Temporal Parity and the Problem of Change.

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Abstract

I discuss the general form of arguments that profess to prove that the view that things endure in tensed time through causally produced change (the dynamic view) must be false because it involves contradictions. I argue that these arguments implicitly presuppose what has been called the temporal parity thesis, i.e. that all moments of time are equally existent and real, and that this thesis must be understood as the denial of the dynamic view. When this implicit premise is made explicit, the arguments turn out to be either circular, they presuppose what they profess to prove, or mere demonstrations of the fact that the dynamic view is incompatible with its own negation. Furthermore, I discuss the metaphysical consequences of accepting the temporal parity thesis, arguing that it deprives us of the means to provide natural explanations to empirical phenomena.

1. Introduction.

It seems to be universally admitted that *change* involves, in some sense, the possession by an entity of different properties at different times, but there is disagreement as to what exactly this difference amounts to. The disagreement is often presented as a dispute about whether change has to be a difference in the properties of a *strictly identical* entity existing 'wholly' at different times, i.e. of an *enduring* entity, or if it can be the variation between distinct *temporal parts* of a compound entity, i.e. of a *perduring* entity. The problem of change is then presented as turning on the nature of *persistence*.[1]

The dispute about the nature of persistence is often presented as a dispute about whether time is tensed or tenseless.[2] According to the tensed view, the transition from future to present and from present to past, allows that one and the very same entity can at present be in its entirety at one particular time, but

[1] David Lewis (1986; pp. 202ff); D. H. Mellor (1981; 1998); Sally Haslanger (1989); Trenton Merricks (1994); Mark Heller (1992).

[2] William R. Carter & H. Scott Hestevold (1994); E. J. Lowe (1998); Michael Loux (1998).

in the future be in its entirety at another time. In other words, tense allows one and the very same entity to be 'wholly present' at many times in succession, i.e. *endure*. Consequently, if time is tensed, endurance is possible. According to the tenseless view, on the other hand, there really is no such transition in time; contrary to what appears to be the case, what is existent and real is not confined to the present. This claim is sometimes called *the temporal parity thesis*, i.e. the claim that all moments of time, even those that appear to be 'in the future' and/or 'in the past' are as equally real and existent as what appears to be 'present'.[3]

In tenseless time nothing 'passes' from one time to another, and yet some things undeniably exist at many times, i.e. persist. According to temporal parity, persistent entities are equally existent and real at all the times at which they exist, i.e. it is not the case that where they *appear* to be located 'at present' objectively represents where they uniquely exist. Rather they exist, objectively speaking, at all the times at which they exist. However, it is not possible that a thing is, objectively speaking, equally existent and real at many times, and 'wholly present' at each and every one of those times, at least not if being 'wholly present' means to exist *exclusively* at the time involved.[4] Nothing can exist exclusively at a single time, and yet be equally existent and real at many other times. An object can only be equally existent and real at many times by having different parts of itself existing at various times, i.e. by being composed of temporal parts, or, in other words *perdure*.

It has been argued that one's preferred time-view, should dictate one's preferred persistence-view according to two linkage thesis: 1) if time is tensed, persistent things *can* endure, and 2) if time is tenseless, persistent things *must* perdure.[5] The tensed view of time goes naturally with an endurance view of

[3] Carter & Hestevold (1994).

[4] What various philosophers mean by the phrase 'wholly present' is not always clear. I, like C.J. Klein (1999) and Haslanger (1989) understand 'wholly present' as implying that the things exists objectively speaking in its entirety at one single time, and 'no-when' else. In this sense to be 'wholly present' is to exist *exclusively* at a single time. Often the sense of what it involves to be 'wholly present' is not given with direct reference to existence at a time, but in terms of not having temporal parts (Mellor (1981; 1998); Peter Simons (2000*a;* 2000*b)*; Theodore Sider (1997)). I prefer to understand 'wholly present' as exclusive existence at a time, because it avoids possible confusions with the way universals are 'wholly present' at a variety of places and times, in each and every particular in which the universal is instantiated. The way universals are 'wholly present' at various places and times, may perhaps be used metaphorically to convey the sense in which enduring particulars are 'wholly present' at different times, but, whatever one might want to call a universal instantiated in a set of particulars spread out in time, it is not an enduring entity.

[5] For instance, Carter & Hestevold (1994).

persistence, not because tensed time necessarily entails endurance, but because it makes endurance possible. On the other hand, it is argued, the tenseless view of time entails perdurance, because a tenseless view of time is incompatible with endurance.[6]

The disagreement about the nature of change can however also be formulated with relation to causality. The dispute about the nature of causal change turns on the question whether causality involves *necessary production*, or if it merely involves a relation of *constant conjunction*, or *correlation* between distinct entities.[7] On the former view, change involves the objective gain and/or loss of properties by a strictly identical entity, while on the latter view change is a regularity relation, or correlation, between temporally distinct entities. Further, that on the former view, the gain/loss of a property by an entity involves the production/destruction of a state of affairs, i.e. its coming into/going out of existence, while on the latter view there is no such gain or loss of properties, or beginning/ceasing to exist; there is merely a correlation between two distinct events, or states of affairs whose existence is given without explanation as a fact of experience.[8] On the latter view, nothing is really brought into existence by the cause; existent entities just happen to occur in ordered pairs according to the thesis: If *C* occurs, then and only then, an occurrence of *E* always follows. I will refer to these two views as the *production,* and *correlation views* of causality respectively.

It has been argued that perdurance goes naturally with a correlation view of causality,[9] and there is an straightforward way in which a production view combines with an endurance account of persistence. If everything at all times is equally existent and real, according to the temporal parity thesis, then (i) things must perdure if they exist at many times, and (ii) nothing can give rise

[6] This claim is denied by e.g. Mellor (1981; 1998), and Simons (2000*a*; 2000*b*). The sense in which they claim things endure is however very different from the sense in which the adherents of what I call the *dynamic view* (see below) in general understand endurance. Simons e.g. thinks of enduring entities as something supervening on a base of occurrents (i.e. entities who are composed of temporal parts).

[7] See Haslanger (1989).

[8] Evan Fales distinguishes between four proposals as to what is to count as the relata of causal relations, of which (a), the category of *events*, is the most commonly held (Fales, 1990, p. 52). The others are (b) that they are *states of affairs*, (c) that one of the relata are particulars, i.e. *things*, in the ordinary sense, and finally (d) that the relata of causality are *properties*. All these proposals depict the causal relation to hold between temporally distinct entities holding a one-sided relation, even though they do not explicitly involve events. For the sake of convenience I will allow myself to use these different terms for the causal relata at convenience in what follows.

[9] For instance, by Haslanger (1989).

to or produce anything else because everything is as equally existent and real as anything else from any point of view. Consequently, if temporal parity is true, causality cannot involve production, but only correlations between the equally existent and real entities in the world. However, if causality does involve production, then substantial entities must endure to provide the stuff out of which new states of affairs are produced. A potter cannot produce pots without clay. But then what exists at one time cannot be equally existent to what exists at the next, because in order for a pot to be produced out of a lump of clay, the clay must cease to be a shapeless lump. If the clay does not objectively speaking cease to be a lump, before it begins to be a pot, it must objectively speaking be both a lump and a pot, or different parts of it are a lump and a pot respectively. In either case the existence of the pot did not come by through production.

The dispute about the nature of change is then nicely nested within three other disputes: (i) about the nature of persistence, i.e. do things endure or perdure, (ii) about the nature of time, i.e. is time tensed or tenseless, and (iii) about the nature of causality, i.e. does causality involve production or correlation. And, the alternatives within each dispute arguably fits with certain alternatives within the other disputes according to certain linkage theses: (i) that one's view of the nature of time should dictate one's view of the nature of persistence, and/or vice versa, and (ii) that one's view of the nature of causality should dictate one's view of the nature of persistence, and/or vice versa. I have not come upon anyone arguing that one's view of time should directly dictate one's view of causality, but only in relation to the persistence-view to which that time-view is associated. However, most philosophers do indeed prescribe to one of two combinations of the alternatives in the three disputes, according to the two linkage theses. Either they hold (a) a tensed-endurantistic-production-view, or (b) a tenseless-perdurantistic-correlation-view. Mark Heller (1992) is one of the few who have attempted to combine a tensed view of time with a perdurance-view of persistence, and D. H. Mellor (Mellor, 1981; 1998) and Peter Simons (Simons, 2000*a*; 2000*b*) are two of the few that have attempted to combine an endurance-view (of a sort, see footnote 6) of persistence with a tenseless view of time. But, in general, philosophers do fit into one of the two alternatives I mention. By being so divided into two camps on these matters, philosophers appear to be divided not just over the particular issues, i.e. change, persistence, time, causality, but over the nature of reality more or less as a whole. I will hereafter talk of the former view as the *dynamic view* (of reality), and the latter view as the *static view* (of reality).

It is, I think, generally accepted that the dynamic view is more in accordance with the *prima facie* appearance of reality.[10] There appear to be enduring entities,

there appears to be something which is metaphorically described as the 'passing' of time, and there do appear to be changes that involve the causal production of new states of affairs. The static view denies that there are enduring entities, that time 'passes', and that states of affairs are causally produced; it reduces these appearances to mere appearance, i.e. nothing but products of our subjective perspective on a reality which does not in itself contain these features. Nonetheless, the dynamic view is by many rejected as a viable alternative to the static view. The main reason given for rejecting the dynamic view is that it contains contradictions.[11] For this purpose, proponents of the static view usually rely on some form or other of J. M. E. McTaggart's famous argument for the unreality of time.[12]

The main reason given for rejecting the static view, despite that it appears to solve the contradictions claimed to be inherent in the dynamic account, is that it solves the contradictions not by explaining what change, persistence and causality is, but by explaining that there really are no such things as change, persistence, and causality *as we intuitively know them*; it solves the knot by cutting it off.[13] In other words, experience tells in favour of the dynamic view, but since it is allegedly contradictory, that tells in favour of accepting the static view despite its apparent disparity with experience, and our intuitive understanding of what change, time, persistence, and causality is.[14]

In section 2, of this paper, I will discuss the general form of arguments that profess to show that the dynamic view involves a contradiction, arguing that they all presuppose and depend upon what has been called the *temporal parity*

[10] For reference, see Loux (1998).

[11] The issue of whether causality involves production is different in this respect. It is not in general criticised for involving contradictions, but, in the spirit of Hume, for failing to account for the necessity of the causal relation, and for relying on metaphysically 'suspect' notions like 'force', 'energy', and/or 'substance'. I think the reason why accounts of causal production is not criticised in the same way relates to the point made in this paper, i.e. that the so called problem of change requires temporal parity. The conception of causality as involving production is more clearly a denial of the temporal parity thesis, than is the tensed view of time. If causality involves objective production/destruction of states of affairs, then there can be no talk of all states of affairs throughout the history of the universe being equally existent and real. Obviously, arguments depending on temporal parity, cannot be applied to doctrines that explicitly deny temporal parity.

[12] For instance, Mellor (1981; 1998); Nathan Oaklander (1984).

[13] Haslanger (1989).

[14] I am here concerned with metaphysical arguments about the nature of change, as opposed to semantical arguments. I therefore entirely leave out the discussion of whether tensed discourse can or cannot be entirely translated into tenseless discourse, or vice versa. I do not think the metaphysical and the semantical issues coincide, although surely they relate to one another. However, it would take us too far afield to elucidate how exactly they do or do not overlap.

thesis, i.e. the view that objectively speaking all moments of time are equally existent and real.

In section 3, I will argue that the temporal parity thesis must be understood as the negation of the dynamic view, i.e. as a denial of tense. Taken in this sense, temporal parity is not just an important corollary to the tenseless view, but equivalent to it; it amounts to the claim that time is tenseless. As a consequence, all arguments depending upon temporal parity to show that the dynamic view involves a contradiction, are merely arguments showing that the dynamic view is incompatible with its own negation. They are, by analogy, arguments trying to demonstrate that it is impossible to square the circle, or, that the world cannot be square, given that it in fact is circular. Further, arguments that depend on temporal parity cannot be used show that the tenseless position must be true because it is the only alternative to the allegedly contradictory tensed position. Such arguments turn out to be circular on closer inspection, since they presuppose what they profess to prove, i.e. that time must be tenseless. In other words, I will argue that what appears to be a straightforward deduction of a contradiction from given premises is really a vicious circle.

In section 4, I will argue that temporal parity sets such constraints to any metaphysical endeavour to make meaningless all questions about the coming into existence, or origin of, particular entities of any kind, whereby the only questions left to ask, and answer, will be those about the structure of existent reality. Like Sally Haslanger (Haslanger, 1989), I think this approach deprives us of the means to provide natural explanations to empirical phenomena.

2. The contradiction of change.

Arguments to the point that change involves a contradiction, whether it is changes in intrinsic properties, or tense, can all be seen as versions of McTaggart's famous argument for the unreality of time (McTaggart, 1927*b*, Ch. 33).[15] The basic form is this:

1. There are incompatible properties *F* and *G*.
2. There is an entity *a*.
3. There are distinct times *t* and *t'*.
4. At *t*, *a* possesses *F*, and at *t', a* possesses *G*.
5. 1, 2, 3 and 4 entail the contradiction that *a* possesses incompatible properties.

[15] William Lane Craig has in a similar vein argued that McTaggart's paradox is *"a special case of what Lewis has called the Problem of Temporary Intrinsics"* (Craig, 1998).

If *F* and *G* stand for any two incompatible tenses and the entity *a* is an event, then we have the usual form of McTaggart's argument. If *F* and *G* are other kinds of temporary intrinsics, and *a* is a thing, we have David Lewis' *Problem of Temporary Intrinsics*. Of course, the conclusion of the argument, as spelled out above, depends upon implicit assumptions, e.g. Leibniz' law, which says that if *a* and *b* are identical then they have all properties in common. That is, if *a*, existing at *t*, is identical to *a*, existing at *t',* and if *a* is *F* at *t*, and *G* at *t',* then it must follow that *a* is *F* and *G*. When Leibniz' law is made explicit, we have the exact form of Lewis' *Problem of Temporary Intrinsics* (Lewis, 1986, p. 202ff). However, I think the argument also presupposes temporal parity. It is only on the assumption that *a*'s possession of *F* and *a*'s possession of *G* are *equally existent and real* states of affairs that *a* can be considered to possess incompatible properties. I think it is important to realise here that temporal parity makes the relativisation of existence to times a meaningless, or at least a merely subjective, notion. According to temporal parity, if *a*'s possession of *F* is a state of affairs that exists at *t*, and *a*'s possession of *G* is a different state of affairs that exists at *t',* then these are in a sense coexistent states of affairs because their temporal location is irrelevant to their existence. According to temporal parity all moments of time coexist, although they have different temporal locations. When this coexistence of everything is kept in mind, one will realise that temporal parity requires that the reality of *a*'s being *F* at *t*, and *G* at *t',* depends on the coexistence of *a*'s possession of *F* and *G,* at *t* and *t'* respectively.

The term 'coexistence' is perhaps unfortunate because it is usually associated to existence at a time, which may cause confusion. Nathan Oaklander e.g. denies that the tenseless theory, is committed to accepting that all things coexist: *"Like relations among universals, temporal relations between and among events, and the facts that they enter into, are not located at any time or any place. Yet, it does not follow that the* terms *of temporal relations coexist timelessly in the way universals do."* (Oaklander, 1998)[16] However, Oaklanders denial that in tenseless time all things coexist, is directed against the claim made by C. D. Broad that the tenseless theory entailed that everything coexists *timelessly* (Broad, 1938, p. 307). Broad's and Oaklander's views illustrate quite clearly the fundamental difference between the tensed and tenseless views with respect to the connection between time and existence. Broad thought (at least in 1938) that time, and tense, is essentially about concrete existence being

[16] This is a thoroughly puzzling passage. Surely, the *token* instances of the 'earlier than' relation-*type,* do exist (tenselessly) in time and space, even if one holds that the *type* does not. Otherwise all temporal relations are uninstantiated universals.

confined in some sense to particular times, and therefore believed that to coexist must be to exist together either at one and the same time, or at all times. The alternative, for Broad, is that existence is altogether abstract so that things really exist in no time at all (like universals do). For Broad, then, if everything coexists, this must mean that everything exists (i) at one and the same time, (ii) at all times (everything exists always), or (ii) at no time at all. Oaklander, quite correctly, notes that the tenseless theory is not committed to any of these alternatives because it does not hold that existence is confined to a particular moment of time. According to the tenselesss theory, things can exist at different times, but without their different locations imposing any special ontological status on them, in terms of existence and reality. But then, I argue, everything does coexist. Not in any of the senses Broad intended, but in the sense that there is no room for saying that things located at one time exist, while the things located at some other time do not. On the tenseless theory, existence cannot be relativised to times. To talk only of the terms that hold the same location as being coexistent, can only be a figure of speech, on the tenseless view, since the theory denies that existence is confined to any particular moment of time. Now, I think that Broad's fundamental point can be made even given this fourth sense of coexistence, namely that it is difficult to understand just in what sense entities that coexist in this fashion hold temporal relations, but that is not relevant for the present paper. What is relevant here is the fact that the claim that existence and reality is not confined to any particular moment of time is the fundamental thesis of the tenseless theory, and the basis of arguments professing to show that the tensed theory is contradictory.

Let me continue to sort out some possible confusions. Some may object to the claim that McTaggart's argument and Lewis' Problem of Temporary Intrinsics really are two different cases of the same argument. There is, for instance, a widespread misunderstanding to the effect that it would make a fundamental difference to substitute *F* and *G* with intrinsic properties, e.g. like colours, instead of tenses, and conceive of *a* as a thing, instead of events. Thus Nathan Oaklander argues that:

> McTaggart argues that events do not change and concludes that there is no change in the B-series, but that follows only if events are the only things that can change. The standard reply to McTaggart is that change can occur in the B-series because it is "substances" or things that can change. Events are changes, they do not themselves undergo change. (Oaklander, 1984, p. 42)[17]

But, this reply fails to take proper heed of the ontology on which McTaggart

[17] A similar objection is given by J. J. C. Smart (1972, p. 127).

bases his argument, and of how similar it is to the ontology of the static view. On the basis of this ontology, it is obvious that McTaggart's argument can be generalised to encompass any kind of incompatible properties and any kind of entity having the properties. This is indeed what Lewis has done, explicitly, and I think it is to be found implicitly in McTaggart's work.[18]

First of all, McTaggart treats events as a class of substances (1927*b*, sect. 306), and, secondly, it is obvious that McTaggart only proceeded to consider the possibility that events change tense, *after* having come to the conclusion that the other class of substances, i.e. things, do not really change properties because they are perduring entities and only vary between parts:

> "St Paul's Cathedral in the nineteenth century," and "St Pauls Cathedral in 1801," are both names of substances. But they are the names of different substances, since many assertions are true of St Paul's in the nineteenth century which are not true of St Paul's in 1801, and vice versa. And the second substance will be part of the first. If we take the substances which are named "St Paul's in 1801," "St Paul's in 1802," and so on to "St Paul's in 1900," they will together include all the content which is included in "St Paul's in the nineteenth century." (McTaggart, 1927*a*, sect. 163)[19]

According to McTaggart, St. Paul's cathedral is, in short, a compound substance

[18] For a detailed account of how I think McTaggart's ontological system determines his conclusion in the time argument, see Ingthorsson (1998).

[19] McTaggart's manner of spelling out his metaphysics in terms of what makes assertions true, has been the source to many misunderstandings about his views. Thus for instance L. B. Lombard claims that McTaggart advocated a notion of change that did not concern the exchange of properties by an object, but did concern changes in the truth values of propositions about when events occur (Lombard, 1986, p. 81). This is plainly mistaken. McTaggart advocated a theory of truth as a direct relation of correspondence between mental states, i.e. beliefs, and existing states of affairs. He explicitly argued against the reality of abstract propositions (McTaggart, 1927*a*, Ch. 2). According to McTaggart, truth is a relation between token beliefs, and token states of affairs, not between types of propositions and token states of affairs. Differences in truth values of different token beliefs of the same type about the same token state of affairs is thus dependent upon changes in that token state of affairs, i.e. no difference in the truth value of different beliefs of the same type about one and the same thing, unless there occurs a real change in that thing. Beliefs about St. Paul's, (and, mediately, linguistic tokens expressing those beliefs) are true by correspondence between the beliefs and the facts they profess to be about, and facts, according to McTaggart, consist of *"either the possession by anything of a property, or the connection of anything with anything by a relation"* (McTaggart, 1927*a*, sect. 10), i.e. facts are existing states of affairs. The reality required to make all the true, but incompatible, beliefs and/or assertions about St. Paul's have corresponding states of affairs, is a multitude of distinct substances having different properties. There cannot be only one substance having all these incompatible states, so there must be a multitude of substances that are parts of a compound, i.e. a perduring entity.

whose parts exist at different times and possess different and incompatible properties. That McTaggart presupposes a perdurance view of persistence, and thinks that whatever can be said about events applies to the temporal parts of things, is very clear in McTaggart's criticism of Russell in the time argument, when he notes that *"Mr Russell looks for change, not in the events in the time-series, but in the entity to which those events happen."* (McTaggart, 1927*b*, sect. 315)

McTaggart claims that it does not make any difference whether we look for change in the events which happen to things or in the things to which events happen. The reason is that he believes that when we consider things we consider them as being composed of temporal parts. McTaggart draws the obvious conclusion that since St. Paul's cathedral, his poker, and all other temporally extended objects consist of temporal parts, they do not really change, but simply vary between parts (McTaggart calls the temporal parts *facts*, but he takes facts to be existent states of affairs, see footnote 19). McTaggart does not simply overlook the obvious, that it is things, or substances, that change. He has come to the conclusion that because temporally extended things consist of temporal parts, they cannot really change. Change's only hope is then that events, *or the temporal parts of things*, change tense.

McTaggart does not address the problem of temporary intrinsics in any detail because it has, on his view, an easy solution, namely to give up change and admit that the incompatible properties are not really possessed by one and the same entity, but by different parts of a compound. For him it is easy, because he does not see change as an essential part of reality, it is the price to pay for order, coherence, and, perhaps, simplicity and elegance. In other words, he realised that change was the logical price to pay. The problem of having incompatible tenses, on the other hand, he could not dispose of so easily, because contrary to other kinds of properties he found it to be in the essential nature of tenses to be possessed in succession by one and the same entity. To be blue does not imply the possession of any other (incompatible) property, so one and the very same thing can be permanently blue without any complications. But, to be future necessarily implies that the thing in question will be present, and past. Nothing can be permanently future, permanently present, or permanently past; indeed nothing can be past without having first been future and present. The solution of providing things with temporal parts that permanently possess the various incompatible properties that apparently occur in the world, cannot be applied to the problem of the possession of incompatible tenses, because it is impossible to think that tense merely involves that there is one part of something that is future, another part that is present, and a third

part that is past. This would cancel the sense in which tenses were temporal.

What is really interesting here are the premises by which McTaggart comes to the conclusion that things must be composed of temporal parts, and why tensed change involves a contradiction. I will now presuppose what I have earlier argued (Ingthorsson, 1998), namely that the conclusion of the argument can only be understood in light of McTaggart's ontological system, in particular the fundamental principles (here presented as postulates) that:

P1 Nothing can be real that does not exist, i.e. that reality coincides with existence. (1927*a*, sect. 2 & Ch. 2)

P2 Existence and reality have no degrees, either something exists and is real, or it does not. (1927*a*, sects. 2, 35 & 40)

P3 Everything in existence, and therefore in reality as well, is constituted by substances that possess properties and hold relations. (McTaggart, 1927*a*, Ch. 4-6)

From this it follows that nothing can be real unless by being an existent substance, or a relation or property dependent for its existence upon being possessed by an existent substance. This means of course that time itself, if real, must be shown to be an existing substance, or, rather, compound substance. McTaggart is quite explicit about this: *"[T]he only way in which time can be real is by existing."* (McTaggart, 1927*b*, sect. 325)

The only way in which time can be real by existing, on McTaggart's account, is by existing as a whole. On the assumption that time is either an ordered relation between events and the temporal parts of things, or consists of the orderly related events and temporal parts themselves, the 'time-series', then all those events must *coexist* in the ordered relations they hold, because relations are for their reality dependent on the existence of the substances that hold the relation. According to his system, it will not suffice that time, or the events in time, exists piecemeal, as theories of temporal becoming suggests. By analogy, one could say that on McTaggart's account events will never make up a time if an event ceases to exist whenever another event begins to exist, just like jigsaw-puzzle pieces will never make up a picture if one piece is removed whenever a piece is fitted. McTaggart's ontology requires, in other words, that every moment of time, every event in time, every temporal part of persistent things, coexists, i.e. that if they are real at all, they are all equally real and existent. This is what is known as the temporal parity thesis. Temporal parity just states what follows from the above mentioned principles, P1, P2, and P3, when they are applied to time itself. It is the application of these principles to time that

creates problems for the dynamic view.[20]

3. The circularity of the arguments against dynamic change.

According to temporal parity, in order for it to be real that in time as a whole an entity is at one time future, at another time present, and at a third time past, that entity must coexist at three different and incompatible positions in time, which is impossible. Nothing could coexist at three different and incompatible positions in time, and yet the reality of tensed time, according to McTaggart's ontology of the real, requires that everything does.

According to temporal parity, in order for it to be real that in time an entity is at one time bent, and at another time straight, that entity must coexist in two different and incompatible shapes, which is impossible. Nothing can coexist as bent and as straight, and yet the reality of something possessing different properties at different times, according to McTaggart's ontology, requires that something does.

Temporal parity is often treated as an important corollary to the tenseless view, but I hold the stronger view that it is *equivalent* to the tenseless view.[21] The temporal parity thesis, as it is usually formulated, is a negation of the objective reality of tenses, and the thesis that only the present exists and is real, or that the present holds a privileged status in terms of existence and reality. William R. Carter and H. Scott Hestevold describe the temporal parity thesis thus:

> *Temporal Parity*: For any times t_i and t_j, neither t_i or t_j exemplifies the monadic properties of pastness, presentness, or futureness. It is not true that the state of the world at t_i or t_j uniquely reflects "the way things really are." Rather, the way things *really* are includes both the way things are at t_i and the way things are at t_j (Carter, 1994).

To hold temporal parity to be true not just commits to holding tenseless time as true, but is in fact equivalent to it; it is the thesis that time is not tensed, but tenseless.

But, if the arguments showing that change involves a contradiction depend on temporal parity, i.e. the denial of tense, then the argument that tenseless

[20] This is not of course the only problem of a dynamic view of time, but it is the most serious one. Other problems concerns, for instance, the construction of a semantics of a dynamic view (Arthur Prior (1967); Peter Ludlow (1999)), of an account of causal production (Mario Bunge (1959)), of a dynamic account of persistence and identity over time (Lowe (1998)).

[21] This view seems to be shared by Loux (1998, p. 207), and Michael Rea (1998). They use the term eternalism for the tenseless view of time, and describe it in very much the same way as I have here characterised the temporal parity thesis, notably that it is a denial of the view that only the present exists.

time must be true because tensed time is contradictory is circular. The alleged 'contradictory' nature of tensed time cannot then be used to justify one's preference of the tenseless view, because the 'contradictory' nature of tensed time merely consists in the fact that it is incompatible with the temporal parity thesis, i.e. incompatible with tenseless time.

Let us however not be too hasty. There is a way to ground the argument against tensed time in a way that is not so obviously circular, but which I think is unfeasible for other reasons. This involves seeing tensed time as directly incompatible, not with the temporal parity thesis itself, but with the principles P1-3 on which the temporal parity thesis rests. Arguably one could hold P1-3 as true, *a priori* of temporal considerations, i.e. before one has decided whether to hold the tensed or tenseless view as true. This is in fact the essence of McTaggart's reasoning.

In the first volume of *The Nature of Existence*, McTaggart sets out to build an ontological system by arguments that are entirely *a priori* of any empirical considerations, except two trivial one's: (i) that something exists, and (ii) the existent is diverse (McTaggart, 1927*b*, sect. 294). Accordingly, he establishes *a priori* of any other empirical considerations (or at least independently of them), including temporal ones, the principles P1-3, listed above. When this metaphysical base is established, and one looks to empirical matters, such as the appearance of time, it has been determined *a priori*, that unless time can be shown to exist as a whole, it cannot be real. If time fails to meet those *a priori* requirements for being a reality, when we do consider its empirical features, then it cannot be real.

McTaggart's approach is faulty, I suggest, because it presupposes that fundamental metaphysical principles can be established *a priori*, or independently of empirical considerations. Especially that it presupposes that the nature of existence can be determined *a priori* of *temporal* considerations. Surely, it is not possible to determine what it is to exist, without considering what it is to exist in time, or without experiences of what it is to exist in time, granted that everything existing does in fact appear to exist in time. When this approach to metaphysics is rejected, and it is admitted that empirical considerations are vital to the formulation of the basic principles of any metaphysical system, then the appearance of time must be regarded as important with respect to the soundness of principles like 'existence and reality coincide'. This makes it impossible to have accepted P1-3, without already having come to the conclusion that those principles are in accordance with existence in time, i.e. with what one believes is the correct view of the nature of time. Since P1-3, taken together, appear to be in conflict with the tensed conception

of time, then one can only accept P1-3 to be correct if one accepts the view that time really is tenseless. It cannot in any case be argued that the tensed view of time (and of existence) is in itself contradictory, but only incompatible with the tenseless view of time (and of existence).

My conclusion is that P1-3 cannot intelligibly be separated from the temporal parity thesis, because they are about existence, and existence appears to us as existence in time. Consequently, even when we think of the arguments against the dynamic view as resting directly on the acceptance of P1-3, then the contradictions that appear only amount to an incompatibility between the dynamic view and its negation.

I do not want to argue this in detail here, but I think it is important to ask about the reasons for accepting the thesis that existence and reality coincide; is it self-evident, or does it indeed depend on our theories of what it is to exist in time? Do we really think, *prima facie*, that the past is real by way of existing, and not *despite* that it has ceased to exist? Do we really think that the 'ratio' between the circumference of a circle and its diameter is real by way of existing? Do we really think possibilities are real by way of existing? Do we think natural laws are real by way of existing? Are the natural numbers real by way of existing? It does not seem to me that it is self-evident that these questions should all be answered affirmatively, and I submit that any principle that is supposed to serve such a basic function as the principle 'existence and reality coincide' does in McTaggart's philosophy, should either be self-evident, or else explicitly be given the hypothetical status it deserves. Even the idea that fundamental principles of the nature of existence and reality, should be boundary conditions upon time, is arguably in contradiction to a long tradition in the metaphysics of time which has seen time as a boundary condition of existent and real phenomena.[22]

There are questions about the validity of the principle that existence and reality coincide, that are, or should be, relevant to any metaphysical endeavour to establish that all moments of time are equally existent and real. Such a principle cannot be established *a priori* of temporal considerations, but only in light of a denial or acceptance of some theory about how the empirical features of time should be accounted for. As the situation is today in the philosophy of time, it can only be established in light of the acceptance of the static view, or denial of the dynamic view. In either case, arguments that presuppose temporal parity to show that the dynamic view contains contradictions, are circular.

If the *a posteriori* approach to metaphysics be admitted to be correct in

[22] Philip Turetzky (1998, p. 1).

contrast to McTaggart's *a priori* approach, the temporal parity thesis must be considered to be a denial of the dynamic view and thus any argument depending on this denial for showing that the dynamic view involves contradictions is circular. At the most it amounts to no more than a demonstration that the dynamic view is incompatible with its own negation (which is something we could know *a priori* of any such demonstration).

4. Temporal parity and the metaphysics of the static view.

To hold that all moments of time are equally existent and real sets serious constraints to any metaphysical model of reality. More immediately, it says that everything is equally existent and real *from any point of view*. From any point of view, what appears as 'the future' is as existent and real as 'the present'. So is 'the past'. In such a model there is no place for causal production.[23] There can only be existent items permanently holding ordered relations. Whatever can be said within the framework of such a metaphysical system about the indeterminism of natural laws, about certain causes enhancing probabilities for the occurrence of certain effects, cannot change the fact that the fundamental thesis of the metaphysics says that the relata of both ends of any relation, including causal relations, coexist.

Any attempt to establish that on the static view it is in some sense indetermined what is on the other end of any relation, or that there are many possibilities about what is on the other end, would either have to be incompatible with the basic principle of the metaphysics of the static view, or involve the claim that there are no causal relations, i.e. that there are no relations of *constant* conjunction; either anything, can be on the other end of any relation, or there are relations of something a bit less than constant conjunction. Perhaps any given kind of cause only holds a 0.8 correlation to some kind of effect. As a consequence it would follow that we could never *know* for certain on the basis of earlier events what will later follow. That is, we could not *know* 'beforehand' what is at the other end of the relation, even though of course there is (tenselessly) something at the other end. All questions about whether or not the history of the world is indetermined, uncertain, or contains many possibilities, will inevitably boil down to epistemological considerations, i.e. what we can know about the later stages of this totality of equally existent and real entities, from what we know about earlier and simultaneous stages of this totality. And, what we can know about the apparent regularity of the order we perceive it to have. That something is possible, on such a view, merely means that we do not yet know for certain whether it exists, either because its existence

[23] Haslanger (1989).

is ‘in some place other than here’, ‘in the future’, or ‘in another possible world’.

The temporal parity thesis even sets restrictions on what is meaningful to ask within an epistemological context. There is no sense in asking about the origin of anything, the coming to exist of anything, merely the relations between what exists. On this account, the reality of anything must in some way or another be grounded in existence. I have already mentioned the question of the existence of the future and past, but there is also such things as possibilities, which are real but non-existent states of affairs, according to the common-sense view. They are typically conceived of as something that *might have existed* if things would have turned out otherwise, or ways in which things could have been different than they in fact are. However, if principles P1-3 are true, possibilities can only be real by existing. This is, I think, Lewis’ view of the nature of possibilities:

> The world we live in is a very inclusive thing [...] Anything at any distance at all is to be included. Likewise the world is inclusive in time […] Maybe, as I myself think, the world is a big physical object […] But nothing is so alien in kind as not to be part of our world, provided only that it does exist at some distance and direction from here, or at some time before or after or simultaneous with now […] But things might have been different, in ever so many ways[…] Are there other worlds that are other ways? I say there are […] The other worlds are of a kind with this world of ours […] The difference between this and the other worlds is not a categorial difference. Nor does this world differ from the others in its manner of existing. I do not have the slightest idea what a difference in manner of existing is supposed to be. Some things exist here on Earth, other things exist extraterrestrially, perhaps some exist no place in particular; but that is no difference in manner of existing, merely a difference in location or lack of it between things that exist. Likewise some things exist here at our world, others exist at other worlds; again, I take this to be a difference between things that exist, not a difference in their existing. (Lewis, 1986, pp. 2-3)

I read Lewis’ modal realism as an attempt to draw out in full the consequences of the principles that existence and reality coincide, and have no degrees. Given those premises, even possibilities must exist in order to be real, and they cannot even exist as mere potentialities in actual states of affairs, since this threatens to introduce degrees of existence and reality. But, since they apparently do not exist in this world, then, on Lewis’ hypothesis, there must exist other ‘worlds’ in which these possibilities do exist (in that world they do not exist as possibilities of course, since then they would not exist there, and would have to exist in some other possible world, etc. *ad infinitum*). This is all very well, as far as the logical consistency and elegance of the metaphysical system is

concerned, but what is the price to pay? I think, like Sally Haslanger (1989), that it deprives us of the possibilities to provide natural explanations to many, or most, empirical phenomena.

5. Change, causality, and explanation.

When the reduction of change to variation between temporal parts is rejected, it is usually done on the grounds that it is a flagrant violation of our intuitive understanding of what change is, and what persistent objects are like. It is presupposed that we know intuitively what change is, and how persistent objects are, and therefore have the means to judge whether any proposed theory of how persistent things change is adequate or not. Haslanger provides another reason to why the intuitive (read dynamic) conception of change, and persistence, are metaphysically speaking better than the static conception. She argues that the static view deprives us of the means to provide *natural explanations* of empirical phenomena (1989).[24] She moves from the assumption that natural explanations depend on the idea that the past constrains the present, in some sense. She does not want to give herself any detailed account of what would count as a natural explanation in this sense, but surely, causal explanations are the paradigmatic example of natural explanations. There is a straightforward sense in which causal explanations explain how the past constrains the present; by preceding their effects in time. But precedence in time is not enough to establish how the past constrains the present. Precedence merely establishes a succession, and, logically speaking, anything can follow in succession after anything, as Hume pointed out. And, if everything coexists, it is not clear to me how the past constrains the present in any sense. Or, to put it in words that are more in line with the static view, how the earlier constrains the later.

In a stronger sense, the sense I prescribe to, causes necessarily precede their effects by being what produces the effects, or what brings the effect *into existence*.[25] On this account, a natural explanation is an explanation of why something exists, of what has brought it into existence. It is an explanation of its natural origins (as opposed to its supernatural origins, e.g. being created out of nothing by a deity, or just 'popping' into existence for no reason at all). A natural explanation of why a certain table exists, would be that it was

[24] Note that I am here talking about explanations of the natural origins of things, e.g. the existence of a table, a sparrow, a quilt. Other writers have claimed that the static view has 'explanatory advantages' over the dynamic view (Yuri Balashov (2000)), but then the term 'explanatory' is used in a different sense, notably 'descriptive coherence'.

[25] For reference, see Bunge (1959, p. 46).

produced out of certain tree by a certain carpenter. The table came into existence by the tree's ceasing to be, but the persistence of the 'stuff' out of which the tree was made. Thus the table is *existentially dependent* upon the tree, in the sense that the existence of the table required that the tree ceased to exist in order to provide the 'stuff' out of which the table was produced. This kind of explanation is not possible on the static view, because it presupposes that the existence of the temporal parts of the wood, the table, and of the carpenter, are equally existent and real; the table is made out of completely different 'stuff' than the 'stuff' which constitutes the tree. No temporal part could cease to exist to provide the 'stuff' of any other part, without violating the temporal parity thesis.

On the static view, what matters is to explain the *structure* of existent reality, in a consistent and coherent fashion, but explanations of the coming into existence, and continuing existence of the parts of this reality are unintelligible. According to the static view, the only explanation to be given to the question why the pyramids have lasted (persisted) for so long, is simply that they have so and so many temporal parts. Questions about *why* any particular exists, or *why* it changes, or *why* it persists, is strictly speaking unintelligible, on the static account. It is only possible to say *what* appears to exists, *how* it appears to change, and *how* it appears to persists. Let me say that the essence of this criticism of the static view is that it is entirely descriptive, not explanatory.

6. Conclusion.

It seems to me that what has hitherto been considered to be one of the most serious threats to a dynamic account of reality, the charge that it is self-contradictory and therefore necessarily false, is invalid. Arguments to the point that the dynamic account contains contradictions, rely implicitly on the temporal parity thesis, which is essentially in itself a denial of central tenets of the dynamic view, namely that only the present exists. When this implicit premise is made explicit, what appeared to be a valid deductive argument moving from self-evident premises to a not so evident conclusion, turn out to be either circular, by presupposing what it professes to prove, namely the falsity of the dynamic view, or mere demonstrations of the fact that the dynamic view is incompatible with its own negation. Since the dynamic view is better in accordance with common-sense, and has not been shown to be self-contradictory, its opponents must provide other reasons for rejecting it.

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