Objective Becoming

Bradford Skow

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Chapter 1

Introduction: Time Passes?

As Dylan Thomas's *Under Milk Wood* begins all the townspeople are asleep but we are awake. We hear the dew falling and the "invisible starfall" and the "darkest-before-dawn minutely dewgrazed stir of the black, dab-filled sea." Then the First Voice, who narrates the opening, says: "Time passes. Listen. Time passes." It is a moment of great anticipation. Immersed in the world of the play it is natural to ask, what is coming?

But a philosopher who holds himself outside of the world of the play may ask a different question. He may ask, just what is this process — the passage of time — that (supposedly) goes on as we listen?

We often reach for metaphors when we describe the passage of time. We say that events are carried along by the passage of time from the future into the past, like sticks and leaves floating on a river. Or we say that we move through time from the past into the future, like ships sailing on an unknown sea. But how seriously should we take these metaphors?

In my view, not very seriously. If the passage of time requires that time move or flow in anything like the way rivers do then, I think, there is no such thing as the passage of time. If the passage of time requires that we move through time in anything like the way that trains move through space, then there is no such thing as the passage of time. I hold that time is a lot like space, "just another dimension." Of course I think there are differences between the time dimension and the three dimensions of space.[1] I just deny

[1] In "What Makes Time Different From Space?" I defended the claim that it is the role that time plays in the laws of nature that makes it different. I am not sure I still believe this view, but it is compatible with denying that time passes.

that there is some mysterious process, "passage," that time undergoes but space does not.

The claim that time is a lot like space is vague, because it says nothing about which aspects of time and space are similar, or about how similar they are. The theory of time in which this claim of similarity is made more precise is sometimes called the "block universe" theory of time.[2] This book is a defense of the block universe theory's account of the passage of time.

In some contexts it is natural to say that, according to the block universe theory, time does not pass. But in other contexts this is a misleading thing to say. For one thing, it can make the block universe theory sound like a mystical doctrine. Some say "time does not pass" to mean that the temporal aspects of reality are a complete illusion. But the block universe theory is not a form of mysticism. Nor do those of us who accept it think that ordinary people are constantly saying false things when they say that time is flying by, or that the passage of time has got them feeling down. The people who we think say false things are the philosophers who defend alternative theories of the passage of time, not non-philosophers who have given no thought to which theory is correct.

To avoid misleading people it is better to allow that in a sense time passes if the block universe theory is true, but that that passage is "anemic." The theory lacks "robust" passage of time. This raises two questions. First, if the block universe theory lacks robust passage then what might robust passage be? What theories of time are there that do contain robust passage?

Once we know what the alternatives are we can go on to ask the second question. What kind of theory of time should we believe? One with robust passage, or one without? My answer to the second question is, of course, that we should believe the block universe theory. But my argument for this answer will follow an unusual path.

The first thing I am going to do is identify my most worthy opponents, the best theories of robust passage. My sense is that many philosophers think that the block universe theory's most natural opponent is a theory of time called presentism. But I will argue in

[2]Sometimes the block universe theory is called "the B-theory of time." But it is just a coincidence that "block" starts with a "b." The term "B-theory" comes from a distinction McTaggart made, which I will discuss in chapter 6. One of the earliest defenders of the block universe theory was Bertrand Russell; see for example his 1915 paper "On the Experience of Time." There have been many others since. A recent defense, against a somewhat different opponent than mine, with extensive references, is in chapter 2 of Ted Sider's book *Four-Dimensionalism*.

chapter 3 that if it is robust passage you are after then presentism is not the right theory for you. The best theory of robust passage, I will argue, is the moving spotlight theory of time.

While I believe the block universe theory my relationship with the moving spotlight theory is, as they say, complicated. I think the theory is fantastic. That is, I think it is a fantasy. But I also have a tremendous amount of sympathy for it. Not in the sense that I want it to be true, but in the sense that I find it easy to think from the position of someone who accepts it. (Or so I believe; I have not had this statement verified by someone who does accept it. Maybe they will find this statement incredible.) Now philosophers on both sides of the aisle — those who believe in robust passage and those who do not — have held that the moving spotlight theory is easily refuted. Many think that contemplating the moving spotlight theory is like watching a bad time travel movie. Each shot stretch of the movie might make sense on its own, but if you think about the movie as a whole there are contradictions everywhere. It is also common to think that the moving spotlight theory runs into trouble as soon as you ask how fast time passes, or that it relies on a way of thinking about time that Einstein's theory of relativity shows to be false. I do not think any of these strategies for refuting the moving spotlight theory succeed. And I will spend chapters 6 through 9 defending the moving spotlight theory against them. This may seem strange, since my ultimate aim is to argue that the theory should be rejected. But philosophy is not politics. I don't care why you vote for my candidate, but I want you to believe the block universe theory for the right reasons.

I think that the endgame in the debate between the block universe theory and the moving spotlight theory is over how the theories make sense of our experience of time. I think that the strongest case in favor of the moving spotlight theory starts with the claim that it explains some features of our experience better than the block universe does. I will examine that case in chapters 11 and 12.