

What Is Time?

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ABSTRACT

In this paper, I answer the question of what time is. First, however, I consider why one might ask this question and what exactly it is asking. The latter consideration reveals that in order to answer the question, one must first engage in a more basic investigation of what a thing, anything at all, is. Such radical investigation requires a special methodology. After briefly characterizing this methodology, I show how it can be employed to answer the titular question. This answer is significant not merely because it illuminates something of perennial interest, but because it is essential to a comprehensive and fully satisfactory metaphysics of time and, hence, to a view of the full structure in reality.

Despite the salience of time in one's life and its centrality to the work of scientists and philosophers, the titular question is rarely (if ever) posed. Of course, in the midst of cosmological ruminations, Augustine famously asks "What, then, is time?"¹. But this is more of a rhetorical *cri de coeur* than the initiation of an ontological inquiry. What Augustine goes on to say—"If no one asks me, I know: if I wish to explain it to one that asketh,

¹ See his *Confessions*, Book XI, Chapter XIV.

I know not.”—is surely misleading. The problem is not just one of articulation. One could hardly have firm beliefs regarding such an abstruse matter as what time is prior to a good deal of metaphysical reflection. Even appreciating this, though, it is not obvious how such reflection should be directed.

In this paper, I answer the question of what time is. First, however, I consider why one might ask this question and what exactly it is asking. The latter consideration reveals that in order to answer the question, one must first engage in a more basic investigation of what a *thing*, anything at all, is. Such radical investigation requires a special methodology. After briefly characterizing this methodology, I show how it can be employed to answer the titular question. This answer is significant not merely because it illuminates something of perennial interest, but because it is essential to a comprehensive and fully satisfactory metaphysics of time and, hence, to a view of the full structure in reality.

I. Why might one ask this question?

One need have no clear sense of time to wonder what it is—if one is just taking it to be closely related to *change*. Change occurs when a thing is one way, then another, incompatible way. All the changes one experiences or undergoes, taken together, are one’s life. So, if change and time are so closely related that the former *requires* the latter, without time, there would be no lives. Change is the stimulus for some of the most poignant emotions associated with life, bringing about nostalgia and prompting expectation. Moreover, if it is experiencing a preponderance of agreeable changes that provides satisfaction and if striving to effect certain changes is what gives one purpose, then both the quality and the very meaning of life are bound up with change and so with time. It is natural, then, for any contemplative person to consider what this is that is so important to life, especially when one suspects these changes and, thus, this life to be finite.

For these reasons, laypersons are intrigued by time. Others with more specialized interests might be as well. Chemists and biologists who study processes of various sorts and physicists who presume that the fundamental structure of the universe is to be characterized in terms of

space-time take time for granted. They might, in a reflective moment, wonder what it is. There are also different areas of philosophy that rely on time in obvious or subtle ways. Consider the philosophy of history, which examines how what was contributed to what is and what this reveals about what will or might be. Consider action theory, in particular, questions regarding free will that examine whether one's choices now can contribute to what will be, or whether what is to come was settled long ago. There are metaphysical questions, pertaining to causation and laws of nature, that examine how things develop and meta-ethical questions about whether the rightness of an action is to be accounted for in terms of the goodness that subsequently comes from it. Surely the work of all those engaged in such inquiry could benefit from an account of what time is and how it contributes to the world.²

While it is plausible that the work of many would benefit from asking the question of what time is, this question seems crucial to the work of others. There is, after all, an area of inquiry ostensibly directed at time—the *philosophy of time*—in which philosophers purport to investigate, among other issues, the structure or extent of time; its topology; whether it has a direction; how things change and, hence, exist in or through time; what properties things bear just in virtue of being in time (or whether they merely stand in distinctively temporal relations); how one experiences time; whether one can travel in it; whether it in some sense “passes”. It seems clear that none of these issues could be resolved without first having an account of what time is. For example, one cannot say what the structure of time is unless one has an account of what it is (and, hence, knows that time is the kind of thing that is structured).

It is surprising, then, that the aforementioned issues, concerning putative features of time or matters associated with it, dominate the philosophy of time. Indeed, an examination of the voluminous literature on time shows that the primary question of what time is is no part of the disputes that exercise philosophers of time. Nonetheless, if a comprehensive metaphysics of time is to be attained, with all the insight

² In Fiocco 2013, I argue that considering the world in time presents formidable challenges for the meta-ethical position of consequentialism.

into the many issues that depend on time that it would provide, it must begin with this question.

II. What is this question asking?

Say one agrees that the question of what time is is worth asking. Still, it might not be clear *what* it is asking. If the only handle one has on time is its close relation to change, and change is such a pervasive part of one's life, it might be hard to discern the focus of the question in order to begin answering it.

In some cases in which one asks what something is, to be told the *kind* of thing that thing is suffices to answer one's question, if that kind is at the appropriate level of generality and one has a clear enough sense of what it is to be of that kind. In other cases, though, a thing might be of no specific kind, it might not be an instance of any kind more limited than the *summum genus* of *thing*, (i.e., *being*, *entity*, *existent*). In other words, it might be *sui generis*, the only thing like it, in any robust sense, in the world. Were this so, to answer the question of what that thing is would require an illuminating account of that thing itself, an account that articulates the definitive features of that thing.

So the titular question might be asking for the statement of some kind or for an account of time *per se*, depending on whether time is an instance of some kind or is *sui generis*. Before determining whether it is the former or the latter, however, one must determine whether time is anything at all. It might not be obvious that it is. There is undoubtedly change, but one might be doubtful that in addition to all the conspicuous changes in the world there is something—literally a thing, to wit, time—underlying or otherwise related to these changes. Therefore, prior to the question of what time is, is the question of whether time is a thing.

Of course, this question can only be answered if one has some account of what a *thing* (i.e., an *entity*, an *existent*, a *being*)—in the most general and inclusive sense—is. All inquiry is directed at something or other, more precisely, at the relations between kinds of thing or particular ones. Inquiry takes things for granted. Although knowing what a thing is might be unnecessary for successful inquiry in most domains, if one's goal is

understanding—knowledge of what exactly it is one is investigating, whether it must be as it is and why—then one needs such an account of *thing*. This account would reveal what each thing ultimately is and how things in general do (and could) relate. Understanding the world or the fundamental structure in reality is presumably the goal of metaphysics in the grand sense, and so an account of *thing* is indispensable to it.

Since any sort of familiar inquiry takes things for granted, if one is to attain an account of what a thing is, one must engage in a special sort of inquiry. One needs a unique methodology. I discuss elsewhere what seems to me to be the requisite methodology, which I dub *original inquiry*.³ Here it suffices merely to sketch this methodology and present its upshot. If the goal of original inquiry is an account of what a thing is, one cannot presume at the outset anything about any thing, not even that things exist. With such a severe constraint, it might seem that there is no way to proceed for it might seem that one has forfeited all means of inquiry.

However, even if one eschews everything and with it any assumption that might prejudice or otherwise taint this special sort of inquiry into each thing, one is not without a focus with which to start. One still has the *world*: all *this*, the heterogeneous array encompassing one. Were one to avail oneself of the assumptions, and the concepts arising from them, that one forgoes in original inquiry, one could characterize this array as a *mélange* of shapes and colors and odors and textures and sounds and cognitive, conative and affective feels. But here, presuming nothing about the world—*not even that “it” is a thing*—the world is to be regarded merely as the *impetus to inquiry*.

The world as the impetus to inquiry is no hypothesis, it is an indubitable prerequisite of any inquiry at all. In confronting the impetus to inquiry, one makes no assumption about what, if anything, exists. Nevertheless, *this*, the world, is a certain way. There must be some explanation for how the world is as it is. This is just the claim that there is some apt characterization, in terms of what exists, of *this*; hence, the claim should not be deemed contentious. Such a characterization would illuminate how *this* is as it is. Were there no such explanation, there could be no successful inquiry. Inquiry is directed either at the world at large or

³ See my “What Is a Thing?” (under review).

at some localized phenomenon. Successful inquiry into the latter, which would provide an account of how that phenomenon is, would depend on some account of the former, since any localized phenomenon is subsumed by the world. Therefore, any explanation of any phenomenon at all rests on some explanation of the world being as it is; the very possibility of successful inquiry requires such an explanation. If there are reasons for being dubious about the possibility of successful inquiry, they arise in light of concerns about the elusiveness of the world, the inaccessibility of things or the fallibility of minds, but such concerns have no force here, where nothing is being assumed about the world (or things or minds). In original inquiry, there is no breach between so-called appearance and reality and so skepticism has not even a toehold.

An explanation for how the world is as it is must be based on something. Indeed, any explanation must have a basis: one could not have a genuine explanation that is vacuously representational, one that would explain in terms of nothing at all. There must be something or other—the explanans—that in virtue of its relation to what is to be explained—the explanandum—illuminates the latter. Such a view of explanation is hardly controversial. Thus, although confronting the world brings with it no ontological commitment, recognizing that *this*, the impetus to inquiry, must have some explanation does. The first ontological principle in inquiry is that there is something that underlies an account of how the world is as it is.

This raises the question of what a thing must be in order to serve as the ontological basis of at least a partial explanation for how the world is as it is. As the basis of such an explanation, a thing bears some relation to the world; in this sense, it is *in the world*, making some contribution to all *this*. If it did not make the contribution it does, it would be nothing at all. Moreover, its contribution is *unique*. Were some other thing to make its contribution, it itself would not be making one. Consequently, there is no thing that makes another thing be or be what it is. Were there such a thing, the very existence of the latter—and, hence, the contribution it makes to the world—would be attributable to the former. In other words, were a thing made to be, “it” would be ontologically idle and, thus, nothing. The world would not be as it is, even in part, because of “it”, but because of whatever is supposed to make “it” be. I have argued, on the

basis of such considerations⁴, that each thing is fundamental, in that no other thing can explain the existence of a thing or what it is (since its being what it is is attendant upon its very existence). Things provide the means of explanation yet also its limits; things explain but are themselves inexplicable, that is, they are not even susceptible to explanation.

A thing contributes to the world as the basis of at least a partial explanation for how the world is as it is. Thus, each thing must be some way(s) or other. Were a thing no way at all, there would be nothing to it, in which case, it could not serve as the ontological basis of any explanation. What a thing is determines, to a significant extent, how it is; how it is are the ways it is. Since nothing explains what a thing is and, hence, the ways that it is, each thing just is what it is. A thing cannot exist without being what it is; its very existence, then, requires that it be at least some of the ways it is. Therefore, each thing is constrained in its being, it must be certain ways just in virtue of existing. In this sense, each thing is *natured*. If there be familiar concrete objects, universal properties (i.e., attributes), particular properties (i.e., modes or tropes), relations, universal kinds, numbers, propositions, processes, facts, states of affairs, sets, holes, boundaries, privations—what have you—each is natured. It is misleading, however, to say that each thing *has a nature*, for this suggests that a nature is a thing (something to be had) in virtue of which a thing is or is what it is. But, as argued above, there can be no such thing that explains or grounds another. For similar reasons, it is misleading to talk of the *essence* of a thing. There are no essences, though each thing is, nonetheless, many ways *essentially*. Although everything must be certain ways (depending on what it is), many things can also come to be and cease to be other ways they do not have to be. These other ways, though, must be consistent with those ways a thing must be just in virtue of existing at all.

A thing, therefore, is a natured entity. Elsewhere⁵, I consider whether the obvious circularity of this account of *thing* is problematic, and conclude

⁴ See my “Each Thing Is Fundamental: Against Hylomorphism and Hierarchical Structure” (under review).

⁵ See my “What Is a Thing?” (under review).

that it is not. The account is informative in light of the world, the ineluctable impetus to inquiry.

III. How should one go about answering it?

As noted in the previous section, prior to the question of what time is, is the question of whether time is a thing at all. I then presented an account of what a thing is. If there is any insightful account of time itself, time must be a natured entity. One must determine, then, whether this is the case. Presumably any grounds for maintaining that time is indeed a thing would also inform the account of what it is. To look for such grounds, one might begin by examining how time is regarded, what it is taken to be.

Most who regard time do not go beyond the sense, acknowledged above, that it has something to do with change. This sense alone, obviously, is too vague to reveal much of anything about time per se. If pressed, a layperson might offer an observation like time is *what makes one grow old* or *what clocks measure*. But what makes one grow old are the features of one's organs or cells; it is their limited durability, that is, the incapacity of these things to preserve their integrity as they interact with other things and undergo their characteristic changes. It is not time itself that makes one age, it is the changes one undergoes given what one's body, organs, and cells are. If time is relevant here at all, it is because it has something to do with change, and so this homely suggestion about time and growing old provides no more insight into time than the vague sense with which one began. Clocks are just machines with cycles coordinated with cycles in other things, usually naturally occurring ones. If clocks measure anything they measure these other cycles. A cycle is just a reoccurring series of changes in some thing (or things). So if a clock is simply a means of marking such changes, then, again, one has a suggestion about time that provides no more insight than one had to begin with. The claim that a clock does not measure only cyclical changes, but also what those changes take place *in* presents an helpful spatial metaphor. Until one has grounds for maintaining that time is a thing—and a literal account of what it is

based upon such grounds—no metaphor can really be illuminating. Such grounds do not seem to be forthcoming from casual reflection on time.

One might think, then, that the cogitations of experts would be more promising. However, as mentioned above, the question of what time is is not central to the philosophy of time. This claim might be perplexing, and not merely because this question is the most obvious one to try to answer if one is interested in the philosophy of time. The claim might be perplexing also because discussions of the metaphysics of time are almost always presented in a context in which there are supposed to be competing *theories of time*. Every issue is approached in light of the *A-theory* versus the *B-theory* or the *tensed theory* versus the *tenseless theory* or the *block theory* versus the *passage theory* or *presentism* versus *eternalism*, etc. Indeed, when considering the philosophy of time at large, one is confounded by what appears to be a host of theories of time.

Although there are these many so-called theories of time, those who propound them never make explicit what it is exactly they are theories *of*. Still, even if they are there only tacitly, one might hope, by examining such theories, to uncover grounds that indicate whether time is a thing and some insight into what this thing is. The first point to note when considering these theories is that none of the terms used to name them—‘A-theory’, ‘the tenseless theory’, ‘presentism’, etc.—is univocal. Each has been used for distinct theories (some of which are incompatible). Suppose though that the (or an) A-theory is a view according to which there is an infinite series of moments, each one of which bears an absolute monadic temporal property *being past*, *being present*, or *being future*, in addition to standing in binary temporal relations, to wit, *earlier than* and *later than*, to other moments. This theory can be contrasted with one, the B-theory, on which there is this infinite series of moments, but the moments only stand in binary temporal relations. Both are theories of what (temporal) properties or relations moments, in an infinite series, bear. Suppose the (or a) tenseless theory is a view on which things do not come into being, but merely exist permanently at some temporal location; whereas the (or a) tensed theory is a view on which things do, in some sense, come into being. Both of these are theories of how things exist, or how they come to exist. Not one of these four theories is about time *per se* and so they

are of little help in determining whether time is a thing. The same holds for other putative theories of time.

Nevertheless, given the theories just considered, one might surmise that what time is is a plurality of related moments, either an infinite series of them (each of which might or might not bear an absolute monadic temporal property) or the totality of temporal locations comprising some lesser array (in which things exist with or without becoming).⁶ Setting aside that it is by no means clear what a moment is, if this is what time were, time would not be a thing. A plurality, which is many, is not any one, natured entity. (This is not to say that a natured entity cannot be complex; a complex thing is one yet with many parts.) There is nothing that makes a thing be or be what it is; each natured entity just is and is as it is essentially because it is. However, a plurality is made to be (and made to be what it is) by the many things that compose it, and a plurality is as it is because these things are as they are. A plurality makes no contribution to the world beyond those made by the things it includes. If there were some way a seeming plurality were that made such a contribution, this would be some indication that that “plurality” were in fact a thing. Such a way would have to be more than some contrived feature, like being multitudinous or being multi-located, based on the presumption that the plurality is indeed a unified thing. If time were a plurality of moments, there is no obvious feature of the world that could be explained by it rather than those moments.

It is, however, not tenable to maintain that time is just a plurality of moments and so nothing in itself. A significant position in the metaphysics of time is presentism. Although there are a great variety of presentist views, the most promising ones deny that there is any array of moments. Yet proponents of such views do not reject time itself. Any such presentist accepts that time exists just as much as any A- or B-theorist or tensed or tenseless theorist, etc. What all these metaphysicians of time agree upon—and it might be the only thing—is that time is real. What

⁶ Some make a claim like this one explicit. See, for example, Tallant 2013: 372 for the assertion that, on the B-theory, the “reality of time consists in nothing more than various objects standing in the ‘fixed and permanent’ relations earlier than and later than.”

they disagree about are the things associated with time or the relations, the structure, among these things. Thus, all these purported theories of time are actually theories of what can be construed more broadly as *temporal reality*, each of which takes for granted the existence of time. The questions remain, though, of what it is each is taking for granted and what motivates all these controversial theories of temporal reality.

There is a long-standing debate in the metaphysics of time, one predating the modern proliferation of theories of temporal reality, that seems to pertain to the key question of whether time is a thing. This debate, concerning *relationism* versus *substantivalism*, is supposed to be about whether time is a substance and, hence, a thing. According to relationists, time is nothing distinct from all the occurrences that take place in the world and the relations among them. According to substantivalists, time is a thing in addition to all these occurrences; in particular, it is the thing in which these occurrences take place and exists independently of them. Relationism cannot offer any insight into time per se. On this view, time is, at most, a plurality: all occurrences, that is, all changing things and the relations among them. As such, time is nothing in itself. Substantivalism does not provide any more insight. Although on this view, time is supposed to be a thing, the account of what it is—the “container” or “arena” in which all occurrences take place—seems to be just (a spatial) metaphor. A literal account of what this “container” is, if indeed there is one, would presumably characterize it as an array of moments. Setting aside, again, that it is not at all clear what a moment is, an array of anything (moments or what have you) is merely a plurality, not anything in itself. On neither side of the debate, then, is time really a natured entity.

This debate between relationists and substantivalists is often motivated with the question of whether time could exist in the absence of any occurrences or changes. If the answer to this question is negative, then time is supposed just to be any occurrences (or changes) and their relations. (But this does not follow—even if time could not exist without occurrences, it need not *be* those occurrences.) If the answer is affirmative, time is supposed to be something, whatever it is, distinct from all those occurrences. Regardless of one’s answer, however, I want to point out the futility of raising this question prior to having an account of what time is or being able to say whether it is a thing. Without such an account (or

argument), one is no position to determine whether time must exist with changes or could exist in their absence. In general, without some clear sense of what a thing is, one cannot say what that thing must exist with or can exist without. As observed above, one's untutored sense of time is that it has something to do with change, but this sense is surely not sufficient to determine whether it is something that must exist with changes or is really anything at all. Hence, this debate between relationists and substantialists reveals nothing about time, neither what it is nor even its status as a thing.

One does not get an answer to the question of whether time is a thing by considering what laypersons might say about it, nor even by considering the voluminous literature produced by philosophers of time. Without any grounds for maintaining that time is a thing, one can hardly answer the question of what time is. One needs, therefore, a different strategy to get purchase on time, one that goes beyond casual reflection—consulting one's "intuitions"—or examining the work of experts. If time is real and is as vital to the world, and one's experience of it, as it seems to be, one should expect to find some indication of this thing in original inquiry, that is, when confronting the world without presumption. Any such indication should provide the means to illuminate the sense that time has something to do with change.

In confronting the world simply as the impetus to inquiry, one is indeed impressed by a world that can be as it is only if it includes a thing plausibly taken to be time. To answer the question of what time is, therefore, one must begin here, with original inquiry.

IV. The Answer

When one undertakes original inquiry, one encounters a heterogeneous array: the world that is *thus*. If one undertakes original inquiry again, one encounters a distinct heterogeneous array: the world as *so*. The world is *thus* and (then) *so*. There are, then, two modes of differentiation in the world. The heterogeneity apparent when it was just *thus* and the heterogeneity apparent in its being *thus* and (then) *so*. The first mode of differentiation can be accounted for simply in terms of the existence of

distinct of things. This second mode is no less incontrovertible than the first, so it, too, must have an explanation and, hence, an ontological basis.

Call the natured entity underlying the explanation for this second mode of differentiation *time*. This is, then, a preliminary answer to the titular question. Time is that thing that accounts for the world being differentiated in the distinct ways that it obviously is. This initial characterization is fitting because if change genuinely occurs in the world, it does so via this second mode of differentiation; this second mode is needed for there to be change. Thus, in a way to be elaborated, time is the thing that makes change possible. The sense that change has something to do with time is thereby corroborated, for there is this very close relationship between time and change.

The better one illuminates change and how it is made possible, the more insight one will have into time per se. So consider again change. Above, I characterize it as the phenomenon that occurs when a thing is one way, then another, incompatible way. Although, there have been those in the history of philosophy who have denied that there is change, I maintain that it must be real. One experiences change confronting the world in original inquiry, that is, when making no assumptions about anything. Distinct modes of differentiation are presented. Either the world itself changes (going from *thus* to *so*) or, if the world is not a thing (and I do not think it is: the world is a plurality, namely, all things), there is change in the inquirer, who encounters the world as *thus* and (then) as *so*. To deny change requires some argument ulterior to original inquiry. Any such argument or, for that matter, any argument at all itself requires change in some inquirer. Premises must be presented sequentially, then considered (sequentially) and then some inference drawn. Given that there is compelling reason to accept change—one experiences it in original inquiry—and that no argument can undermine it, I maintain change indeed occurs.

Since change is real, there must be some explanation for it and this explanation must have an ontological basis among the things in the world (for there is, of course, nothing else). Change requires incompatible ways. No one thing is incompatible in itself. Change, therefore, is no one thing. Rather, change is what can be called a *structural phenomenon*, some plurality of things in relation. If something changes, that thing is incompatible

ways, that is, bears inconsistent properties. Since, again, nothing is incompatible in itself—a thing that were both p and $not-p$ would be inherently contradictory and so is impossible—and yet there is change, there must be some thing distinct from the thing that undergoes change that accounts for how the former is incompatible ways. Call whatever it is that accounts for how one thing is incompatible ways a *moment*. Thus, when change occurs, something is one way at one moment and that very thing is an incompatible way at a distinct moment. This is an elucidation of the plausible account of change adopted above, specifying the basis of the phenomenon in the world of things. It reveals that change is several things in relation: at least one mutable thing, two properties and two moments. Time is the thing that makes change possible; change requires moments. This raises the question of how time is related to moments and what it is that can both underlie the explanation for the second mode of differentiation in the world and also be so related to moments. Answering this question would illuminate what exactly this thing time is.

I maintain that there must be some explanation for the second mode of differentiation evident in the world and, furthermore, that time is the ontological basis of this explanation. Yet I also maintain that there is change and, hence, that there must be distinct moments. If the existence of more than one moment underlies an account of change and change is just a manifestation of this second mode of differentiation—call it *temporal differentiation*—it might seem that moments suffice as the ontological basis of an explanation for temporal differentiation. Distinct moments are not a thing, they are merely a plurality of things, and so one might claim that it is misguided to posit something—time itself—as the basis for such an explanation. Thus, given the existence of moments, time might seem superfluous. This is a reoccurrence of the idea, to wit, that time really is not anything at all, just an array of moments, floated and rejected above. One might see in the foregoing considerations new motivation for this idea; however, these considerations also provide the means to argue against it more conclusively.

More is needed to account for the structural phenomenon of temporal differentiation and change than merely distinct moments. These phenomena also require that moments be related in a certain way. For, say, change to occur, a thing must be one way at one moment and an

incompatible way at a distinct moment that *succeeds* the first (or, conversely, a thing must be one way at a moment that *precedes* another moment at which it is an incompatible way). This structure—this plurality of things in constraining relations—comprising moments requires explanation. Just adding the relation *later than* (or *earlier than*) to the complex of mutable thing, incompatible properties and moments will not do, for something is needed to account for how this relation is related to these other things in the appropriate ways (a Bradleyian regress threatens here). Time is supposed to be the natured entity that underlies the explanation for the second mode of differentiation in the world, and so time is this needed thing. It is time that accounts for how the world encountered in original inquiry is thus *and then* so. In other words, it is in virtue of time that one moment is appropriately related to another by *later than* (or *earlier than*). Given change, there is no denying that moments are related in a distinctive way, one that need not inhere in them as instances of that kind of thing that enables a natured entity to be incompatible ways. Time, therefore, is the ontological basis of an explanation for what is naturally called the *temporal order* of moments.

Note that the explanation for the order of moments, this distinctively temporal structure, cannot be based on any moment itself. A moment is simply a natured entity that enables something to be incompatible ways. If one moment were to exist at another, and a thing can be incompatible ways at distinct moments, then it would be possible for something to be incompatible ways at the same moment. This is impossible, so distinct moments are mutually incongruous; each moment excludes every other. Nothing more seems to follow regarding the relations among moments merely considering a moment per se. Yet if there are distinct moments, as there must be given temporal differentiation and change, these moments must be ordered. Time is the thing that accounts for this order.

Considering moments, there is no reason to think any particular moment must exist, and much reason for thinking each moment ceases to be.⁷ Yet, given that there is change, there must be some moment(s) or other(s). The necessary presence in the world of some moment(s), though any moment can fail to exist, is a structural phenomenon that requires an

⁷ See Fiocco 2014a.

explanation. What is needed here is a sort of natural-cum-causal explanation, an account of how one thing comes to be given the existence of another. It is not necessary to explain how a particular moment *is*. There could be no such explanation, for there is no explaining a thing or its existence in this sense. Nevertheless, how there are instances of a certain kind at all is amenable to explanation, and such an explanation is somewhat pressing if there is reason to think that there must be some instance of that kind though each one ceases to be. The source of any moment could naturally determine the order of moments. Therefore, since time is the thing that accounts for this order, it is plausible that time is also the source of each moment, the thing that underlies an explanation for the presence in the world of any such thing. This conclusion confirms the claim that time is more than merely a plurality of moments.

The world comprises things standing in constraining relations and time is one of these things. Given this, time makes a contribution to the world that no other natured entity does. It is the ontological basis of an (at least partial) explanation for the second mode of differentiation in the impetus to inquiry, accounting for how the world is *thus* and then *so*. As such, time is the thing that enables change; it is in virtue of time that anything whatsoever changes. Change requires moments ordered in a particular way. So time enables change by being the source of any moment, as well as the thing that orders them. This, then, is the answer to the question of what time is: It is the natured entity that is the source of any moment and what orders any moment(s).

V. What hangs on this answer?

I have answered the question of what time is. Since it seems clear from the foregoing discussion that time is *sui generis*, rather than an instance of some kind, I have answered this question by articulating the definitive features of time. This answer has some value. First of all, it makes clear what those who muse upon time or worry about it are musing upon or worrying about, namely, the thing that makes change possible, that thing that permits growth and decay, gain and loss. The answer also illuminates what is or, at least, should be the focus of the philosophy of time. Time

is the thing that underlies any temporal phenomenon, and so all accounts of these phenomena must ultimately be based on the thing that gives rise to and orders moments. More importantly, however, I maintain that it is only by recognizing that time is a thing itself—and, more precisely, the one that makes change possible—that one can develop a comprehensive and fully satisfactory metaphysics of time.

Investigations of the metaphysics of time are universally taken to reveal an irreconcilable tension. This tension is characterized in different ways. Thus:

[There are] two fundamentally different ways in which we conceive of and talk about time. On the one hand, we conceive of time in a dynamic or tensed way, as being the very quintessence of flux and transiency...[On the other hand,] is the static or tenseless way of conceiving time, in which the history of the world is viewed in a God-like manner, all events being given at once in a *nunc stans*.⁸

And

Distinctions and transitions of tense, between what has been, is and will be past, present and future, divide philosophers into two fundamentally opposed camps. The one, ‘tensed’, camp takes these distinctions to reflect real nonrelational differences between past, present and future things (events, facts, etc.)...that is what [those] in the ‘tenseless’ camp deny.⁹

More recently and succinctly:

Contemporary analytic metaphysics of time is shaped by the debate between A-theorists and B-theorists.¹⁰

And

⁸ Gale 1967: 65-66.

⁹ Mellor 1981: 4.

¹⁰ Deng 2013: 713.

Metaphysical theories of time divide into *A-theories* and *B-theories*.¹¹

These characterizations of the tension do not make clear what its source is and, hence, it is not obvious what the disputes arising from this tension are really about. Although the characterizations suggest—or in some cases explicitly state—that the tension pertains to *time*, or different theories thereof, the lack, in these investigations, of any account of what time itself is belies this.

Perhaps the only claim that can be taken for granted in contemporary discussions of the metaphysics of time is that time exists.¹² There is, then, some common ground among those investigating the metaphysics of time. If any progress is to be made from this common ground, an uncontroversial account of what time is is required. The account I propound is not based on any contentious assumptions. Indeed, it is not based on any assumption at all. It arises through original inquiry, by encountering the world as the impetus to inquiry, noting that it is differentiated in distinct modes and recognizing that this phenomenon must be explicable in terms of what exists. Because it arises in this way, and is so minimal, it is hard to see how anyone could deny this account of time, or why anyone would want to. So here is the required account.

If this is what time is, however, the tension that is supposed to be central to investigations of the metaphysics of time vanishes. Time per se is no series, so a fortiori it is neither an A-series nor a B-series; it is itself neither tensed nor tenseless, transient nor static. Harmony is achieved. Yet such quick resolution of these hoary disputes is hardly satisfying. What this dissatisfaction indicates is not that there is some problem with this ecumenical account of time; rather, it shows that these disputes ostensibly about time (or theories thereof) actually have a different focus.

If one accepts that there is time and at least one moment, one can see that these disputes are more about these moments of time (and the things that exist at them); they concern the properties of moments, their relations, the extent of them. In other words, the disputes are about the

¹¹ Deasy 2016.

¹² McTaggart, of course, denied this. See McTaggart 1908.

relations among distinctively temporal entities (moments, temporal properties, temporal relations, etc.), i.e., the *structure in temporal reality*. Thus, there is, among others, a dispute concerning whether moments have absolute monadic temporal properties and stand in temporal relations or just stand in temporal relations; a dispute concerning whether moments (and the things that exist at them) come into being or exist permanently at some temporal location; a dispute concerning whether there is more than one moment with the same ontological standing; a dispute concerning whether the properties of moments make them dynamic in some sense. There are several disputes here, not one of which pertains to time per se, and not one of which is primary in the sense that one must accept one of the disputed positions and one's choice there determines one's position on every other dispute. None of these disputes, therefore, reveals the central tension in investigations of the metaphysics of time.

In fact, these disputes might seem puzzlingly trivial. One might wonder why anyone would care to argue about, say, the properties of moments or how many there are. What is missing is a view of the real bone of contention in discussions of the metaphysics of time, what it is that motivates any of these disputes in the first place. By examining the disputes together, rather than the details of any one of them, one can see that each arises in connection with a phenomenon that all those who investigate the metaphysics of time acknowledge. Regardless of how one identifies (A-theorist, B-theorist, tensed theorist, tenseless theorist, presentist, block theorist, etc.) one concedes that there is a compelling impression of *novelty* arising from one's experience of being in a world with time. This impression has traditionally been characterized as a sense of *passage* or *flow* and is really nothing more than an awareness of the second mode of differentiation in original inquiry—that awareness of the world being *thus* and then *so*—accounted for in terms of time itself. Accompanying this impression of novelty, however, is one of *permanence* that is no less evident. Given that the world is now *thus*, it seems that *this* never changes, that it must always be the case that the world is thus *at this moment*. Yet, obviously, things do change for the world is now *so*.

This last observation need not be incompatible with it always being true that things and, hence, the world were a different way a moment ago. Thus, the real bone of contention in investigations of the metaphysics of

time, the motivation for all the disputes one encounters therein, is how to reconcile the undeniable impression of novelty in the world with the commensurately compelling impression of permanence. Some metaphysicians of time take more seriously the permanence, and try to account for the impression of novelty by the means they employ to explain this permanence. Others take more seriously the novelty, and try to account for the impression of permanence in terms of what underlies this novelty. There is a divide, then, between those who take the world to be fundamentally permanent and those who take it to be fundamentally transient. This conflict between permanence and transience is supposed to be unavoidable when investigating the metaphysics of time and, as illustrated by the quotations above, usually provides the framework for these investigations. Acquiescing to this framework has led to impasse.

A *comprehensive* metaphysics of time provides the means to account for every temporal phenomena. Insofar as both transience and permanence are irrefragable phenomena, a *fully satisfactory* metaphysics of time accounts for both without neglecting either. Thus, a comprehensive and fully satisfactory metaphysics of time would resolve the tension between the transience and permanence in the world. Since no thing in itself is both transient and permanent, if the central disputes regarding the metaphysics of time concerned a single thing—time or the world, were it a thing¹³—the tension giving rise to these disputes would indeed be irresolvable. Transience would have to be accounted for haphazardly in terms of things best-suited to explain permanence or vice versa; there could be no fully satisfactory metaphysics of time. This is why it is so important to recognize what these disputes are really about. They are not about time alone, but about time and the structure it renders. Realizing this presents the prospect of finding a place for both transience and permanence in this structure and, hence, in the world more generally.

The key to a fully satisfactory metaphysics of time is distinguishing between the *world in time* and the *world outside of time*. This spatial locution is merely suggestive; the operative notion of inclusion has not to do with space, but with *ontological dependence*, the necessary relations between things

¹³ As mentioned above, I do not think the world is a natured entity. Rather, it is a plurality of things, to wit, *all* things.

given what those things are. As a thing, time is in the world. There are some things that are ontologically dependent on time, in that, given what they are, they cannot exist in the absence of time. These things together, this plurality, is what above I dub *temporal reality*, the *world in time*. There are, however, other things that are ontologically independent of time, in that they do not have to exist with time merely given what they are. The plurality of these things is *atemporal reality*, the *world outside of time*.

It is here that having an account of what time is is imperative. The account provides the insight required to elaborate the distinction between temporal and atemporal reality. Time is the thing that makes change possible by yielding and ordering moments. Any moment, then, ontologically depends on time. The mark of existing in time is existing at a moment thereby poised to change. Any mutable thing must exist at a moment and so any such thing is ontologically dependent on time. Transience involves change in a way consistent with the compelling impression of novelty. Therefore, one can expect the transience in the world to be accounted for in terms of those things that ontologically depend on time. Those things that do not ontologically depend on time do not, cannot, exist at a moment (otherwise they would depend on time) and so these things do not (cannot) change. One can expect, then, the permanence in the world to be accounted for in terms of these atemporal things. If the real bone of contention in investigations of the metaphysics of time is how to reconcile the indisputable impressions of novelty and permanence, then by recognizing the world in time and the world outside of time one can discern the proper domain of transience and permanence, and so do justice to both, thereby allaying any tension between them. Crucial to recognizing both the world in time and without it—the full structure in reality—is having the proposed account of what time is and appreciating the distinction between time itself and temporal reality.

An account of what time is is essential to a comprehensive metaphysics of time, for it provides its foundation; furthermore, as just observed, such an account is of the utmost importance in articulating a fully satisfactory metaphysics of time. Yet there is still much to be done to attain this metaphysics. One must give an account of the structure in temporal reality consistent not only with change, but with the impression of novelty. One must give an account of atemporal reality, what exists outside of time, in

terms that illuminate the permanence of the world. I have started these projects elsewhere, providing a presentist account of the world in time¹⁴ and an account of the simple facts that structure the world without time and, thus, timelessly ground one's true claims about all the things that change and cease to be¹⁵.

The purpose of this paper, though, is to demonstrate that one cannot have a genuine sense of the basis of or the motivation for modern discussions of the metaphysics of time without first having an account of what time is. Without such an account, there is no way to move beyond the familiar disputes—and the impasse—in these discussions. However, with such an account, there is the promise of a comprehensive and fully satisfactory metaphysics of time.

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¹⁴ See Fiocco 2007.

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