

Replies to Cameron, Wilson, and Leininger*

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1 Summary

Does time pass? Well of course it does. Iconoclasts and gadflies might deny it, but (as my parents used to say) they're just looking for negative attention. It is therefore frustrating to be told, as I have been, that one's theory of time is false because it leaves out the passage of time. In a way, *Objective Becoming* (Skow 2015) is a defense of the theory I prefer against this accusation. That theory is the block universe theory of time.¹

The bumper-sticker version of the block universe theory says that time is a dimension of reality that is a lot like space. Since space does not move, or flow, neither does time. But that's okay; time does not need to move or flow in order for it to be true to say that time is passing.

At least that's what I think. But some philosophers do think that time needs to move, or at least change in some way, for it to be true that time is passing.

Since these philosophers, and I, disagree about what it takes for it to be true that time is passing, it's better not to frame our debate as a debate about whether time passes. Instead we should focus on the features we can all agree that the block universe theory and its rival theories have.

Objective Becoming frames the block universe theory and its rivals in more or less the meta-metaphysical framework Ted Sider advocates (Sider 2011).² Some

*For a symposium on *Objective Becoming* in *Analysis Reviews*.

¹It is sometimes also called, in one of the worst choices of philosophical terminology ever, the "B-theory" of time.

²I didn't choose this framework out of any feeling of necessity. I haven't actually

(true) descriptions of reality describe reality in a fundamental way, while others describe it in a non-fundamental way. The fundamental descriptions use only fundamental vocabulary; descriptions that do not use only fundamental vocabulary are non-fundamental.³ In this framework a theory of time must do two things: say what the “temporal aspects of reality” are like, fundamentally speaking, and at least gesture at what the “metaphysical truth-conditions” are for non-fundamental ways of speaking of those temporal aspects. A metaphysical truth-condition has the form: “S” is true in context C iff . . . , where “S” is replaced by a non-fundamental sentence and the dots are replaced by a sentence that uses only fundamental vocabulary. (The connective “iff” should be read as something stronger than material equivalence, maybe even as something stronger than necessary equivalence—but the exact details of its meaning won’t matter here.)

If we work under the assumption that Newtonian mechanics on its standard interpretation is true, then the block universe theory says that, fundamentally speaking, there is such a thing as time, just as there is such a thing as space; that time forms a one-dimensional continuum, just as space forms a three-dimensional one; the story goes on, but this summary must be brief. The theory also says that tensed verb forms are non-fundamental, and offers truth-conditions for sentences containing them. For example, “Jones used to be 4 feet tall,” as used in a context where the time of speech is T, has the truth-condition that Jones is 4 feet tall at a time earlier than T. Here “is” is a tenseless form of *be* that does not occur in English. (This is only an approximation to the metaphysical truth-condition, since “feet” and “tall” and “earlier” are also non-fundamental; since what is relevant in debates in the metaphysics of time is whether tense is fundamental, I pretend that a modification of English that lacks tensed verb forms is a fundamental language.)

I haven’t done any surveys, but I’d guess that the most popular alternative to the block universe theory of time is presentism. The most natural version of presentism says, against the block universe theory, that tense *is* fundamental, and thought through whether that framework is essential to my defense.

³Sider formulates his meta-metaphysics so as not to require the use of “fundamental” as a predicate of words and phrases, but for simplicity I will use it that way.

also says, again against the block universe theory, that fundamentally speaking time does not exist (after all, it is not needed to give truth-conditions to tensed sentences anymore). But I don't think that presentism is the best alternative to the block universe theory. The best alternative, I think, is the moving spotlight theory. It's better not just than presentism, but also the "growing block" theory of time and the "branching future" theory of time. A large proportion of *Objective Becoming*, the first 10 chapters in fact, is spent sizing up, and also *propping up*, the moving spotlight theory.

So what does the moving spotlight theory say? As a first pass it says that exactly one time is present, and that which time that is changes: later times will be present, earlier times were present. Of course the block universe theory says that these sentences are true too, but in that theory their truth is due to the context-sensitivity of "present" (and of tense). What makes the moving spotlight theory different is that their truth is not due to these factors; in fact the theory says that "present" is a fundamental piece of vocabulary.

What about tense? Does the moving spotlight theory also say that tensed verbs are among the fundamental pieces of vocabulary? At this point it becomes misleading to speak of "the" moving spotlight theory; a variety of versions of the theory diverge here. *Objective Becoming* focuses on two. The first, the "supertense" version of the moving spotlight theory (which I abbreviate "MST-Supertense"; I am not proud of the name), says that among the fundamental pieces of vocabulary are tensed verb forms. Those tensed verb forms, however, differ in meaning from analogous forms in English, so to avoid confusion I spell them differently. The past form of *be* in the fundamental language, for example, is spelled "super-was"; in general the verbs in the language inflect for "supertense." This version of the moving spotlight theory says that, fundamentally speaking, exactly one time super-is present, times later than the present time super-will be present, and so on. In this theory English sentences containing tensed verb forms have truth-conditions which may be stated using supertensed verbs and quantifiers ranging over times. For example, the theory says that "Jones used to be 4 feet tall" super-is true (in English) iff it super-was the case that (Jones super-is tall at the present time).⁴ Another

⁴Here "the present time" is non-rigid. There are actually two versions of MST-

version of the theory, which I call MST-Time, breaks from the block universe theory not by saying that tense is fundamental, but by asserting a relativity of facts to instants of time that goes beyond anything in the block universe theory. According to this theory, from the perspective of each time, that time is present; it is the fact that later times are present from the perspectives of later times that, in the theory, underwrites the truth of the claim that “presentness” “moves” along the series of times. (A third version of the theory, “MST-Supertime,” also appears in the book; it says that later times are present at later *supertimes*. But its appearance is just a ladder that is kicked away.)

The moving spotlight theory has come in for a lot of bad press, so in the middle of the book I cross the aisle to defend it against some bad arguments. The theory is not inconsistent, as McTaggart has been thought to have shown; and the theory does not have an incoherent answer to the question of how fast time passes, as many of my fellow pro-blockers have alleged.

If those arguments aren’t good grounds for preferring the block universe theory, what are? I don’t think we can decide what theory of time to believe by simply looking at them all, consulting some a priori intuitions about what the passage of time consists in, and saying “a ha! That one is the one that gets the passage of time right, so it is the true theory.” Deciding between the theories is going to require more evidence and argument than that.

I discuss two kinds of evidence, the first kind esoteric, the second kind available to anyone who sits on a couch for five minutes. The esoteric evidence ultimately comes from complicated physics experiments—the experiments that physicists took to establish Einstein’s special, and then general, theories of relativity. There is a tradition of arguing that theories of time like the moving spotlight theory are inconsistent with the theory of relativity, and so must be false. I show, against this, that the moving spotlight theory can be made consistent with the theory of relativity in many different ways. (Consistency, of course, is a low bar; the block universe theory might still be more strongly supported by the evidence for relativity theory than is the moving spotlight theory. Although I believe this to be the case, I Supertense, which disagree on the truth-conditions for “ordinary” tensed sentences; this is what the version with “strong” truth-conditions says.

do not push the point in the book.)

The easily-available evidence is evidence that comes “from experience.” It’s a common thought that in some sense the world would not look (or sound) like *this* if the block universe theory were true, but would if a theory like the moving spotlight theory were true. The problem with this argument is unclarity in what “like *this*” means, and I discuss three ways to make it clear, and three arguments that come out of them. Maybe the claim is that the way our experience represents the world (for example, the way our visual experience represents the scene before our eyes) favors the moving spotlight theory; or maybe the claim is that the fact that our experience has a certain “phenomenal character” favors the moving spotlight theory. Both these claims, I argue, are false. I also discuss a third way of construing the argument from experience. According to the block universe theory, I may be at one time looking at a green paint chip, and at another time looking at a red paint chip. In that theory, then, I bear the same relation to the experience as of the green chip as I do to the experience as of the red chip. But surely I don’t! The experience as of the red chip is *the one I am having*, and this fact has been left out of the theory. The moving spotlight theory, the argument continues, does not leave this out: it says that the experience I am having is the one that occurs at the present time. This argument is all smoke and mirrors, though; in short, the block universe theory *does* say that the red chip is the one I am having, since “the one I am having” refers to the experience I am having at the time of speech, which in this case is the time when I am looking at the red chip.

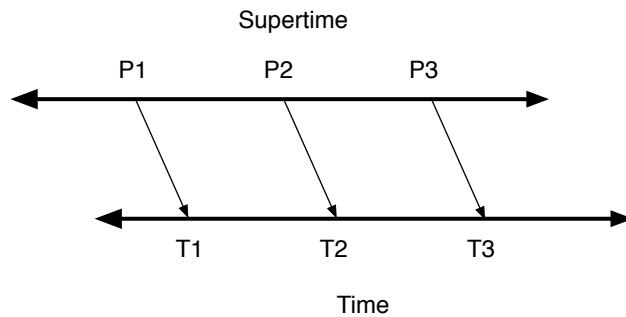
2 Response to Cameron

Ross Cameron thinks that MST-Supertime, MST-Supertense, and MST-Time are defective as versions of the moving spotlight theory, and goes on to describe what he thinks they are missing. But I don’t think they are defective; and what Cameron says is missing from these theories is actually present in a version of MST-Time that appears in the book.

Cameron thinks that MST-Supertime, to start with, is inconsistent, and so the worst of the lot. He thinks McTaggart’s argument shows it to be inconsistent. But

the theory is not inconsistent. We can draw a picture of what reality is like according to the theory, and the picture doesn't confuse us the way M. C. Esher's pictures of inconsistent situations do. Figure 1 contains such a picture: the arrows indicate that time T1 is present at supertime P1 and that time T2 is present and supertime P2; you can easily fill in the other arrows in your mind. So where is the inconsistency? Cameron's argument is that "T1 is present at P1" entails "T1 is present," and "T1 is past at P2" (which follows from the fact that at P2, T1 is earlier than the time that is present) entails "T1 is past" (holding the context fixed throughout), which contradicts "T1 is present." But this argument relies on the principle that "S at P" entails "S," and this principle is false in MST-Supertime.

Figure 1:



Cameron is aware that the theory may be interpreted to make this principle false: "If it [namely the modifier "at P," where "P" names a point in supertime] is to signal a fundamental relativity then the problem is indeed solved: if times are never present, simpliciter, but only relative to a point of supertime, then there is no incompatibility in the way things are at one point of supertime to another." But, he says, "I don't think this is how we should understand MST-Supertime." Well—I do think that's how we should understand it.

Of course, Cameron doesn't prefer his interpretation for no reason at all. He has a reason: "at P" in MST-Supertime is supposed to work in the same way that "at T" (where "T" denotes a time) works in the block universe theory, and in that theory, Cameron believes, "S at T" does entail "S." This really just moves the bump

in the carpet though: I don't think that this entailment holds in the block universe theory either.

That's not actually right; there are many versions of the block universe theory, and this entailment may hold in some (likely those that incorporate the doctrine of temporal parts) and not in others. What is important is that there are perfectly respectable versions of the block universe theory in which the entailment fails (they'll be versions that incorporate an "endurance" theory of persistence), and "at P" in MST-Supertime should be understood by analogy with the way "at T" works in those versions. (Cameron is right that MST-Supertime so-understood "give[s] up on the characteristic A-Theoretic claim that there is a unique objective present"; and I agree that that some who pledge their allegiance to the "A-theory" of time may take this as a reason to dislike it. But then I wasn't trying to get them to like it; MST-Supertime is the red-shirted engineer who gets killed off early, not one of the stars of the Moving Spotlight show.)

So much for MST-Supertime; Cameron also thinks that MST-Supertense is not such a great theory. He's quite brief, though, about its alleged defects. He writes "We might wonder why we need this complicated machinery of supertime or supertense operators. Isn't the basic idea behind the moving spotlight simply that what time is present changes? In which case, shouldn't we just be appealing to time?" The implicit answers here are yes and yes; the alleged problem with MST-Supertense then is that it does not just appeal to time, it also makes use of supertense, in its analysis of statements like "X has changed" (here I take an analysis to be a provision of metaphysical truth-conditions, and the activity of analyzing to be the activity of providing them).

But I don't think that a yes answer to the first question entails a yes answer to the second. Let's agree: the basic idea behind the moving spotlight theory is that which time is present changes. Cameron seems to think that an analysis of change should "appeal" only to time. But that's wrong. Certainly presentists won't accept it; even if they believe in instants of time, they don't think change should be analyzed in terms of time (as Cameron acknowledges). They will analyze "X has changed" just as "X was one way, and is now another way" (and give no further analysis of this analysis). Nor should believers in MST-Supertense accept

Cameron's thought. In MST-Supertense, "temporality" manifests itself in reality in two ways: in a thing (time), and in a bit of ideology (supertense operators). Certainly change has to do with "temporality," but if temporality manifests itself in two ways, then clearly an analysis of change may (or even must) appeal to both ways.

Finally, MST-Time; Cameron takes this theory to task for "abandon[ing] the thought—crucial, I think, to what motivates realism about passage in the first place—that there is something uniquely special about the present." That's fair enough, but it applies only to the version of MST-Time that I focus on most. It does not apply to another version that I discuss, though only briefly, in an appendix. That version does give you a uniquely special present. In addition to saying that each time T is present from the perspective of T , it also says that exactly one time, call it N , is present "absolutely," present "simpliciter." Cameron thinks that its appearing only briefly in an appendix shows that I think this is a bad version of the moving spotlight theory, but that's not right; it's just that the differences between it and "standard" MST-Time weren't going to matter in the rest of the book. In a twist, though, Cameron thinks that I *should* regard the version in the appendix as a bad version: "This is a view on which there is an absolute present, but it doesn't change: every time is present from the perspective of itself, and there is one unique time P such that P is absolutely present from the perspective of every time. In the first sense of presentness, every time has equal claim to objective presentness, whereas in the second sense of presentness, it does not change what time is objectively present. In no sense do we capture the thought that there is a unique, but changing, objective present." But Cameron has misunderstood the theory (in his defense, my presentation of it is compressed). It is not true in any sense in the theory that N is present from every perspective. It remains true in the theory that the only time present from a perspective T is T itself. In fact the appendix theory has what Cameron wants, namely a unique, changing, objective present: let S be a time later than N ; then N *is* objectively present, and S *will be* objectively present, because the truth-condition for " S will be present" is "there is a perspective later than the present time such that S is present from that perspective," and this latter sentence is true (true simpliciter, not relative to anything; S itself is the relevant perspective). So, again, this is a theory that says what Cameron wants the moving spotlight theory to say,

namely “there is a unique absolute present, but [...] a different time used to be the unique absolutely present time and that yet another time will be.” (In fairness to Cameron, I didn’t say in that appendix what truth-conditions the theory assigns to tensed sentences; but this way of doing it is the natural analogue of the strong truth-conditions that standard MST-Time assigns, as discussed on p. 63.) The theory also does what Cameron later says a theory must do to “take the A-theory seriously,” namely say “that the past and future perspectives on the world are simply incorrect: they misrepresent reality.” The appendix version of MST-Time agrees: each future perspective F is false because from it F is present, even though F is not present, absolutely speaking.

3 Response to Wilson

Wilson, like Cameron, criticizes MST-Time. He claims that if MST-Time is true, the spotlight does not move; and also (that is, even if that claim fails) that if MST-Time is true, the spotlight does not move into the future.

Both claims are clearly wrong. If we eliminate the metaphor from “The spotlight is moving into the future” we get “One time is present, and a later time will be present.” And this is true from every perspective, in MST-Time, as we can see if we crank through the truth-conditions MST-Time assigns to this sentence. Let T be an arbitrary time; then “one time is present, and a later time will be present” is true from the perspective of T iff from that perspective (i) some time is present, and (ii) there is a time later than T such that from the perspective of that time, a time later than T is present. Both clauses of this truth-condition are true, clause (i) because T is present from the perspective of T, clause (ii) because any time later than T is a time from the perspective of which a time later than T (namely that time itself) is present.

Why does Wilson think that the spotlight doesn’t move, and doesn’t move into the future, in MST-Time? He acknowledges that, in the theory, “from the perspective of one time, it’s [the spotlight is] at one time, and from the perspective of another time, it’s at another. But,” Wilson goes on, “that doesn’t give us motion of the spotlight, it just gives us lack of absoluteness of its position.” But actually

it does give us motion of the spotlight, once we combine it with the theory's claim about what it takes for "a later time will be present" to be true at a perspective. Later Wilson says that MST-Time "simply append[s] a perspective to each instant of time," and maybe that's where he's gone wrong; the theory says more than just that from the perspective of each time, that time is present; it also says what conditions must obtain for sentences like "a time later than T will be present" to be true from a perspective—and those conditions do obtain (according to the theory).

Wilson is also wrong when he writes that "The formulation of MST-Time is time-symmetric; it doesn't build in any temporal asymmetry that could give the motion of the spotlight a direction." Again, the sentence "Some time is present, and times later than it will be present" is true from every perspective (and the sentence "times earlier than it will be present" is false from every perspective). The "motion of the spotlight" does have a direction in the theory, namely the direction that points toward the future. Where does the theory "build in a temporal asymmetry" to "give the spotlight a direction"? The asymmetry is there in the structure of time: times are ordered by the asymmetric *later than* relation (according to the theory), and what will be true, from a perspective, is a matter of what is true, from a later perspective.

Wilson observes that the physicists might come by and tell us they've discovered that for no time is there a time later than it. (Maybe they tell us that although there are other times, none of them is later; maybe they tell us that there is only one time.) If they were to discover this, then yes, the spotlight would not move in MST-Time; it can't be that a later time will be present if there are no later times. Defenders of MST-Time (are you out there?) had better hope the physicists don't learn any such thing. But Wilson thinks there is a problem even if they don't: "Typically, though, friends of objective becoming don't want to make their view hostage to any empirical fortune; our experience of the passage of time is meant to be sufficient evidence for the kind of objective becoming they have in mind, such that physics could not in principle provide defeaters for it." So: MST-Time is hostage to empirical fortune, but no acceptable theory of objective becoming is hostage, so MST-Time is not acceptable. But a believer in MST-Time is not *required* (not by logic anyway) to think that physicists might discover his theory is false. (Remember Quine.) You can accept MST-Time and be prepared to dismiss any evidence

physicists might present that seems to suggest that there are no later times as misleading, on the ground that the evidence you get from your experience of time that time is passing is so secure that nothing could undermine it. Prior seemed to have had this attitude toward alleged evidence against presentism; he was willing to say that whatever the physicists were talking about when they denied absolute simultaneity, it wasn't *time* (Prior 1997, 50). You don't *have* to have that attitude if you like MST-Time, I would say you shouldn't, but I don't see how MST-Time bars you from having it.

I've been explaining how, in MST-Time, "One time is present, and a later time will be present" is true *from every perspective*. But there is another strand in Wilson's discussion which argues, not that this is false, but that its truth is not enough. This strand is prominent when he writes that "the objection from motion simpliciter is the problem that 'T is present' is not metaphysically complete." His complaint here is that any moving spotlight theory worth its salt must say that "One time is present, and a later time will be present" is a perspective-independent truth. Why think this? Wilson prefers to put the ball in the other court: "Skow has not given us any reason to think that it [MST-Time] secures anything that counts as passage." I guess I think this isn't a productive way to conduct the debate. We can stare at the clouds all day and contemplate the question of whether time *really* passes if MST-Time is correct, but I can't see why it matters what the answer is. What matters is how well our evidence—the evidence I described in my summary—supports the theory, and if the evidence favors MST-Time over every other theory, it's not going to matter whether the theory counts as one in which time *really* passes.

I say some dismissive things about the "branching future" theory of time in my book, but Wilson thinks that what I say doesn't actually amount to an argument against the view. The theory's stand-out feature is supposed to be the way it analyzes future indeterminacy. It says that it is indeterminate whether there will be outposts on Mars iff there are Martian outposts on some but not all future branches of time. It is important here that the "future branches of time" in this theory are not set-theoretic what-nots in a formal semantics for a language of future indeterminacy. No, the future branches are concrete parts of time itself (or spacetime itself). In the book I observed that, in this theory, the future is big, much bigger than we

might previously have imagined—since we (or at least I) previously imagined it to have just one branch. Now if in this very large future there are Martian outposts, then, I claimed, “There will be outposts on Mars” is *determinately* true. How could the (determinate) existence of a Martian outpost in the future not be sufficient for the determinate truth of this sentence?⁵ Why would it matter if certain other parts of the future (namely, other branches) lack Martian outposts? Suppose there is only one future branch; if that branch has Martian outposts in the distant future, but not the near future, then “There will be outposts on Mars” is determinately true; the near-future’s lacking Martian outposts does not bar the far-future’s having them from making the sentence determinately true. Well then, if there are branches, by parity of reasoning one branch’s lacking Martian outposts should not bar another branch’s having them from making the sentence determinately true.

In the book I summed up my argument by saying that facts about all those branches of the future are just more determinate matters of fact about what the future is like, and that a bunch of determinate facts about the future can’t add up to indeterminacy about the future. Wilson sees this as an instance of a general form of argument that, if good, could be used to refute any analysis of anything; since successful analyses exist, the argument form is not good. He claims that the more general form works like this: someone proposes an analysis of X in terms of Y; the argument against the analysis then is that no amount of Y could add up to X, since X and Y are different. (In other words, he’s accusing my argument of being an instance of Butler’s “everything is what it is, and not another thing.”)

Now this is conjecture on Wilson’s part; in the book I don’t say whether the argument is an instance of a more general form. Now that it’s come up, though, I can assure you that I didn’t have Wilson’s more general form in mind. True, I did compare my argument to a common argument against modal realism: modal realism says that it is contingent that there are human beings iff (i) there are humans spatiotemporally connected to me, and (ii) there is another spatiotemporal

⁵Actually, the idea that the way the future is determines which future-tensed sentences are now true is part of the block universe theory, and is rejected by most alternatives to it, including the moving spotlight theory; but this complication is off to the side right now. I address it in the book, on page 78.

system, disconnected from me, that lacks humans; the argument against this says that facts about what spacetimes disconnected from me are like are just more facts about actuality, and that a bunch of facts about actuality can't add up to a fact about contingency (which depends on what the alternatives are to actuality). But if this comparison suggests a general form of argument, it's that you can't analyze one thing in terms of something "opposed" to it, as determinacy is opposed to indeterminacy, and actuality to counter-possibility (that is, unactualized possibility). And this general form isn't nearly as widely-applicable as the form Wilson accuses me of endorsing; an analysis of water in terms of hydrogen and oxygen (or an identification of water with H₂O) can't be attacked using that (more specific) form, since hydrogen and oxygen aren't in any sense "opposed to" water.

I realize that a determined modal realist will say that other spatiotemporal systems *just are* unactualized possibilities, not things "opposed to" unactualized possibility, and that a determined branching-future guy will say that variation across future branches just is future indeterminacy; they won't be persuaded. But I was't aiming to persuade them. It's also true that a committed defender of the thesis that "Possibly, Jones is forty feet tall" is true iff Jones shares a planet with a yawning cat won't be persuaded by any objection; still, as Trenton Merricks forcefully puts it, "yawning cat counterpart theory is obviously wrong and we should come right out and say it" (Merricks 2003, 536). The branching-future theory analysis of future indeterminacy may not be in "yawning cat territory," but it's not far off.

Peering in from the background here is a general question about how to evaluate proposed analyses. Someone proposes a metaphysical theory that says how things are, fundamentally speaking, and then says how truth-conditions couched in fundamental terms are to be assigned to non-fundamental sentences; what kind of argument could one give that one of these analyses is wrong? The easy case is where one of the target sentences is false but the theory assigns it a true truth-condition (or vice versa); but suppose we're in the hard case. It seems to me common to think that in the hard case, one must have fairly complicated grounds to be justified in rejecting an analysis. The idea here is that the "data" we have for evaluating theories like this are facts about which non-fundamental sentences are (or strike us as) true, or false; if a metaphysical theory assigns all the true ones true truth-conditions, and

all the false one false truth-conditions, then to reject one or another of its analyses one must show that the theory lacks one or another “theoretical virtues”: it’s not simple, for example, or it’s not explanatory.⁶ I don’t try to show that the branching future theory lacks such virtues; maybe this is what Wilson has in mind when he says that I “[refuse] to take the analysis seriously.” Now this way of thinking about evaluating metaphysical theories seems to leave little room for being justified in rejecting an analysis in isolation from the rest of the theory. Well if it does leave little room for this, then, I think, it’s a bad model for evaluating theories. The absence of humans in other spatiotemporal systems (suppose there are some) just doesn’t make it contingent that there are human beings, no matter how much it would simplify our overall theory to suppose it did. The same goes for variation across future branches of time in whether Mars is inhabited, and indeterminacy about whether there will be Martian outposts.

Finally, Wilson doubts that the argument from the presented experience “depend[s] essentially on any features of experience.” Suppose I’m eating chocolate cookies on Monday and coconut cookies on Tuesday. A proponent of the argument from the presented experience says: if the block universe theory is true, then I bear the same relation to my experience as of eating chocolate cookies as to my experience as of eating coconut cookies; but I obviously do not, because only the first experience is one that I am having. Wilson points to another, closely related argument: if the block universe theory is true, then I bear the same relation to my eating of the chocolate cookies as to my eating of the coconut cookies; but I obviously do not, because only the chocolate cookies are cookies that I am eating. And Wilson thinks that this second argument is just as good (or bad) as the first one. But why should the existence of this second argument show the first not to “depend essentially” on experience? It would if (i) both arguments were “versions” of some one ur-argument, if they were equally good precisifications of some inchoate argument-idea, and (ii) the notion of experience plays no role in either the second argument’s premises or the justification of its premises. I gestured, in the book, at the argument-idea that I was trying to make precise: the inchoate idea is that I “look

⁶Probably this should all be done contrastively—there is a simpler, or more explanatory, alternative that is also consistent with the data.

out on the world” from the “perspective” of just one time, and it is hard to see how to reconcile this fact with the block universe theory. This argument has whatever plausibility it has only because I have a point of view, because it makes sense to say that I look out on the world from a perspective. An otherwise parallel argument that focused on a rock, rather than me, would be less plausible, exactly because rocks lack points of view. I took this dependence on point-of-view to justify calling the argument an argument from experience, though I suppose you might think that having a point of view is a more general phenomenon than having experiences. Anyway: insofar as I accept (i), (ii) seems false: it is the fact that I have a point of view that makes plausible the second argument’s premise that the chocolate cookies are the ones that I am eating.

4 Response to Leininger

Leininger dislikes MST-Supertime and MST-Time because “there is no absolute NOW in either theory.” In the first theory a time is only present relative to a point in supertime; in the second a time is only present from the perspective of a time. In both, times are present only relative to something else, not absolutely.

Someone who wants an “absolute NOW” from a theory in my book, though, can have it: they should order up MST-Supertense. When that theory says that exactly one time super-is present, there is no hidden relativity to times or supertimes.

Now in the book I was not out to promote MST-Supertense as the best version of the moving spotlight theory, but neither was I out to consign it to the flames. Leininger, however, denies that MST-Supertense is a safe haven for those who want an absolute NOW, because “the proponent of MST-Supertense . . . ultimately must endorse either MST-Supertime or MST-Time.” Why must she do this? Because “there must be an ontological picture to go with the semantic theory”; the theory needs “an account of the truthmakers of supertensed statements”; the theory needs an answer to the question of “what makes supertensed statements true.” Translated into the meta-metaphysical framework my book uses, the claim here is that supertensed verbs cannot be part of the fundamental vocabulary, and so that any sentence containing them must have a truth-condition stated in tenseless terms. The

truth-condition for a sentence like “Times in the year 3000 super-will be present” will have to be either that there are supertimes later than the supertime from which this time (the time of this writing) is present, relative to which times in the year 3000 are present, or that there are times later than this time from the perspectives of which times in the year 3000 are present. But the first claim is part of MST-Supertense, and the second, MST-Time.

Why does Leininger think that supertensed verbs cannot be part of the fundamental vocabulary? Or, as this kind of question is sometimes put, why can’t supertense be primitive? She does not answer; her demand stands on air. If I wanted to defend MST-Supertense, I’d reject it.

It’s not like there’s no precedent for what MST-Supertense does. Presentists, some of them anyway, say that (ordinary) tense is primitive; they deny that tensed sentences have tenseless truth-conditions. The paradigm case of someone with this view is A. N. Prior. After saying that I must answer the question of what makes supertensed statements true Leininger admits that “Like Prior, Skow could deny that these questions need to be answered.” Okay then.

In *Objective Becoming* I tried out an alternative to the moving spotlight theory in which *we*, rather than the spotlight, move through time. While the block universe theory and the moving spotlight theory agree that I am located at every time between my birth and my death, this theory says no: I am located at just one time, a particular instant in the year 2017, but I will be located at later times, and was located at earlier times; this change in my location constitutes my motion through time.

In virtue of what does my location in time change? The same three strategies are available here as in the case of change in which time is present. Maybe I am located at different times *relative to different points in supertime*; maybe I am located at different times *from the perspectives of different times*; maybe I super-am located at one time, and super-will be located at later times.

Leininger brings up this theory and claims that “Motion through time is not good enough for objective becoming if it is without robust change,” where change is robust when it is not reduced to variation in time/supertense. Maybe; but even if that’s right, there is a version of the theory that passes the test, namely the last one I mentioned, the analogue of MST-Supertense. But backup: why should we think

that motion through time without robust change is not good enough? Leininger describes a flip-book, the kind kids like, with a stick figure named Bob who is on the left-hand side of the first page and the right-hand side of the last page. So “relative to” different pages, Bob is in different places. Leininger then argues that (i) Bob satisfies my definition of “movement,” but (ii) in fact Bob does not move, so my definition is bad; and since (her argument continues, implicitly) (iii) that is the definition I rely on when I say that we move through time in the versions of the “moving through time” theory that are analogous to MST-Supertime and MST-Time, (iv) it is false in those theories that we move through time. But I am happy to accept that in one sense of “move” the sentence “On page five, Bob is moving from left to right” is false. That is a sense in which motion requires variation *in time*, not just variation *across some set of indicies or other*. Even still, on this more restricted interpretation of “move,” we are moving through time in the “MST-Time” version of the moving through time theory—and arguably also in the “MST-Supertime” version, if we say that supertime is part of time.

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