

Summary of *Sensorama: A Phenomenalist Analysis of Spacetime and Its Contents*

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What is time? “Time is the measure of motion.” True, maybe, but hardly illuminating as to the inner nature of time—hardly a *definition* or analysis of time. Motion, after all, is change of location *over time*. “Time is the possibility of change.” That too may be true. But it’s also circular: the possibility of change is the possibility for a single thing to have different properties *at different times*. “Time is the order of events.” Order in terms of what? Size? Importance? No: order *in time*.¹

A definition of time would have to define it in atemporal terms. But what terms might those be? What transcends time? Logic. Mathematics. But if we can define time in purely logical or mathematical terms, then time must be a purely logical or mathematical entity. Like a set or a number, time would be an abstraction, its nature knowable *a priori*, if at all. But time is not like a number, and its nature cannot be known without empirical investigation. So we can’t define time in purely logical or mathematical terms. So we can’t define it at all. Time is conceptually and metaphysically primitive. It has no inner nature. It is part of the ontological bedrock.

The central message of *Sensorama* is that the foregoing argument is wrong. Not only is a reduction of time to something more basic possible:

¹“Time is the *causal* order of events.” What about simultaneous causation? “Time is the order of events in terms of non-simultaneous causation”—that is, in terms of causation between events that don’t occur *at the same time*.

such a reduction is part of our best account of the relationships among time, space, and consciousness.

The account takes the form of a metaphysics that reduces facts about spacetime and its contents to phenomenological facts. On the theory I advance, time and space are not part of the basic ontology, but logical constructions out of a certain kind of potential for conscious experience—a potential that exists regardless of whether there are minds (which are themselves just a certain kind of potential for experience), and regardless even of whether there are any conscious experiences. I call the theory radical phenomenism.

How does one arrive at such a view?

The journey begins with a platitude. We all have experiences as of physical things, and it is possible to interpret those experiences as perceptions of objects and events belonging to a single universe. In Leibniz's famous image, our experiences are like a collection of different perspective drawings of the same landscape. They are, as we might say, *worldlike*.²

Ordinarily, we refer the worldlike quality of our experiences to the fact that we all inhabit the same world, encounter objects in a common space, and witness events in a common time. We take the second step towards radical phenomenism when we realize that this is not the only possible way to think about it. Instead of saying that the physical world *explains* the worldlike quality of our experiences, we might say that it *is* the worldlike quality of our experiences, or rather that it is the tendency for experiences to constitute a worldlike totality of the sort that our experiences do, in fact, tend to constitute.

This is the basic idea behind the phenomenism of J.S. Mill. According to Mill, a physical object is a tendency for conscious sensations to occur in patterns that, taken as a whole, bear interpretation as including veridical sense-perceptions of that object.

When Mill talks about patterns of sensations, he means sequences of conscious experiences unfolding over time. We take the third step

²See G.W. Leibniz, "Notes for Leibniz to Des Bosses, 5 February 1712," in

towards radical phenomenism when we reflect that this way of understanding sensation-patterns severely limits the scope of Mill's theory. If consciousness is a temporal phenomenon, there can be no question of a phenomenist construction of time itself. The most we might hope for is a phenomenist construction of space. But it turns out that even that would be hoping for too much, since, according to our best science, nothing can occur in time without also occurring in space.³

Well, maybe phenomenism just is a limited metaphysic. After all, isn't it just obvious that experiences occur in, extend through, and change over time? Is an atemporal conception of experience even intelligible?

We take the fourth step towards radical phenomenism when we realize that the answers to these questions are: No, and Yes.

When I look at the full Moon, I have an experience as of something round and enduring: my experience has the qualities of phenomenal roundness and phenomenal duration. From the fact that the experience is phenomenally round, I don't infer that it is literally round (like the Moon itself). So why should I infer from the fact that the experience has the property of phenomenal duration that the experience literally endures? Why should the evidence of introspection lead me to infer that my experiences have any objective temporal features at all?

The fifth and final step towards radical phenomenism comes with the discovery that removing consciousness from time is not just an interesting conceptual possibility, but a practical necessity arising from the need to reconcile the evidence of introspection with a scientifically respectable understanding of time.

One might have thought that there was no special problem here, but there is. Bertrand Russell saw the problem as early as 1914, and Henri Poincaré even earlier. The problem arises from the fact that time is really

Philosophical Essays, edited by Roger Ariew and Daniel Garber (Indianapolis and Cambridge: Hackett Publishing Company, 1989), pp. 199-200.

³For Mill's phenomenism, see J.S. Mill, *An Examination of Sir William Hamilton's Philosophy, and of the Principal Philosophical Questions Discussed in his Writings* (Toronto: University of Toronto Press, 1979), pp. 177-209.

just an aspect of relativistic spacetime. In a relativistic context, nothing but a single point of spacetime (or its occupant) can have two properties absolutely simultaneously. Now, when I look at a vase that holds a yellow daffodil and a red rose, the experience I have simultaneously instantiates yellow qualia and red qualia, and absolutely so. As Russell points out, it follows that my experience cannot exist in spacetime except as an unextended point-event.⁴

Can we resist this argument by saying that conscious experiences occur in time, but not in space, so that relativistic considerations don't apply to them? That, I argue, would force us to deny that there is any fact of the matter about how our experiences temporally relate to physical events. Could we say that there is no moment at which consciousness is wholly present, and therefore no such thing as a simultaneous instantiation of qualia? That, I argue, would compel us to deny the essential unity of consciousness; for example, we'd have to say that someone could have auditory experience within a period of time throughout which he also had visual experience, without having any audio-visual experience.

A further impediment to locating consciousness in spacetime arises from the time-reversal invariance of fundamental natural laws. Roughly, this is the symmetry by virtue of which a movie depicts events that obey the same laws, whether you play the movie forwards or backwards. It is arguably the deepest symmetry known to science. I argue that consciousness cannot exist in time without breaking it.

Seeing that there's no obvious incoherence in the idea that consciousness transcends time brings an intriguing possibility into view: the possibility that consciousness might serve as a suitable basis for the metaphysical reduction of temporal phenomena, including time (or spacetime) itself. And the difficulty of reconciling a temporal conception of conscious-

⁴See Bertrand Russell, "The world of physics and the world of sense," in *Our Knowledge of the External World* (London: George Allen & Unwin, 1914), p. 130. Poincaré discusses the implications of a relativistic (or proto-relativistic) understanding of spacetime for the philosophy of mind in "La mesure du temps" *Revue de Métaphysique et de Morale* (1898) 6: 1-13.

ness with our best scientific theories gives us an incentive to explore the prospects for such a reduction. After all, if physical events don't relate to conscious experiences temporally, it's hard to see how they *do* relate to them, if not by somehow reducing to them.

The second half of *Sensorama* argues that such a reduction is feasible. Very roughly, I suggest that we can think of a physical thing as a tendency for increases in the total amount of conscious experience to correspond to increases in the probability that there are experiences interpretable as perceptions of that thing, with the probability going to 100% as the quantity of experience goes to infinity.

Working out this proposal in detail requires coming to an understanding of "increases in the amount of experience" that is consistent with an atemporal conception of consciousness, and that has the resources to meet the usual objections to phenomenalism, such as that it can't account for the possibility of deceptive appearances or imperceptible phenomena. These are serious challenges, but no more serious than those that confront other, more popular metaphysical schemes. Or so I argue.

Sensorama is first and foremost a defense of phenomenalism, but it includes material that I hope will interest even those who have little patience for grand-scale metaphysical theorizing. The book contains arguments relevant to ongoing debates about intentionality, personal identity, introspection, the stream of consciousness, scientific realism, the principle of sufficient reason, the sorites paradox, and other topics in metaphysics, the philosophy mind, and the philosophy of science.

It has been a long time since phenomenalism was considered a worthy topic of serious philosophical conversation, and even then, the conversation was short-lived. The fact is that the phenomenalist position was abandoned before it was even completed, much less manned by partisans capable of exploiting its advantages. I do not expect my book to raise an army of phenomenologists, but I do hope that it will encourage people to see phenomenalism as something more than a mere historical curiosity.