and thus we have no reason, arising from the fittingness of the asymmetry, to posit such facts. I also argue for a stronger conclusion: even if these facts obtain they are no part of what grounds the fittingness of the type asymmetry. These facts are explanatorily redundant.

**Introduction**

Our attitudes are temporally asymmetric in the following sense: the content of the attitudes we direct towards some state of affairs, S, often vary depending on whether S is located in the past or the future. There are broadly two ways in which the content of these attitudes varies.

First, it can be that *how much* we value S depends on whether S is in the past or the future. People tend to devalue states of affairs when they are located in the past, compared to when they are located in the future (Caruso, Gilbert and Wilson 2008; Greene, Latham, Miller and Norton 2021a). This is sometimes known as the *value asymmetry* (Suhler and Callender 2012). Consider the state of affairs of undergoing a painful dental surgery. Evidence suggests that we tend to prefer that the painful surgery be located in the past rather than the future, since we value its disutility less if it is past relative to future. By contrast, we tend to prefer that positive events be located in the future rather than the past, since we more highly value their utility if they are in the future compared to the past. This pattern of preferences is known as *future-bias*.[[2]](#footnote-3)

Second, it can be that *which kind of* attitude we direct towards S depends on whether S is in the past or the future. For instance, consider the painful dental surgery. We are relieved that the surgery is over only when it is past, and we dread the surgery only when it is future. Call the fact that we direct different attitudes to states of affairs when they are past compared to when they are future, the *type asymmetry.*

It has been argued, going back at least as far as Prior (1959), that what grounds the rational permissibility of both asymmetries is the presence of tensed facts. More than that, Prior, and more recently Pearson (2018) and Craig (1999), hold that in the absence of tensed facts these asymmetries in our attitudes would not be rationally permissible. Since these asymmetries in our attitudes are rationally permissible, it follows that there are tensed facts. Call arguments of these kinds *asymmetry arguments.*

It is controversial whether the value asymmetry is, as these authors suppose, rationally permissible.[[3]](#footnote-4) It is, however, agreed that the type asymmetry is rationally permissible. So this paper focuses on evaluating the *type asymmetry argument.* According to that argument we should conclude that there are tensed facts because only if there are such facts is the type asymmetry rationally permissible, and the type asymmetry is rationally permissible.

I argue that the type asymmetry argument fails. The presence of tensed facts is not necessary to ground the rational permissibility of the type asymmetry, and, more than that, the presence of such facts plays no role in grounding that permissibility. [[4]](#footnote-5) Thus the rational permissibility of the type asymmetry provides us with no reason to posit tensed facts.

I begin, in Section 2, by articulating the argument to which this paper responds. I introduce a number of principles that connect the normative status of the type asymmetry with the obtaining of tensed facts. Then in Section 3 I offer a series of cases that show that each of these principles is false.

**2. Temporal Expressions, Attitudes, and Tensed Facts**

I will suppose that what it is to be rationally permissible to direct attitude A towards the object of that attitude, O, is for doing so to be *fitting*, and conversely that what it is for it to be rationally impermissible to do so, is for that attitude to fail to be fitting. I’ll take no view about what fittingness itself consists in: I hope the general idea of the fittingness of attitudes is clear enough.

Then it is agreed that it is fitting to direct an attitude of “relief that this is over”[[5]](#footnote-6) towards the past painful dental surgery, and fitting to direct a different attitude, say dread (or perhaps better ‘dreaded anticipation’) towards the future dental procedure. It is also agreed that it is not fitting to direct an attitude of relief (of this kind) towards the dental procedure when it is future, or to direct an attitude of dread (of this kind) towards the dental procedure when it is past.

In what follows by ‘tensed fact’ I will mean a *robustly tensed fact:* a fact that is tensed, (such as that it rained) and where the obtaining of that fact is not reducible to the obtaining of some set of tenseless facts. So robustly tensed facts obtain at a world only if some version of the A-theory is true at that world: that is, just in case time robustly passes,[[6]](#footnote-7) such that there is an objective matter of fact regarding which events are present, and which events those are, changes. Views of this kind include presentism[[7]](#footnote-8), the growing block,[[8]](#footnote-9) and the moving spotlight[[9]](#footnote-10). Robustly tensed facts, then, do not obtain[[10]](#footnote-11) in non-dynamical worlds such as B-theoretic[[11]](#footnote-12) or C-theoretic[[12]](#footnote-13) worlds, although *non-robustly tensed facts* do obtain, where the obtaining of those facts is reducible to the obtaining of various tenseless facts.

Prior (1959) was the first to argue that the fittingness of the type asymmetry undermines views of time on which there are no tensed facts.

Prior’s initial argument aims to show that we cannot translate certain tensed sentences—those that express claims about attitudes, such as ‘thank goodness that’s over’, towards states of affairs—into tenseless sentences. The thought was that if tensed sentences cannot be translated into tenseless ones then the two kinds of sentences must have different meanings, and hence must be made true by different facts: hence tensed sentences must be made true by tensed facts.

This version of the argument has fallen out of favour since non-dynamists ceased to defend the claim that we can translate tensed sentences into tenseless ones. Nevertheless, the idea that there is *something* right about the argument persists. A new version of the argument has been defended by, *inter alia,* Schlesinger (1976); Craig (1999) and Pearson (2018). That version aims to show that tensed facts are required in order for the type asymmetry to be *fitting*. We can spell out the argument as follows:

*The Type Asymmetry Argument*

1. The type asymmetry is fitting
2. The type asymmetry is only fitting if there are tensed facts.
3. Therefore, there are tensed facts.

We can understand [2] as the claim that tensed facts play some role in *grounding* the fittingness of the type asymmetry.[[13]](#footnote-14)

In what follows it will be useful to distinguish whole from partial ground. If x is the whole ground of y, then x is sufficient for y. By contrast, if x is only a partial ground of y then x, alone, is not sufficient for y. Rather, x in addition to some other things, jointly ground y. In what follows I will use / to pick out whole ground and // to pick out partial ground, so that x/y is to be read as ‘ x grounds y’ and x//y is to be read as ‘x partially grounds y’ and ‘∆zz’ is to be read as ‘the plurality of the zs.’ Then ‘∆xy’ is the limiting two-membered case and should be read as ‘the plurality of x and y’.

So, let A be the any type asymmetric attitude that is directed towards some attitudinal object (such as relief that something is over). Let T be the relevant tensed fact (such as the fact that the dental procedure is past). Let N be the normative status of A (i.e. fitting or not).

Then we can understand the claim that tensed facts ground the fittingness of the type asymmetry as the claim that A and T jointly ground N. Call this Ground.

Ground: ∆AT / N

Suppose Ground is true. Even if it is, it is not sufficient to vindicate [2]. All it tells us is that if tensed facts obtain, then they are a partial ground for the fittingness of the type asymmetry. But Ground does not entail that the presence of a tensed fact is *necessary* for a type asymmetric attitude to be fitting. That’s because in general that x/y does not entail that y cannot also be grounded in z (where x ≠ z). For instance, the fact that there are no non-bald people in the office is grounded in the fact that the office contains only Fred and Jack, both of whom are bald. But that same fact can also be grounded if the office only contains Henry and Herbert, both of whom are bald. So the fact that Fred is in the office is not a necessary (partial) ground for the office containing only bald people, even though it is a partial ground.

So Ground leaves it open that there is some plurality that grounds N, and which does not include any tensed facts. Hence defenders of the type asymmetry argument will need to endorse a stronger principle. They need to endorse what I call the Necessary Partial Ground of Fittingness (henceforth just Necessary Partial Ground). Necessary Partial Ground says that if there is some fitting type asymmetric attitude, N, then the ground of N will include T. That is, if N obtains, then so does T, and T//N.

Necessary Partial Ground: If N, then T//N

[2] is true only if Necessary Partial Ground is. Indeed, on one reading of Pearson (2018) he argues in favour of something very much like Necessary Partial Ground.[[14]](#footnote-15)

In the remainder of this paper I argue that Necessary Partial Ground is false. Hence the type asymmetry argument fails. Along the way I also argue that Ground is false. It is not merely that the presence of tensed facts is not a necessary partial ground for the fittingness of the type asymmetry; rather, even if such facts obtain they are no part of the ground. They are explanatorily redundant: they do no work in grounding the normative status of the type asymmetry.

**3. Tensed Facts and the Type Asymmetry**

3.1 Some Assumptions

My aim is to argue that each of the following is false.

Ground: ∆AT / N

Necessary Partial Ground: Necessarily, if N, then T//N

In doing so I assume that the type asymmetry is fitting. That is, I assume that [1] of the type asymmetry argument is true. If you think it is not then you already think that the type asymmetry argument is unsound. I am interested in resisting the argument even if we accept [1].

First, I want to flag three assumptions I will make use of.

The first is *necessitarianism about ground*. Necessitarianism about ground, as I shall understand the view, is the thesis that if x/y, then necessarily, if x obtains, then x/y. The motivation behind accepting necessitarianism is that if x really does explain y—if y obtains in virtue of x—then it must be that whenever x obtains so does y (and that y obtains in virtue of x). If there could be worlds in which there is x, but no y, then it seems as though x is not *really* the thing in virtue of which y. Necessitarianism is very widely endorsed (see Cameron (2008) and Schaffer (2009)).

Combining necessitarianism about ground with Ground entails the following principle:

Necessitated Ground: If ∆AT / N then, necessarily, (if ∆AT then ∆AT / N)

That is to say, if the plurality of A, and T ground N, (if Ground is true) then necessarily, if that plurality exists, then that plurality grounds N. [[15]](#footnote-16) By assuming necessitarianism about ground I assume that if Necessitated Ground is false, then so is Ground. The arguments I offer against Ground are in fact arguments against Necessitated Ground. I attempt to find cases in which the plurality of A and T obtain, but N does not. If you reject necessitarianism about ground, then you will not think that such cases show that Ground is false. Hence you will not think that I have shown that tensed facts are explanatorily redundant. Nevertheless, even if Ground is true and tensed facts are *not* redundant, the type asymmetry argument relies on the truth of Necessary Partial Ground. The cases I articulate show that Necessary Partial Ground is false. So the argument fails regardless: all that is at issue is whether the facts are both unnecessary and redundant, or just unnecessary.

Next, consider Necessary Partial Ground:

Necessary Partial Ground: Necessarily, if N, then T//N

In order to show that Necessary Partial Ground is false, I just need to show that there is a case in which there is some type asymmetric attitude that is fitting, that is, N obtains, but it’s not the case that T obtains.

That brings us to my second assumption. In what follows I assume that tensed facts are possible. That is because I want to consider a range of scenarios in which there are tensed facts, in order to show that these facts are not doing the work they are purported to do. I take this assumption to be friendly to my interlocutor: after all, if tensed facts are not even possible, then they certainly do not ground the fittingness of our type asymmetric attitudes.

A third assumption I make is that not only are tensed facts possible, but that different kinds of tensed facts are possible. Or, put another way, I assume that there are different possible ways to ground there being a tensed fact corresponding to different A-theoretic models of time. For instance, I take it that growing block models of time ground there being tensed facts in terms of there being a slice of being that is at the growing edge of the block, such that earlier slices of being exist and there are no later slices of being. By contrast, I take it that (at least some) moving spotlight models ground there being tensed facts in there being some fundamental property of presentness (which moves).

This, then, is to assume a sort of contingentism about the nature of time. I make this assumption insofar as some of the cases I present are ones that rely on the tensed facts having a particular ground: the kind of ground they can only have in growing block worlds. Contingentism about the nature of time is controversial. [[16]](#footnote-17) And if growing block worlds are impossible then some of the cases I outline are also impossible. So unless you think we can learn something about what grounds what by looking at impossibilities, those cases tell us nothing about whether tensed facts ground the fittingness of our asymmetric attitudes. Still, even if that is so the remaining cases are left intact and, hopefully, those cases are sufficient to show that the type asymmetry argument fails.

Before we proceed I’ll introduce some distinctions we are going to need moving forward.

3.2 Some Distinctions

Following Miller (2021) let’s distinguish the *objective* past/future from the *subjective* past/future. This distinction will become important later, since, as we will see, it is not tensed facts, which (partially) ground the normative status of the type asymmetry, but rather, facts about what is *subjectively* past or future for an agent. I call these *subjective facts*. Subjective facts are, effectively, facts about where events are located in an agent’s personal-time, where personal-time is conceived as Lewis (1976) does. Roughly, then, personal-time is time as it is measured by the subject. Hence subjective facts are not tensed facts; they are reducible to the obtaining of various tenseless facts (in particular, to facts about whether an event is earlier or later in personal-time, which in turn reduces to tenseless facts about the causal connections between person-stages).

So if it is subjective facts that (partially) ground the fittingness of the type asymmetry, then tensed facts do not ground its fittingness. To be sure, sometimes tensed facts align with subjective facts, in which case it can appear as though the former are the facts that are doing the work: but where these two sets of facts come apart, it is the subjective facts, and not the tensed ones, that are (partially) grounding the normative status of the type asymmetry. So the presence of tensed facts is not a necessary partial ground for the fittingness of the type asymmetry (Necessary Partial Ground is false) and so too is Ground.

**Objective Past/Future:** An event, E, is *objectively* *past* iff E was in the metaphysically privileged present. An event E\* is *objectively future* iff E\* will be in the metaphysically privileged present.

Hence E is objectively past or objectively future only if there are tensed facts.

**Subjective Past/Future**: An event, E, is *subjectively past* for an agent, A, iff E is earlier, in the personal-time of A. An event E\* is *subjectively future* for an agent, A, iff E\* is later, in the personal-time of A.

The subjective past (or future) of agent A includes those events that are earlier (or later) in the personal-time of the agent in question,.

3.3 The Cases

In what follows I will describe six cases and argue that our judgments about which attitudes are fitting in each case undermines either Necessary Partial Ground or Necessitated Ground. In making these arguments I take our judgements about whether particular attitudes are fitting to be good, albeit defeasible, evidence regarding the fittingness of those attitudes. I take this assumption to be shared by my opponents. After all, the reason we think the type asymmetry is fitting is that we take our judgements on the fittingness of particular attitudes as good evidence about their fittingness, which, in turn, informs our view that the type asymmetry itself is fitting.

Each of the cases I present has some controversial elements. Each is a case that some people will think is impossible. I’m not going to fully defend all the controversial assumptions along the way, although I will flag them. Rather, my aim is to inflict on the type asymmetry argument something like death by a thousand cuts (although I only inflict six such cuts). In order to rescue the argument my opponent has to find a way to reject all six cases.

Onto the cases.

Let’s suppose there are two attitudes one might have: *relief* or *dread*. Relief, (recall) is relief that something is over. Dread, let’s suppose, is dread that something is still to come. Relief and dread are both type asymmetric attitudes. Now let’s consider an example: the painful dental procedure. Defenders of Ground will say that relief is only fitting when it is directed towards a particular tensed fact: the fact that the dental procedure is past, and that dread is only fitting when it is directed towards a particular tensed fact: the fact that the dental procedure is future. Then the following two principles are just instances of Ground.

**Objectively Past Relief:** If the plurality of an attitude of relief and a relevant tensed fact (that the painful dental procedure is objectively past) obtains, then the fact that that plurality obtains grounds it being the case that the attitude of relief is fitting.

**Objectively Future Dread:** If the plurality of an attitude of dread and a relevant tensed fact (that the painful dental procedure is objectively future) obtains, then the fact that that plurality obtains grounds it being the case that the attitude of dread is fitting.

Now let’s consider Case 1:

Case 1: Time Travel with Relief

Freddie lives in a world with tensed facts. Time travel is expensive, but not entirely uncommon. The richest 0.001% of the population sometimes travel in time. Freddie is such a person. Freddie learns, through the historical records, that the time travelling adventure he is about to depart on, and which will take 3 hours of his personal-time and take him back to the year 1961 (some 300 years into the past – the objective present is 2261), will result in him having very painful dental surgery in 1961. Freddie is relieved that the painful dental surgery is over.

I'll have more to say about the time travel aspect of this case shortly. For now, let’s just take things at face value.

I predict that we will all judge that Freddie’s attitude is *not* *fitting*. Yet in this scenario Freddie has an attitude, relief, and the relevant tensed fact (that the dental procedure is past) obtains. So according to Objectively Past Relief the attitude is fitting. Hence Case 1 is a counterexample to Necessitated Ground (and hence Ground) the relevant plurality of A (relief) and T (the tensed fact) obtains, but N does not.

Now consider case 2.

Case 2: Time Travel with Dread

Freddie lives in a world with tensed facts. Time travel is expensive, but not entirely uncommon. The richest 0.001% of the population sometimes travel in time. Freddie is such a person. Freddie learns, through the historical records, that the time travelling adventure he is about to depart on, and which will take 3 hours of his personal-time and take him back to the year 1961 (some 300 years into the past – the objective present is 2261), will result in him having very painful dental surgery in 1961. Freddie dreads the painful dental surgery.

I predict we will judge that Freddie’s attitude of dread *is fitting.* Yet in this scenario Freddie has an attitude, dread, but the relevant tensed fact (namely the fact that the dental procedure is future) does not obtain. So the attitude is fitting despite the absence of T. So this case is a counterexample to Necessary Partial Ground. It shows that N can obtain (the dread is fitting) even though it’s not the case that T//N.

The most plausible diagnosis of cases 1 and 2 is that what (partially) grounds the fittingness of the relevant attitudes are not tensed facts, but rather, subjective facts. What grounds its being fitting for Freddie to dread the painful surgery, and not fitting for him to be relieved that it is over, is that the surgery is in his subjective future. That is, there is a subjective fact—a fact regarding where, in Freddie’s person-time, the event lies—and that fact partially grounds the fittingness (or not) of his attitudes. It doesn’t matter where in the objective past/future the event lies when it comes to the normative status of the attitude, all that matters is its relative location in personal-time.

At this point the defender of Necessitated Ground and Necessary Partial Ground might protest that cases 1 and 2 are problematic for three reasons.

First, they might note that on some accounts of time travel in dynamical worlds, travel effectively ‘winds back’ time, so that the time to which one travels becomes the objectively present moment.[[17]](#footnote-18) If that is the way time travel works, then the relevant destination time is not the objective past, and these cases are not counterexamples to the relevant principles. This response, however, only succeeds if winding back time is the only way that time travel can work in dynamical worlds. But I see no reason to suppose this to be so.

Second, one might argue that in presentist worlds it’s unclear that what I’ve said about the fittingness of the attitudes in these cases is right. As some note, in a presentist world the time traveller might *make it the case* that some past-tensed fact obtains, but that is not the same as its being true that the time traveller will, future-tense, be located in the past. Perhaps the time traveller should not anticipate the experiences she *had* in the past, since the past no longer exists and it’s not true that she is traveling to it, but only true that she did exist at it.[[18]](#footnote-19) If you think this, then perhaps you will think that Freddie’s relief is fitting, and his dread is not.

Even if this is right (and I don’t say it is) this is no help unless presentism is necessarily true. If there are non-presentist dynamical worlds that contain tensed facts then cases 1 and 2 jointly show that both Necessitated Ground and Necessary Partial Ground are false. As I noted earlier, I assume that there are such worlds.

Third, one might complain that time travel is impossible in worlds with tensed facts. Certainly there are arguments to that conclusion[[19]](#footnote-20) although there are also plenty of countervailing arguments.[[20]](#footnote-21) But if the cases described are impossible then our judgements about such cases are irrelevant, since what-grounds-what in impossible scenarios sheds no light on what-grounds-what. I agree that if time travel in worlds with tensed facts is impossible, then perhaps cases 1 and 2 show us nothing. But I don’t think that time travel in worlds with tensed facts is impossible. If you do, however, then you can resist these first two cases. That just leaves you with four more to worry about.

Case 3: Growing Block World with Relief

Freddie lives in a growing block world.[[21]](#footnote-22) There is an objective matter regarding which events are present—namely those at the edge of the growing block—and which past, such that which events are present, changes as new being comes into existence. The objective past exists: it is the entire block that is earlier than the objective present. It is, presently, t6. That is, the S6 slice of being is at the growing edge of the block. On slice S4 Freddie undergoes a painful dental procedure. On the S2 slice Freddie is thinking about the painful dental procedure that he has not yet had. On the S2 slice Freddie is relieved that the painful dental procedure is over.

I predict that you will judge that Freddie’s attitude is *not* *fitting*. Yet in this scenario Freddie has the attitude of relief, and the relevant tensed fact (the fact the painful procedure is pasts) obtains. The tensed fact obtains because it is, presently t6, and the painful dental procedure happened at t4. So it if Necessitated Ground were true, then Freddie’s attitude would be fitting. Since the attitude is not fitting, this is a counterexample to Necessitated Ground

Case 4: Growing Block World and Dread

Freddie lives in a growing block world. There is an objective matter regarding which events are present—namely those at the edge of the growing block— and which past, such that which events are present, changes as new being comes into existence. The objective past exists: it is the entire block that is earlier than the objective present. It is, presently, t6. That is, the S6 slice of being is at the growing edge of the block. At t4 (on slice S4) Freddie underwent a painful dental procedure. At t2 (on the S2 slice) Freddie was thinking about the painful dental procedure that he had not yet had. At S2, Freddie dreads the painful dental procedure.

I predict that you will judge that Freddie’s attitude of dread *is fitting.* Yet in this scenario the relevant tensed fact does not obtain. For it’s not true that the painful procedure is in the future: it’s in the past. So this case is a counterexample to Necessary partial Ground.

The defender of Necessitated Ground and Necessary Partial Ground might respond by arguing that neither case 3 nor 4 is possible. The problem with these cases, it might be argued, is that in describing them we are describing Freddie as, *tenselessly* having a certain attitude. After all, at t6 it’s not *present*-tense true that Freddie has those attitudes, so if it is true that he has them, it must be tenselessly true. But, one might argue, in growing block worlds there are no tenseless truths of this kind. Or, even if there are tenseless truths of this kind, when we are evaluating the fittingness of Freddie’s attitudes it is not these tenseless truths that we should be evaluating.

Then one will say that if it is t6 then all that can be said is that Freddie *had* an attitude of dread/relief, and that he *underwent* the painful surgery. Indeed, we can say that Freddie *had* the attitude of dread/relief *before* he *underwent* the surgery, and that is why the attitude that he had was fitting (in the case of dread) or not (in the case of relief). That is because at t2, Freddie is (present-tense) having an attitude of dread/relief, and that attitude is fitting/not-fitting because he *will* have the painful surgery (at t2 the relevant future-tensed fact obtains). [[22]](#footnote-23) That is entirely consistent with both Necessitated Ground and Necessary Partial Ground.

Why think we can make sense of Freddie having, tenselessly, an attitude of dread/relief?

Consider some three-dimensional slice of being, S1, which comes into existence at t1. It is natural to think of S1 as being a time: namely as being t1. Then when we ask how thing are at t1 we are asking how things are when S1 is present: that is, when it is t1. But S1 is also a location in a block of spacetime. It’s a slice of reality at which things occur. Suppose it is presently t6. We can still ask about the properties of S1, where this is not to ask how things *were* at that slice of being, when it was t1, but rather, to ask how things are, at that slice of being, when t6 is present. That is, it’s to ask how things are at a location that is ‘back’ within the block, rather than at its edge. Call the view that there is (tenselessly) some way that things are at three-dimensional slices of being, regardless of where those slices are located in the block, the *locative principle.*

**Locative Principle:** For any three-dimensional slice of being, S, that comes into existence, there is some way S is (tenselessly) once S is no longer at the edge of being.

There are several reasons to accept the locative principle. First, the growing block is a block of spacetime. I find it difficult to see how there could fail to be, tenselessly, facts about how things are at locations in the block.

Second, endorsing the locative principle allows us to endorse a pretty plausible view regarding what it is that grounds past-tensed facts. Namely, it allows us to say that the obtaining of some past-tensed fact is grounded in the obtaining of facts about what is, tenselessly, the case in the objective past.[[23]](#footnote-24) Call this the reduction of (past) tensed facts.

*Reduction of (Past) Tensed Facts:* When t is present, there obtains some past-tensed fact F according to which it was the case that P, iff there is some tenseless fact F\* according to which it is the case that P, and F\* obtains in the objective past.

Then on this view it is how things are, at slices located in the objective past, which grounds the obtaining of past-tensed facts in the present. So for instance consider the past-tensed fact that Freddie underwent painful dental surgery. What grounds the obtaining of this fact? That Freddie is, tenselessly, undergoing painful surgery at some slice S, and that Freddie at S is located in the objective past.

Not only is this reduction neat, but it provides a pleasing account of the nature of the facts towards which we direct attitudes.[[24]](#footnote-25)

What is the object of my relief that the painful dental procedure is over? I’m tempted to say that the object of my relief includes, in some way or other, a dental procedure: a procedure that involves mouths, and teeth and pain and drills. *That* is the thing that I am relieved is over. If the reduction of past-tensed facts is true, then that is right. The fact that the dental procedure is over is constituted by there being a dental procedure, and by that procedure being in the objective past. That past-tensed fact is a very apt object of my relief.

Suppose instead one denies the reduction of past-tensed facts, and holds that past-tensed facts are not partially constituted by past dental procedures. Perhaps one thinks that past-tensed facts are fundamental. Or perhaps one thinks they are made up of some present object, which has a past-tensed property. Then it is no longer so clear to me that this fact is an apt target of our attitudes. There is nothing noisy, painful, or toothy, about *that* fact. This, I think, gives us another reason to endorse the reduction in question.

So, I think that Freddie is, tenselessly, feeling relieved that the dental procedure is over (or dreading that it is not). But when we combine this tenseless fact with the tensed fact that obtains at t6, we find that Freddie’s attitude of dread is not fitting, and his attitude of relief is.

At this point one might protest that even if there are tenseless facts of this kind, when we are evaluating the fittingness of Freddie’s attitudes we shouldn't be evaluating some tenseless fact; we should be evaluating a tensed fact. And if we do that, we find that his attitude is fitting (when the attitude is in the present) and that it was fitting (now that it is in the past),

In response to this one might reply that if one allows that it is, tenselessly, the case that Freddie has the attitudes he does, then we should be able to evaluate whether those attitudes are fitting. Moreover, we can do this perfectly well if we don’t appeal to tensed facts as part of the ground of the fittingness of his attitudes. We can say that what makes Freddie’s attitude of dread fitting is that the painful procedure is in Freddie’s subjective future. It is a subjective fact that partially grounds the fittingness of the attitude of dread. Likewise it is the fact that the painful procedure is in Freddie’s subjective future, which (partially) grounds his attitude of relief failing to be fitting. No appeal to tensed facts is necessary.

Of course, these two cases are controversial. But in order to rescue both Necessitated Ground and Necessary Partial Ground one must find a way to respond to all four of the cases I have presented so far, as well as the two cases I will present next.

In what follows I will introduce two worlds, W1 and W2. For now, I'll simply assume that these worlds are possible. I’ll return to that assumption shortly.

Case 5 The Backwards World with Relief

Consider W1 and W2. Both worlds contained, will contain, or contain, qualitatively identical events and objects bearing the same spatial relations to one another. So if there’s a coffee mug sitting on a table in one world, there is a duplicate coffee mug sitting on a duplicate table in the other two worlds. Moreover, the temporal between-ness relations are the same in all three worlds. So if event E2 is temporally between E1 and E3 in one world, then it is temporally between the duplicate events in the other two worlds.

W1 and W2 contain fundamentally tensed facts. In W1 the world begins with a big bang. In that world entropy increases towards the objective future, and the present time contains records of objectively past events, but not objectively future ones. In W1 people deliberate towards the objective future on the basis of records from the objective past.

W2 is like W1, except that the contents of time occur in the reverse order. W2 looks like W1 run in reverse. In W2 the big bang happens at the final moment in time. In W2 entropy decreases towards the objective future, and there are (apparent) records of the objective future, but not the objective past.

At each moment, the agents in W2 are intrinsic duplicates of agents in W1. So if there is a time at which Freddie, in W1, desires coffee, there is a time in which Freddie’s counterpart, Freddie\* in W2, desires coffee. While Freddie deliberates about the objective future on the basis of his memories of the objective past, Freddie\* deliberates about the objective past, on the basis of his memories of the objective future. Both Freddie and Freddie\* are relieved that the painful dental procedure is over.

I take it we all agree that Freddie’s attitude of relief is fitting. I think we should also say that Freddie\*’s relief is fitting. This should strike you as more controversial. But things seem, to Freddie\*, just as they do to Freddie. Subjectively speaking, Freddie\* is oriented towards the objective past in all of the ways in which Freddie is oriented towards the objective future. Freddie\* *must* deliberate towards the objective past, and not the objective future, since Freddie\* already knows what he will do in the objective future – he has reliable memories (assuming for now they are memories) of it; whereas he does not know what he did do in the objective past. If Freddie anticipates an event, then so does Freddie\*. If Freddie remembers an event, then so does Freddie\*. So, I say, it is fitting that Freddie\* has an attitude of relief towards the painful dental surgery. Freddie\* remembers the painful surgery, and he deliberates about what he will do on the basis of holding fixed that he has had the painful surgery. That makes it fitting for him to be relieved that the surgery is over.

If that is right, then Case 5 is a counterexample to Necessary Partial Ground. For Freddie\* has a fitting attitude of relief (N), yet the fittingness of that attitude is not partially grounded in the relevant past-tensed fact, for that fact does not obtain.

Case 6 The Backwards World with Relief

Consider W1 and W2. Both worlds contained, will contain, or contain, qualitatively identical events and objects bearing the same spatial relations to one another. So if there’s a coffee mug sitting on a table in one world, there is a duplicate coffee mug sitting on a duplicate table in the other two worlds. Moreover, the temporal between-ness relations are the same in all three worlds. So if event E2 is temporally between E1 and E3 in one world, then it is temporally between the duplicate events in the other two worlds.

W1 and W2 contain fundamentally tensed facts. In W1 the world begins with a big bang. In that world entropy increases towards the objective future, and the present time contains records of objectively past events, but not objectively future ones. In W1 people deliberate towards the objective future on the basis of records from the objective past.

W2 is like W1, except that the contents of time occur in the reverse order. W2 looks like W1 run in reverse. In W2 the big bang happens at the final moment in time. In W2 entropy decreases towards the objective future, and there are (apparent) records of the objective future, but not the objective past.

At each moment, the agents in W2 are intrinsic duplicates of agents in W1. So if there is a time at which Freddie, in W1, desires coffee, there is a time in which Freddie’s counterpart, Freddie\* in W2, desires coffee. While Freddie deliberates about the objective future on the basis of his memories of the objective past, in Freddie\* deliberates about the objective past, on the basis of his ‘memories’ of the objective future. Freddie dreads the painful dental procedure; Freddie\* is relieved that the painful dental procedure is over.

This case requires a slight tweak. I said that Freddie and Freddie\* are intrinsic duplicates. In the case just outlined Freddie and Freddie\* are intrinsic duplicates at each time they exist, except for one slight difference. Where Freddie dreads the painful dental procedure, Freddie\* is relieved the procedure is over. In all other respects the two are intrinsic duplicates.

I think Freddie\*’s relief is *not* fitting. Freddie\* is relieved that the painful dental is over, despite its being the case that Freddie\* *anticipates* having the procedure. Freddie\* not only does not have any memories of the procedure, but there are no records of that procedure at the time at which Freddie\* is objectively present. Moreover, there are no records of Freddie\* ever having *deliberated* about attending a dental procedure, having *organised* such a procedure, or having *attended* such a procedure. So it is surely bizarre for Freddie\* to be relieved that the painful dental procedure is over; and if he does, then that attitude is not fitting.

If that is right, however, then Case 6 is a counterexample to Necessitated Ground. For Freddie\* is relieved that the procedure is over, and the relevant past-tensed fact obtains, and yet the attitude is not fitting.

Your first instinct here might be to think that one of the worlds described in cases 5 and 6 (namely W2) is impossible, either because events cannot happen in ‘reverse order’ or because even if they can, Freddie and Freddie\* would have different mental states and hence (contra the claims in case 5) would not be intrinsic duplicates of one another. If so, these cases are no threat to Necessitated Ground or Necessary Partial Ground.

Let’s take each idea in turn.

First, one might argue that W2 is impossible because in worlds in which time robustly passes at least *some* processes are time irreversible. So not all the processes that obtain in W1 can be reversed to yield W2.

This claim doesn’t strike me as very plausible. It requires that it is impossible (in the broadest sense of this term) for (at least some) processes to be time-reversed. Even if you think that as a matter of nomic necessity there are processes like this, it is a big call to think that their reversal is impossible.

Moreover, conditional on the actual world being one in which time does robustly pass (as, presumably, defenders of the type asymmetry argument suppose), we have good reason to think that this claim about irreversibility is false. The actual laws of nature are time reversal invariant. If a process is nomically possible, then the temporal reverse of that process is also nomically possible. That means that it is nomically possible that the contents of our world be distributed in the reverse temporal order to the order in which they are in fact distributed. So if W1 were, for instance, the actual world, then we have reason to think that W2 is not only possible (which is all the argument requires) but also that it is nomically possible.

 (You might wonder how that can be given that it’s often said to be a law that entropy tends to increase, and a temporally reversed version of our world would be one in which entropy decreases. The best explanation for the increase of entropy towards the future in or world is that it is the product of perfectly time symmetric statistical mechanisms in conjunction with a very low local entropy state (i.e. the big bang). Symmetrical laws entail that if entropy is very low at some point then it will tend to increase away from that point. That is why entropy is increasing away from the big bang. This insight, however, is consistent with W2 ‘running backwards’. For W2 has a very low entropy boundary condition: it is just that that condition is at the *other* end of the world. As such, we’d expect entropy to *decrease* towards that boundary: that’s just what statistical mechanics tells us will happen.)[[25]](#footnote-26)

Even if one accepts that it is possible for all the processes in W2 to run in the opposite direction to W1, one might still complain that W2 is impossible. For one might think that even if W2 is a slice-by-slice physical duplicate of W1, it is not a slice-by-slice duplicate *simpliciter*. For instance, you might think that in W2 things will seem (phenomenologically) different from how they seem in W2. Maudlin (2007) for instance, thinks that things wouldn’t seem any way at all in W2 (it would contain phenomenal zombies).

I’m going to assume that physicalism is true, or, at the very least, that mental states supervene on (and are grounded by) physical states. Then the first thing to say is that the supervenience base for mental states is the same in W2 as it is in W1. That strongly suggests that the worlds are mental duplicates.

Now, one might protest that what matters is not just which physical states obtain (and which are, as it were, temporally adjacent to which others) but also the causal relations between those states. If matters that x causes y causes z, rather than the reverse. In W2 it looks as though decisions cause deliberations while in W1 deliberations cause decisions. In W1 light hitting the retina causes someone to see a tree, in W2 seeing a tree causes light to hit the retina. Or so you might think.

That brings us back to the claim made in cases 5 and 6 that in W2 Freddie\* remembers the future. Setting aside the idea that you might think that memory is, analytically, connected to the past (in which case feel free to call what he does something else) you might worry that Freddie\* is not remembering, since his present mental state is not the effect of the relevant future events. Memories are records of events; Freddie\* has no record of future events, since future events do not cause present events; so Freddie\* does not remember the future. So even if things did *seem* the same to Freddie and Freddie\*, they are in fact very different because the relation that Freddie\* bears to the future is completely different from the relation that Freddie bears to the past.

Both of these worries hinge on the idea that if e causes e\* in W1, then e\* causes e in W2: causation, as well as time, is reversed. Now, one might deny this. Perhaps there are possible worlds in which the causal direction comes apart from the direction of temporal flow. If so, the causal facts in W2 can be the same as in W1. Still, since it seems plausible that temporal passage is, of necessity, connected to the (general) direction of causation, it seems likely that the causal facts must be different in W2 than in W1.

Here, though, is what we can say about this. W2 is a world in which micro-level causation proceeds from objective past to objective future, and hence the micro-causal structure of the world is reversed compared to W1. Nevertheless, in W2 the pattern of macro-causation, captured by counterfactual dependencies, runs in the opposite direction to the micro-causal relations. In W2 if we want to explain why things are as they are at the macro-level in the objective present, we do best to appeal to the way they *will b*e in the objective future, not the way they *were* in the objective past. If we want to explain why we did such and such, we do best to appeal to the deliberations that occur in the objective *future*, than to any macro events that occurred in the objective past. W2 is a somewhat peculiar world in which the counterfactual dependencies run in the opposite direction from micro-causation.[[26]](#footnote-27)

But given that these macro-level counterfactuals obtain, it is surely these that are relevant in determining mental content, and in determining whether Freddie\* can be said to remember the future. Given that they do obtain, we’d expect W1 and W2 to be intrinsic duplicates of one another. Hence we have no reason to think that W2 is impossible. And, in turn, cases 5 and 6 provide a counterexample to Necessitated Ground and to Necessary Partial Ground.

Moreover, when we look at these case we see that it is really the presence of subjective facts that is doing the work of grounding the fittingness (or not) of the attitudes in question. Freddie and Freddie\*’s attitudes of relief are fitting just when the painful dental procedure is subjectively past, and their attitudes of dread are fitting just when the painful dental procedure is subjectively future. It makes no difference whether the procedure is in the objective past or future.

**5. Conclusion**

In all, then, Cases 1-6 give us good reason to reject both Necessitated Ground and Necessary Ground, and, in turn, Ground. This shows not only that the presence of tensed facts is not necessary for our type asymmetric attitudes to be fitting, but also that the presence of tensed facts is not part of what grounds the fittingness of those attitudes. It is not the presence of tensed facts that is doing the normative work in any of these cases. Rather, what is doing the work is that the object of the attitude is *subjectively* past or future. *That* fact is present in all the cases in which the attitude is fitting. Since that fact is tenseless, we should reject the type asymmetry argument. The presence of tensed facts is not necessary to ground the fittingness of the type asymmetry.

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1. With thanks to BLINDED for helpful discussion of these issues. [↑](#footnote-ref-2)
2. Recent empirical work supports the contention that people are positively hedonically future-biased: they prefer that, all things being equal, positive hedonic events be located in the future rather than the past. That work also supports the contention that people are negatively hedonically future-biased: they prefer that, all things being equal, negative hedonic events be located in the past rather than the future (Caruso, Gilbert and Wilson 2008; Greene, Latham, Miller and Norton 2021a). Indeed, there has recently been a spate of empirical work exploring the conditions under which people exhibit future-bias. This work includes investigation of whether such preferences are limited only to hedonic events (Greene, Latham, Miller and Norton 2021a), whether they are limited only to the first-person condition or also extend to third-person conditions (Caruso, Gilbert and Wilson 2008; Greene, Latham, Miller and Norton 2021a) and whether they only obtain in conditions of equality, or also obtain when the events have different utility depending on where in time they are located (Greene, Latham, Miller and Norton 2021b). [↑](#footnote-ref-3)
3. See Hare 2007, 2013; Dougherty 2011, 2015; Greene & Sullivan 2015; Sullivan 2018; Dorsey 2018; Brink 2011 for discussion. [↑](#footnote-ref-4)
4. In this I follow Yehezkel (2013), who makes the case that it’s hard to see why the obtaining of tensed facts (partially) grounds certain attitudes being fitting and others not. The arguments I present are different, however, from those presented by Yehezkel. [↑](#footnote-ref-5)
5. One might think one can direct an attitude of relief towards a *future* dental surgery by, say, being relieved that it is scheduled (if one is in pain) or by being relieved that the surgery is temporally further away rather than temporally near (if one fears the surgery) or relieved that it is temporally closer rather than temporally further (if one wants to get it over and done with and one is in pain). In what follows I will just talk of *relief*, but I intend this to be the special sort of relief that the event is over and done with, that can (apparently) only fittingly be directed towards past events. [↑](#footnote-ref-6)
6. I talk of robust passage since some B-theorists argue that there is a kind of anodyne temporal passage (succession) on the B-theory. See Deng 2013, Leininger 2021 and Oaklander 2012. [↑](#footnote-ref-7)
7. For explication and defense of presentist versions of the A-theory see Deasy (2017), Ingram (2016), Pezet (2017), Tallant (2012), Crisp (2003), Bourne (2006). [↑](#footnote-ref-8)
8. For explication and defense of variants of the growing block view see Rosenkranz and Correia (2018), Forbes (2016), Forbes and Briggs (2017), Tooley (1997), Forrest (2006), Button (20007). [↑](#footnote-ref-9)
9. For explication and defense of variants of the moving spotlight view see Cameron (2015), Skow (2015), Deasy (2015), Miller (2019). [↑](#footnote-ref-10)
10. There are still facts about which events are past, present, and future, but these are merely relational facts about where events are, relative to a speaker or a time. [↑](#footnote-ref-11)
11. See Maudlin 2007, Oaklander 2012, Mellor 1998; Le Poidevin 1991; Tegtmeier (1996; 2014); Kajimoto (2019) and Norton (2020); Bardon (2013). [↑](#footnote-ref-12)
12. See Price 1996; Farr 2012, 2018; Callender 2017. [↑](#footnote-ref-13)
13. I intend ‘grounds’ to be a fairly neutral term that can be read as ‘explains’ or ‘is the thing in virtue of which’. It is therefore consistent with my usage that one thinks of grounding as a metaphysically substantive relation that obtains between objects or facts (i.e. states of affairs) as do Schaffer (2009) and Cameron (2008). Equally, however, it is consistent with my usage that ‘x grounds y’ should simply be read as ‘y in virtue of x,’ or ‘x explains y’. [↑](#footnote-ref-14)
14. Pearson sometimes seems to allow that there *might* be other grounds for the fittingness of the relevant attitudes, but he certainly makes the case that tensed facts are the best such grounds, and some of what he says suggests that there are (and could be) no other grounds. [↑](#footnote-ref-15)
15. Notice that necessitarianism does not entail that if x/y, then necessarily, if y, then x/y. Necessitarianism does not rule out that y might have multiple different grounds. It just says that if x/y then, necessarily, if x, then x/y. So Necessary Ground does not follow from Ground, in conjunction with necessitarianism. [↑](#footnote-ref-16)
16. See for instance McTaggart (1908); Markosian (2004) and Bigelow (1996) who deny it, though see also Bourne (2006), Balaguer (2014) and Le Bihan (2014) who defend the contingency of time’s being tensed. [↑](#footnote-ref-17)
17. See Van Inwagen (2010) and Bernstein (2017). [↑](#footnote-ref-18)
18. See for instance Sider (2005) [↑](#footnote-ref-19)
19. For arguments of this kind see Miller (2005), Miller (2008), Sider (2005), Slater (2005) and Hales (2010). [↑](#footnote-ref-20)
20. For arguments to the conclusion that time-travel is consistent with robust passage see Monton (2003), Daniels (2012) Keller and Nelson (2001) and Hall (2014) and Van Inwagen (2010) (though the kind of time-travel that is at issue in van Inwagen’s case is rather different). [↑](#footnote-ref-21)
21. This case could just as easily be specified by appealing to a moving spotlight world. [↑](#footnote-ref-22)
22. I take Correia and Rosenkranz 2020 to advocate a view of this kind. [↑](#footnote-ref-23)
23. Clearly, of course, presentists will not say any such thing. They might well take tensed facts to be fundamental, and not to be grounded in anything further. [↑](#footnote-ref-24)
24. For discussion see Miller (2018). [↑](#footnote-ref-25)
25. For discussion of worlds like this see Price (1996). [↑](#footnote-ref-26)
26. This is, after all, what happens in deterministic worlds with time travel. [↑](#footnote-ref-27)