

# BOOK SYMPOSIUM

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## *What Is Time?*

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### *Abstract*

Augustine says that he knows what time is as long as no one asks him to say what time is. Many of us are in the same boat. Nevertheless, M. Oreste Fiocco, in his *Time and the World: Every Thing and Then Some*, attempts to answer the question *What is time?*. I argue that his answer falls short of actually saying what time is. Then I consider the standard way to answer this question, according to which time is one of four more or less similar dimensions that make up a unified manifold appropriately called *spacetime*. I offer several arguments against this view. I also consider several other proposals, including the claim that there is no such thing as time, and the claim that time is a logical construction out of maximal, consistent propositions. But in the end I defend an answer to our question according to which time is best understood as a complicated and multifaceted dimension of reality (akin to the modal and moral dimensions) that is concerned with the ways reality has been, is, or will be.

*Keywords:* Fiocco, time, dynamic theory of time, static theory of time, dimensions, spacetime

### *1. Introduction*

M. Oreste Fiocco, in his marvellous book *Time and the World: Every Thing and Then Some* (2024), points out a curious aspect of the recent literature on the metaphysics of time: many philosophers have engaged in the debates over the passage of time, temporal ontology, temporal parts, etc., but virtually no one in this recent literature is talking about the question ‘*What is time?*’<sup>1</sup> That seems surprising: given that all of us in these debates take ourselves to be talking about the nature of time, it is downright weird that we do not address this seemingly basic and primary question.<sup>2</sup>

1 A notable exception is Fiocco himself. See footnote 3 below.

2 Augustine, many years ago, famously remarked on the difficulty of answering this question. (2008: bk. XI) But difficult or not, it still seems like an important question that we should not ignore.

So I applaud Fiocco for explicitly addressing this important but unduly neglected question in his book.<sup>3</sup> In what follows I will consider Fiocco's discussion of this question, and explain why I find it in the end not completely satisfying. Then I will consider what I take to be the implicit answer to our question that goes along with the currently most popular view of the nature of time, namely, The Static Theory of Time. This is an account of time that I will call The Standard Account of What Time Is. I will offer three reasons against endorsing this Standard Account. Next I'll consider several different 'deflationist' views of what time is, and, finally, I will propose an approach that I think is the best way of answering our question. But let me start with Fiocco's account of what time is.

## 2. *Fiocco's account of what time is*

Fiocco's account of time appears in Chapter 5 of the book. Here is a summary of what I take to be the most important claims from this chapter.

- Time is what makes change possible (121).
- Time is a substance (132).
- Time is *sui generis* (132).
- Time yields moments, that is, it is the source of moments (132, 133).
- Time is the basis of an account of the orderly arrangement of moments (132).
- Time is the natured entity that enables change, and is the ultimate key to change (132, 133).
- There is no explanation for the existence of time, which is not reducible to or grounded in anything else (137).
- Time is a non-qualitative particular (141).
- Time exists necessarily (141).
- Time is not composed of moments. It is mereologically simple (135).
- Time is abstract (141).

It is no doubt useful to be told so many things about what characterizes time. But insofar as we are looking for an answer to the question '*What is time?*' much of the above is not directly relevant to our inquiry. If we delete the claims from the above list that are about what time *is like*, and focus on only the claims about what time *is*, then we have the following:

- Time is that which makes change possible (121).
- Time is a substance (132).
- Time is abstract (141).

3 Fiocco also addressed the question of what time is in his 2017 paper, 'What Is Time?' where he defended a version of the answer he gives in Chapter 5 of *Time and the World*. In this paper, I will focus on the updated version of his view that appears in the book.

Thus we can give the following initial formulation of Fiocco's answer to the question '*What is time?*'

*An Initial Formulation of Fiocco's Account of What Time Is*

Time is an abstract substance that makes change possible.

One important thing to note about this view is that Fiocco's account of what time is does not distinguish *time* from *moments*. For on Fiocco's view, moments, too, are abstract substances that make change possible.<sup>4</sup> So time, according to Fiocco, is one of countlessly many abstract substances that make change possible. But time is the unique one of these that satisfies the following description:

*What Time Is Like, According to Fiocco*

Time is a substantial, ungrounded, irreducible, *sui generis*, necessarily existing, mereologically simple, abstract, non-qualitative particular; it is both the source of moments and the basis of an account of the orderly arrangement of moments; and it is also one of the things (along with moments of time) that make change possible.

Putting these together, the following is Fiocco's full account of what time is and what it is like:

*Fiocco's Account of What Time Is, and What It Is Like*

Time is the unique abstract substance that is ungrounded, irreducible, *sui generis*, necessarily existing, mereologically simple, and non-qualitative; also, it is both the source of moments and the basis of an account of the orderly arrangement of moments; and it is one of the things (along with moments of time) that make change possible.

All of the above is extremely important and insightful. But I do have a worry about Fiocco's account of what time is: it seems to me that it does not really tell us very much about what time is. Fiocco tells us that time is an abstract substance that makes change possible, and that it is one among many such substances. He also says some things to help us distinguish time from the other abstract substances that make change possible (all of the many moments of time). But, taken all together, this account of what time is feels pretty thin to me. I do not feel like I know, from hearing this account, what time really is. At bottom, the account says that time is an abstract substance that fulfils a certain role: it makes change possible, and it is in some sense the most important one of the many abstract substances that make change possible.

Here is an analogy. Suppose I happen to own a solid gold statue that looks like the Heisman Trophy and weighs 20 pounds. I show it to my financial planner and ask, 'What is this thing?' She examines it, and says that it is a thing that will help make it possible for me to retire comfortably in a few years. Then I remind her of that 401(k) thing she was telling me about, and

4 See for example page 131.

ask her what that is. She says that it too is a thing that will help make it possible for me to retire comfortably in a few years.

This is a nice story, but I do not think I have learned in this story either what the gold statue is or what the 401(k) is. To learn what the gold statue is, I would have to learn that it is a material object made of gold. That is what the statue is. To learn what the 401(k) is, I would have to learn that it is a retirement savings plan sponsored by an employer that lets an employee save and invest a portion of their paycheck. My worry is that, in metaphorical terms, Fiocco has told us what the 401(k) is good for, but has not actually told us what it is. I wanted to know what it is.

### 3. *The standard account of what time is*

I mentioned above that, as Fiocco observes, there has been surprisingly little discussion in the recent literature on the metaphysics of time concerning the question of what time is. But in a way this observation is unfair to one party in these disputes, namely, proponents of what is sometimes called The Static Theory of Time. The Static Theory of Time is a package of views about the nature of time that is probably the majority view among philosophers and scientists on these matters. Here is the combination of views I have in mind.<sup>5</sup>

#### *The Static Theory of Time*

- (1) The universe is spread out in four more or less similar dimensions (each one orthogonal to each other one), which together make up a unified, four-dimensional manifold (appropriately called *spacetime*) in which physical objects are located and possibly extended.
- (2) Any physical object that persists through time does so in virtue of having a temporal part at each moment at which it is located.
- (3) There are no genuine and irreducible *A-properties*; all talk that appears to be about *A-properties* can be correctly analysed in terms of *B-relations*.
- (4) The temporal facts about the world include facts about *B-relations*, but they do not include any irreducible facts about *A-properties*.
- (5) We do not need to take tense seriously. Propositions have truth values *simpliciter* rather than at times, and so cannot change their truth

5 Let us understand *A-properties* as putative temporal properties such as *being present*, *being past*, *being future*, *being four days future* etc. And let us understand *B-relations* as temporal relations such as *simultaneous with*, *earlier than*, *later than*, *four days later than* etc. (These definitions of 'A-properties' and 'B-relations' are from Markosian 1993, but they are based on the 'A-series' and 'B-series' terminology introduced by McTaggart in his *The Nature of Existence* (1927: bk. V, ch. 33).

Some or all of the following components of The Static Theory can be found in Williams 1951, Price 1977, Smart 1966, Lewis 1976, Sider 2001, Hawley 2001, Moss 2012 and Skow 2015 (as well as many other places).

values over time. Also, we can in principle eliminate verbal tenses like *is*, *was* and *will be* from an ideal language.

- (6) The correct ontology does not change over time, and it always includes objects from every region of spacetime.

The main rival to The Static Theory has been The Dynamic Theory of Time, which is also a combination of six different theses.<sup>6</sup>

### *The Dynamic Theory of Time*

- (1) Time cannot be added to the dimensions of space to form a unified manifold in which physical objects are located and possibly extended.
- (2) Any physical object that persists through time does so in virtue of being wholly present at each moment at which it is located.
- (3) There are genuine and irreducible *A-properties*, which cannot be correctly analysed in terms of *B-relations*.
- (4) The temporal facts about the world include ever-changing and irreducible facts involving *A-properties*, including facts about which times are past, which time is present and which times are future.
- (5) We must take tense seriously. Propositions have truth values at times rather than *simpliciter* and can, in principle, change their truth values over time. Also, we cannot eliminate verbal tenses like *is*, *was* and *will be* from an ideal language.
- (6) The correct ontology is liable to change over time, and it is always true that only present objects exist.

Here is why the debate between The Static Theory and The Dynamic Theory is relevant to our question of what time is. Proponents of The Static Theory rarely say this explicitly, but their view of the nature of time allows them to give a clear and satisfying answer to the question of what time is. Here is the idea. Picture time as a line, made up of all the individual moments of time. Think of events as spread out along this line. And think of things, with their various temporal parts, as also spread out along this temporal dimension. But now understand time as being just one of four more or less similar dimensions, with the other three being the dimensions of space. And, finally, think of these four dimensions as forming a unified manifold. This unified manifold is like a container that houses the universe and everything in it.

Here is the view that is suggested by these considerations.

6 Some or all of the following components of The Dynamic Theory can be found in [Prior 1967](#), [Thomson 1983](#), [Markosian 1993, 2004](#) and [2022](#) and [Sullivan 2012](#) (not to mention many other places). It is important to note that, like The Static Theory, The Dynamic Theory, as it is formulated here, is a natural and popular combination of related theses. But it is not inevitable. Various hybrid views are possible, and several such views have been endorsed in print.

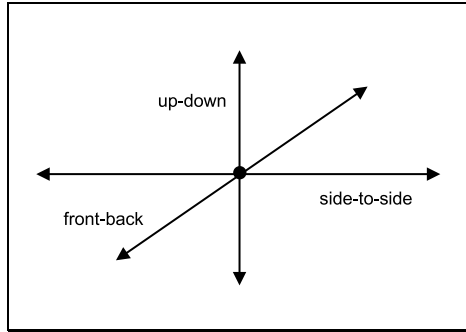


Figure 1. Our 3-dimensional physical space is a unified manifold.

### *The Standard Account of What Time Is*

Time is one of four more or less similar dimensions that make up a unified manifold, appropriately called *spacetime*, that contains the universe and all of its contents.

#### 4. *Three arguments against the standard account of what time is*

One important question that is immediately raised by this account is ‘*What is a unified manifold?*’ The idea is from Minkowski, Einstein, and others, but Minkowski and friends do not generally say much about what several dimensions have to be like in order to form a unified manifold. Still, it is clear that the paradigm case of a unified manifold is meant to be our three-dimensional physical space, which is an isotropic space that is made up of three similar dimensions. Our three-dimensional physical space can be represented by a graph with three axes that connect at a common origin point, as in [Figure 1](#).

By contrast, the two-dimensional space that we can represent with a graph showing your mass at various times (as in [Figure 2](#)) is not a unified manifold, for at least four different reasons.

First, the two dimensions that make up this space are quite dissimilar; they don’t have enough in common to make up a unified manifold. Second, the space consisting of mass + time is not isotropic. For one direction corresponds to increase in mass, and another direction corresponds to the *later-than* relation. Third, objects cannot be located in the space consisting of mass + time. For the relevant space is an abstract thing: it is just a collection of ordered pairs – each one consisting of a mass and a time – and a graph like the one above is just a way of encoding some information about these ordered pairs. And fourth, despite what the graph in [Figure 2](#) suggests, mass and time are not really connected in any real way. (More on this shortly.)

Meanwhile, on The Standard Account of What Time Is, spacetime is different from mass + time, because spacetime *is* a unified manifold, as illustrated in [Figure 3](#).

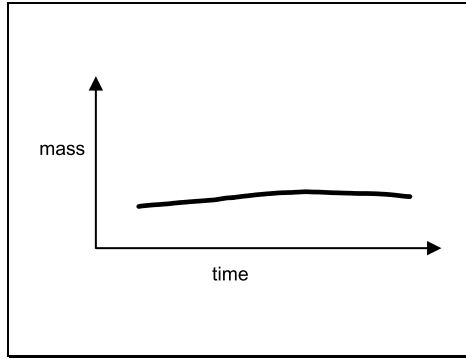


Figure 2. Mass + time is not a unified manifold.

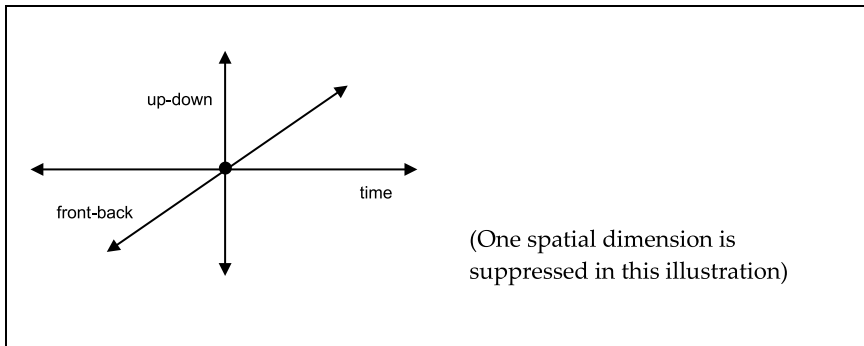


Figure 3. On The Standard Account, spacetime is a unified manifold.

Although I do not endorse The Static Theory of Time, I have to give its proponents credit for having something that is both clear and plausible to say about what time is. But unfortunately for me, I am unable to accept either The Static Theory of Time or The Standard Account of What Time Is. For I have recently given five arguments against The Static Theory of Time,<sup>7</sup> and three of them can be recycled as arguments against The Standard Account of What Time Is. I will give short versions of the relevant arguments here.

My first argument against The Standard Account is The Argument from Location. Here is a principle that I claim any  $n$ -dimensional space must obey if it is to count as a unified manifold.

<sup>7</sup> See [Markosian 2022](#)

### *Location*

If several dimensions,  $d_1-d_n$ , form a unified manifold, then any object that has a location along one of the dimensions in  $d_1-d_n$  must also have a location along each of the other dimensions in  $d_1-d_n$ .

For example, because our 3-dimensional physical space is a unified manifold, any particle that has a location along one of the three spatial dimensions must also have locations along each of the other two spatial dimensions. That is an unbreakable rule governing how space works.

But it seems to me that there are many objects that have a location in time without having any location in space. Examples may include some or all of the following:

- Sets whose members do not always exist (like your singleton set).
- Propositions with constituents that do not always exist (like the proposition that you are a philosopher).
- Numbers (which all exist right now, but do not have locations in space).
- Various abstract objects (including fictional characters, on the *abstract artefact* view of fictional characters, which holds that a fictional character is created at a certain time by a specific author).<sup>8</sup>

Since there are many objects that have a temporal location but lack a location along any of the spatial dimensions, it follows, by the principle Location, that spacetime is not a unified manifold.

My second argument against The Standard Account of What Time Is concerns another principle that I claim any  $n$ -dimensional space must obey if it is to count as a unified manifold. Here is the principle.

### *Rotation*

If several dimensions,  $d_1-d_n$ , form a unified manifold, then rotating an object that is located in that manifold, so that its orientation with respect to  $d_1-d_n$  changes, will not result in changing the intrinsic features of that object.

For example, if we rotate a rock in the three dimensions of physical space, that does not change the intrinsic features of the rock.

So far, so good. But there are plenty of objects and events that, when rotated in spacetime, do change their intrinsic features. A beautiful piece of music, for example, is liable to turn into a cacophony of noise if you rotate it in spacetime so that all of the notes happen at the same time.<sup>9</sup> Likewise, a wonderful narrative arc might be spoiled by rotating it 90 or 180 degrees in spacetime. And the value of a sequence of events that begins with an unjust situation and ends with a just resolution would be spoiled by running the

<sup>8</sup> On the abstract artefact view of fictional characters see [Thomasson 1999](#).

<sup>9</sup> I give an argument based on this idea in [Markosian 2020](#).

same sequence in reverse. Hence, by the principle Rotation, it follows that spacetime is not a unified manifold.

My third argument against The Standard Account of What Time Is concerns the idea of commensurability. Here is another principle that I claim any  $n$ -dimensional space must obey if it is to count as a unified manifold.

### *Commensurability*

If several dimensions,  $d_1$ - $d_n$ , form a unified manifold, then those dimensions must be commensurable. That is, for any two dimensions,  $d_i$  and  $d_k$ , among  $d_1$ - $d_n$ , it must be possible to compare distances along  $d_i$  to distances along  $d_k$ .

Static Theorists will of course tell you otherwise,<sup>10</sup> but I think it does not make sense to compare how old I am to how far removed you are from Paris. You can't say that I am older than you are far from Paris. Hence, by the principle of Commensurability, it again follows that spacetime is not a unified manifold.

There is a likely objection to what I have said so far. According to the objection, we cannot give up the idea of spacetime as a unified manifold, because it is an important and unavoidable consequence of The Special Theory of Relativity (STR) that space and time form a unified manifold. To give that up would be to reject one of the most empirically successful theories in the history of physics. So (according to the objection), there must be something wrong with all three of the above arguments.

Here is my reply to this objection. Leaving aside any philosophical baggage that Einstein and others might have built into STR, the theory entails that *spacetime* is a useful framework for observations and predictions concerning the physical world. It requires us to think of spacetime as a four-dimensional space in which events and objects are spread out,<sup>11</sup> such that it is not possible to observe a relation of absolute simultaneity among pairs of events. But this requirement is neutral between thinking of that four-dimensional space *as a unified manifold*, in the sense spelled out above (like our three-dimensional physical space), or merely *as a logical construction* (like mass + time) that is useful for various purposes. The choice between these two options is a theoretical choice, not a choice that is forced upon us by the empirical content of the theory. This is a case of underdetermination of theory by data.

## 5. *Eliminativism*

Although The Standard Account of What Time Is gives us an appealing answer to the question '*What is time?*' proponents of The Dynamic Theory of

10 For they will insist that the fundamental unit of measure for both space and time is spatio-temporal separation. But this is exactly what I am calling into question.

11 A similar thing is true of General Relativity.

Time (like myself), who reject the idea that spacetime is a unified manifold, will have to come up with an alternative answer to that question. And if (like me) other proponents of The Dynamic Theory of Time are not satisfied with Fiocco's account (since, according to what I have suggested above, it does not really say what time is), then Dynamic Theorists will have to come up with an altogether different answer to the question 'What is time?' What, then, can we say?

One approach is simply to avoid answering this question. In *The Structure of Time* (1980), W.H. Newton-Smith suggests that instead of defining 'time', we should simply take as primitive certain temporal notions (like *moments* and *periods of time*, the *earlier-than* relation and *events*), so that we can give stipulative definitions of *the time system* (for Newton-Smith this is the ordered set of moments) and *the history system* (which for him is the set of events), and then ask questions about the relations between the time system and the history system (without ever trying to say what time is).

This approach is consistent with there being an answer to our question – 'What is time?' – and also consistent with there not being an answer. Either way, it avoids answering the question. But avoiding answering the question, especially when others (like Fiocco and the Static Theorists) are addressing it head-on, does not really seem like a good approach.

There is a more radical approach that is perhaps suggested by Newton-Smith. Rather than avoiding answering our question, while leaving open the possibility that there is an answer to it, we may want to say something even stronger. We may want to say that there is no such thing as time. The idea would be to claim that there is a loose cluster of concepts, and a family of phenomena, that all fall under the general heading of *Time*; but, on this approach, we should say that there is no single entity that deserves the name 'Time'. Here is the view I have in mind:<sup>12</sup>

### *Eliminativism About Time*

There is no such thing as time. That is, there is no single entity that deserves to be called *Time*. Instead, there is a loose cluster of concepts, and a family of phenomena, that all fall under the general heading of *Time*. Those concepts and those phenomena are what we are talking about when we talk about 'Time'.

Eliminativism is consistent with there being such things as instants of time, periods of time, temporal relations and even A-properties like *being present*. It's just that (according to this view) these things don't add up to any special *thing* that it would make sense to call *Time*.

Eliminativism has some advantages as a response to our question. But I cannot bring myself to endorse it. For I think there is such a thing as time. I

12 In addition to being suggested by Newton-Smith in *The Structure of Time* (1980), this view is explicitly endorsed by Mark Balaguer in *How to Be a Presentist* (forthcoming).

think it's a fact about reality that my breakfast this morning was earlier than my lunch this afternoon, and I also think it is a fact about reality that the future is coming. In short, I think that the cluster of temporal concepts and the family of temporal phenomena mentioned in the formulation of Eliminativism are very real. And I think we need an account of time that incorporates this fact.

#### 6. *Could time be a logical construction from propositions?*

In a paper I wrote called 'A Defense of Presentism', I said that a good way to think of *moments of time* is as logical constructions out of propositions (2004: §3.10). There is a unique maximal, present-tensed proposition that happens to be true right now. It describes every detail about the current state of the world. We can identify that proposition with the present time. There is also a unique maximal, present-tensed proposition that currently has the property *going to be true in 10 years*. We can identify that proposition with the time ten years from now. And similarly with a whole bunch of other maximal, present-tensed propositions, each one of which will be true in a certain amount of time or has been true a certain amount of time ago. Moreover, if we put all of these special propositions in an ordered set, with the order determined by when the relevant proposition will be or has been true, we have something that is a good stand-in for the entire series of all the times. Perhaps we can identify that ordered set with time itself.

Here is the view suggested by these remarks.<sup>13</sup>

#### *Time As a Logical Construction From Propositions*

Time is an ordered set of maximal, present-tensed propositions that have been true, are true, or will be true.

Although the relevant ordered set may be a useful construction for many purposes, I do not think the above is a tenable account of what time is. For time itself is clearly more complicated, and has many more things true of it, than some ordered set of propositions. One way to see this is to notice that the phenomenology of time is not suggestive of something as formal and abstract as an ordered set of propositions. I'm sure W.V. Quine would have loved this idea, but as my grandmother (who knew a lot about time) would have said, 'An ordered what now?' Or as Aristotle himself might have put it, time is said in many ways. Consider the following representative sample of things that can be said about time.

- There is still plenty of time.
- The time is exactly twelve noon.

13 To be clear: Although this view might be suggested by what I said about *moments of time* in 'A Defense of Presentism', I did not actually propose this account in that paper.

- In four days she will be in Paris.
- She got there in the nick of time.
- Time flies like an arrow.
- Time is asymmetrical.
- Time waits for no one.
- Ridiculous the waste sad time stretching before and after.

These considerations suggest that it would be more accurate to call time *a complicated and multifaceted dimension of reality*. This is in fact the approach that I want to take. But in order to explain my preferred approach, we first need to take a very short detour through the metaphysics of modality.

### 7. *A short detour through the metaphysics of modality*

Meg Wallace has a very interesting account of modality. She thinks that modality is like the dimensions of spacetime: objects are extended in space, across time (with temporal parts), and also across modal space. You right now are just one small part (a temporal part of a modal part) of an object that is extended across space and time and modality. The you in this world that we are familiar with is just one modal part of the thing that is really you, and that thing has modal parts in many possible worlds. Here is a way to state Wallace's view.<sup>14</sup>

#### *Wallace's View of Modality*

Modality is one of five dimensions (along with the three dimensions of space and the dimension of time) that make up a unified manifold in which physical objects are extended. Each physical object has spatial, temporal, and modal parts.

This is an extremely interesting thesis, and Wallace does a very impressive job of motivating and defending it. Still, for ordinary fans of spacetime, this will seem like a bridge too far. Most metaphysicians (including most proponents of The Static Theory of Time) are unwilling to say that other possible worlds are concrete universes, and they are also unwilling to say that each one of us is spread across modal space the way temporal parts theorists think we are spread across time. Likewise, most metaphysicians are not willing to say that modality is a dimension that can be stuck onto the dimensions of spacetime in order to form an even bigger unified manifold.

Now, here is a question for most metaphysicians: if we want to reject Wallace's view of modality as a dimension that can be added to spacetime in order to form an even bigger unified manifold, then do we have to deny that there is such a thing as modality? The answer should clearly be 'No'. For we can say, and indeed we should say, that modality is an aspect of reality. It is *the modal dimension*, and it involves a cluster of concepts (possibility, necessity,

<sup>14</sup> Wallace develops and defends this view in 'The Lump Sum: A Theory of Modal Parts' (2019).

contingency, etc.) and a family of phenomena (Joe could have been a plumber; it is part of Clara's essence that she is a good person) that must be accounted for in any accurate theory of the world. You can't leave out the modal dimension!

In fact, modality is one of quite a few such dimensions of reality. Other examples include the moral dimension, the psychological dimension, the esthetic dimension, the economic dimension, the spatial dimensions and the temporal dimension (among others). Each one of these dimensions involves a distinctive cluster of concepts, as well as a close family of phenomena. For the moral dimension, the characteristic cluster of concepts includes moral permissibility, moral wrongness, and moral obligatoriness. And the family of phenomena associated with the moral dimension includes all of the moral facts. They are a real part of the world. Similarly with the modal dimension, and the others: for each of these dimensions there is a distinctive cluster of concepts (often expressible using terms that are interdefinable, but not definable in terms outside of the cluster), and a family of phenomena (usually involving genuine facts that cannot be accounted for without talking about the relevant concepts) such that leaving out those phenomena in a description of the world would render that description incomplete.

To clarify: as I am using the term, a *dimension* need not be a series of positions on a line that can be stuck onto the dimensions of physical space in order to form a unified manifold. Instead, a dimension is simply *an aspect of reality* that involves a cluster of interconnected concepts and a family of related phenomena. So I am thinking of *dimension* in a very broad sense of the word.

### 8. *The dimensional account of time*

I think that time is a genuine dimension of reality, in exactly this sense. And I believe Aristotle and Fiocco were on the right track when they suggested that time is the dimension of change. Here is how I would put it:

#### *The Dimensional Account of time of What Time Is*

Time is a complicated and multifaceted dimension of reality that involves a cluster of temporal concepts (*earlier-than*, *later-than*, *pastness*, *presentness*, etc.), and a family of temporal phenomena (change, remaining the same, growing older, the passage of time, etc.).

An important component of my account, borrowed from Prior,<sup>15</sup> is the claim that time is in certain important respects more similar to the dimension of modality than to the dimensions of space. Just as modality is the dimension of ways reality could be, time is the dimension of ways reality has been, is, or will be. To put things a slightly different way, time is the aspect of reality that has to do with the fact that there is only one reality, and it keeps changing. When we attend to *all this*, one of the first things we notice is that it goes from *thus* to *as so*.

15 See for example [Prior 1957](#).

It remains true, as per The Dynamic Theory, that in order to capture the temporal dimension of reality we will need a tensed language, including some tense operators, as well as terms for the various A-properties. But the main point, on my view, is that it is not correct to say that time is an abstract substance that makes change possible, since time is not an abstract substance. Nor is it correct to say that there is no such thing as time, since there is a temporal dimension to reality, and that is all we need to mean when we say that there is such a thing as time.<sup>16</sup>

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### References

- Augustine, Saint. 2008. *Confessions*, Trans. H. Chadwick, Oxford University Press.
- Balaguer, M. Forthcoming. *How to Be a Presentist*. Oxford University Press.
- Fiocco, M.O. 2017. What is time? *Manuscripto* 40: 43–65.
- Fiocco, M.O. 2024. *Time and the World: Every Thing and Then Some*. New York: Oxford University Press.
- Hawley, K. 2001. *How Things Persist*. Oxford: Oxford University Press.
- Lewis, D.K. 1976. The paradoxes of time travel. *American Philosophical Quarterly* 13: 145–52.
- Markosian, N. 1993. How fast does time pass? *Philosophy and Phenomenological Research* 53: 829–44.
- Markosian, N.. 2004. A defense of presentism. In *Oxford Studies in Metaphysics*, vol. 1, ed. D. Zimmerman, 47–82. Oxford: Oxford University Press.
- Markosian, N. 2020. Sideways music. *Analysis* 80: 51–59.
- Markosian, N. 2022. Five new arguments for the dynamic theory of time. *Philosophical Perspectives* 36: 158–81.
- McTaggart, J.M.E. 1927. *The Nature of Existence*, vol. 2. Cambridge: Cambridge University Press.
- Moss, S. 2012. Four-dimensionalist theories of persistence. *Australasian Journal of Philosophy* 90: 671–86.
- Newton-Smith, W.H. 1980. *The Structure of Time*. London; Henley; Boston, MA: Routledge & Kegan Paul.
- Price, M.S. 1977. Identity through time. *Journal of Philosophy* 74: 201–17.
- Prior, A.N. 1957. *Time and Modality*. Oxford: Oxford University Press.
- Prior, A.N. 1967. *Past, Present and Future*. Oxford: Oxford University Press.
- Sider, T. 2001. *Four-Dimensionalism*. Oxford: Oxford University Press.
- Skow, B. 2015. *Objective Becoming*. Oxford: Oxford University Press.
- Smart, J.J.C. 1966. The river of time. In *Essays in Conceptual Analysis*, eds. Flew A., 213–27. New York: St. Martin's Press.
- Sullivan, M. 2012. The minimal A-theory. *Philosophical Studies* 158: 149–74.

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- Thomasson, A. 1999. *Fiction and Metaphysics*. Cambridge: Cambridge University Press.
- Thomson, J.J. 1983. Parthood and identity across time. *Journal of Philosophy* 80: 201–20.
- Wallace, M. 2019. The lump sum: a theory of modal parts. *Philosophical Papers* 48: 403–35.
- Williams, D.C. 1951. The myth of passage. *Journal of Philosophy* 48: 457–72.