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## McTaggart, Lewis and the Problem of Temporary Intrinsic

**Abstract:** McTaggart's Paradox has been considered a special case of Lewis's Problem of Temporary Intrinsic (see Craig (1998), Rea (2003) and Rettler (2012)). I argue instead that the Problem of Temporary Intrinsic cannot simply be applied to the Problem of the passage of time and therefore that McTaggart's Paradox cannot be a special case of the Problem of Temporary Intrinsic. This observation is relevant in order to point out the difference between the change in objects or events over time (i.e. the subject of Lewis's Problem) and the change (or passage) of time (i.e. the subject of McTaggart's Paradox).

**Keywords:** passage of time, Problem of Temporary Intrinsic, being past, being present, being future, D. Lewis, J. M. E. McTaggart

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McTaggart's Paradox is notoriously hard to understand: different interpretations have been given of it and it has even been argued that it has no coherent interpretation.<sup>1</sup> My concern is not to establish whether there is or is not a correct interpretation of the paradox, but to consider whether a particular interpretation is actually an adequate account of a paradox of the passage of time, without considering whether the paradox is really McTaggart's paradox or not. The interpretation I have in mind depends on the assumption that McTaggart's Paradox is a special case of Lewis's Problem of Temporary Intrinsic.<sup>2</sup>

I have two main targets. First, I will point out that the Problem of Temporary Intrinsic cannot simply be applied to the problem of the passage of time and the reason for this is of use for highlighting the difference between the change over time (i.e. the subject of Lewis's Problem) and the change (or passage) of time (i.e. the subject of McTaggart's Paradox).

Once the difference between the two problems have been pointed out, my second aim will be to show that there is a way to present a Paradox of the passage of time in which some differences remain with respect to the Problem of Temporary Intrinsic.

My work is organized as follows: first, I give a presentation of the Problem of Temporary Intrinsic, second, I show that this argument cannot simply be applied to the problem of the passage of time, third, I will present a paradox for the passage of time which is not simply a special case of the Problem of Temporary Intrinsic.

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<sup>1</sup> See for example Broad (1938) and Dummett (1960) for different interpretations of McTaggart's Paradox (to be found in McTaggart (1908)). See Thomson (2001) for arguments against a coherent interpretation of McTaggart's Paradox.

<sup>2</sup> The Problem of Temporary Intrinsic first appeared in Lewis (1986). The hypothesis that McTaggart's Paradox is a special case of Lewis's Problem of Temporary Intrinsic has been first proposed by Craig (1998), and then approved by Rea (2003) and more recently by Rettler (2012).

### 1. Lewis's Problem of Temporary Intrinsic

Lewis's Problem of Temporary Intrinsic has been very widely discussed since its first publication in 1986.<sup>3</sup> I believe that the problem depends on two pre-theoretical hypotheses we make about things changing over time: the first is that one and the same changing thing exists at different instants of time; the second is that any property characterizing a thing changing is both temporary (i.e. it lasts for a period of time shorter than the entire existence of the changing thing) and intrinsic (i.e. it is possessed by the changing thing independently of any relation it may have with anything else).

In my opinion, the two pre-theoretic hypotheses can be schematically expressed as follows:

- 1) One and the same changing object (or event) *O* exists at different times
- 2) Any property *P* characterizing *O*'s change is exemplified both temporarily and intrinsically<sup>4</sup>

It may be interesting to note that when we make the second hypothesis pre-theoretically, the first is already incorporated in it, i.e. it is assumed that *O* in 2) is an object (or event) which exists at different instants of time.

The Problem of Temporary Intrinsic depends on the fact that the two hypotheses give rise to a contradiction. The argument showing the contradiction may be schematically presented as follows:

- 1- One and the same *O* exists at *t* and at *t\** [assumption]
- 2- Being bent is a property which characterizes a change in *O*, *O* is bent at *t* and *O* is straight (or not bent) at *t\** [assumption]
- 3 - Therefore, one and the same *O* is intrinsically bent and is intrinsically straight (or not bent)

Once 1 and 2 are assumed and the two pre-theoretical hypotheses 1) and 2) are accepted, conclusion 3 follows. Conclusion 3 is a clear contradiction and requires the revision of at least one hypothesis grounding it. Lewis himself presents three solutions to the problem envisaged above. Each of the three solutions requires us to revise our image of what it means for something to change over time and the philosophical literature has long discussed which solution is best. I am going to present very briefly the three solutions to the Problem of Temporary Intrinsic: my aim is just to provide the instruments for understanding why I think that the paradox of the passage of time cannot simply be a special case of the Problem of Temporary Intrinsic.

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<sup>3</sup> It is well beyond the purpose of this work to account for the literature on Lewis's Problem of Temporary Intrinsic. It may be useful just to remind that Lewis answered to objections to his argument in two publications: Lewis (1988) and Lewis (2002).

<sup>4</sup> Lewis wrote about temporary intrinsic properties. Some objectors to Lewis's Problem of Temporary Intrinsic pointed out that the Problem may be solved if we assume that the properties characterizing an object's or an event's change are instantiated either relationally (see Johnston (1987) and Rettler (2012)) or intrinsically (see Lowe (1988) and Haslanger (1989)). This debate presupposes a subtle distinction between the temporary or intrinsic nature of *properties* and the temporary or intrinsic nature of *property instantiation*. I try to be neutral with respect to this subtle distinction.

### ***1.1 The first solution to the Problem***

The first solution – the one actually defended by Lewis - is to assume that nothing exists in its entirety at different instants of time (i.e. the solution is to deny the first pre-theoretical hypothesis); according to this approach to the problem, what we commonly consider to be objects and events extended in time are constituted by temporal parts, each part being instantaneous and different from any other part. To use the terminology introduced by Lewis, things and events “perdure”, being constituted by temporal parts and not being wholly present at each instant of time. If we adopt the theory of temporal parts, the Problem of Temporary Intrinsic disappears as long as there is not something maintaining its identity through time and undergoing a change over time.

The first solution does not deny the second hypothesis, which is to be considered vacuously true. In order to see this, it may be useful to consider that we consider the following assertion vacuously true: any fountain of youth rejuvenates whoever drinks water from it. As long as it is commonly believed there are no fountains of youth, it is taken for granted that the sentence is vacuously true. In the same way, as long as - according to the first solution - it is not the case that one and the same object (or event) exists at different instants of time, there are no properties characterizing a changing thing existing in its entirety at different instants of time, and the second hypothesis is therefore to be considered vacuously true.

### ***1.2 The second solution to the Problem***

The second solution is to hold hypothesis 1), i.e. that something exists in its entirety at different instants of time, but to reject hypothesis 2). It is claimed that something existing in its entirety at different instants of time may change over time by having different temporary properties, without assuming that the properties characterizing something's change should be intrinsic.

For example, according to the second solution, I am something existing in its entirety at different instants of time. Suppose, moreover, that I am seated at  $t$  and that I am not seated at  $t^*$ , then – according to the second solution - I have the relational property being-seated-at- $t$  and I do not have the relational property being-seated-at- $t^*$ . The two properties are different relational properties and therefore there is no contradiction in assuming that I have one and not the other.

### ***1.3 The third solution to the Problem***

The third solution is again a way to reject the first hypothesis, and to allow the second hypothesis to be trivially true. Even if the third solution's approach towards the two hypotheses is equivalent to the first solution's approach, the reasons grounding it are not at all similar.

While the supporter of the first solution maintains that what we commonly consider an object or event is constituted by temporal parts, the supporter of the third solution - the presentist, according to Lewis - does not maintain that there are temporal parts, she claims instead that there is only one genuine time – i.e. the present - and therefore anything existing exists at it.

As in the case of the first solution, the second hypothesis is to be considered trivially true. The third solution excludes things existing at different instants of time and changing in it, these claims are enough to consider the second hypothesis trivially true. As long as nothing maintain its existence at different instants of time, the second hypothesis is considered trivially true.

## ***2. Lewis's Problem and the Change (or Passage) of Time***

Let us now try to apply the Problem of Temporary Intrinsic to the passage of time. Just as we believe pre-theoretically that objects and events persisting in time have temporary intrinsic properties (the assumptions which gave rise to Lewis's Problem), we may illegitimately presume the pre-theoretical belief that at least events persisting in time have temporary intrinsic *temporal* properties (by temporal properties I mean the properties "being present", "being future" and "being past"). And we may also presume that the latter pre-theoretic assumption gives rise to a Paradox which parallels the Problem of Temporary Intrinsic. In this section of my work, I want to argue that this parallelism is not adequate and that this fact may be useful for understanding an important difference between change over time and change of time.

Let us first try to apply Lewis's Problem of Temporary Intrinsic to the problem of temporal change. We seem to adopt the following two hypotheses:

- 1) One and the same event E undergoing temporal change exists at different times
- 2) Any temporal property T characterizing E's temporal change is exemplified both temporarily and intrinsically

A moment's reflection shows that we are not at all pre-theoretically disposed to accept the first hypothesis. Let us consider why. Let us suppose that an event E is instantaneous, i.e. it exists at a single instant of time. We still suppose that such an event undergoes a temporal change: it passes from being future, to being present and then past. The first hypothesis is therefore not pre-theoretically required in order to account for the passage of an event from being past to being present and from being present to being future.

It may be useful to reflect on the reason why the Problem of Temporary Intrinsic cannot simply be applied to the passage of time and in particular why the first hypothesis is not adequate. In my opinion, while we pre-theoretically assume that any property characterizing change over time pertains primarily to objects or events existing at different instants of time, we pre-theoretically accept that the properties "being past", "being present" and "being future" concern primarily instants of time, which are by definition instantaneous.

### **3. The Change of Time**

If my observation is correct, we pre-theoretically assume that while "being past", "being present" and "being future" pertain to instants of time and only indirectly to events or objects (instantiated at these instants of time), the other properties pertain to events or objects.

The problem of the passage of time may therefore be described as a problem concerning instants of time (and only indirectly objects or events): the problem may be described as the inability of an instant of time to instantiate the properties "being past", "being present" and "being future" both intrinsically and temporarily.

The paradox of the passage of time is not therefore a simple reproduction of the problem of temporary intrinsic change since the temporal properties pertain primarily to instants of time and not to objects and events; moreover instants of time changing their temporal properties are by definition without temporal duration, i.e. they are instantaneous, while objects and events changing over time have temporal duration.

Now, these observations concerning the objects which instantiate temporal properties make the first hypothesis considered (i.e. 1) in §2) inadequate, not only because the object of temporal properties are supposed to be instants of time, but also because they are not assumed to persist in time. We cannot simply assume that "one and the same instant of time exists at different times", an instant of time does not exist at any instant of time different from itself. In order for an instant of time to change its temporal properties, it seems that it should

be assumed that it maintains its identity through time, the first hypothesis is therefore to be changed as follows:

1\*) Every instant of time  $t$  maintains its identity through time

The second hypothesis is that an instant of time instantiates temporal properties both temporarily (i.e. it has them at certain times and not at others) and intrinsically (i.e. it has them independently of any relation it has with any other instant of time). The second pre-theoretic hypothesis may therefore be expressed as follows:

2\*) Any temporal property  $T$  characterizing  $t$ 's change is exemplified both temporarily and intrinsically

1\*) and 2\*) give rise to a contradiction. The argument may be schematically represented as follows:

1-  $t$  is identical with itself at any instant of time [assumption]

2- Being present is a temporal property which characterizes  $t$ 's change,  $t$  is present at  $t$  and  $t$  is not present at  $t'$  [assumption]

3 - Therefore, one and the same  $t$  is intrinsically present and is intrinsically not present

Once 1 and 2 are assumed and the two pre-theoretic hypotheses 1\*) and 2\*) are accepted, the contradictory conclusion 3 follows. Once again, some of our pre-theoretic assumptions are to be revised in order to avoid the contradiction.

I see three options which may be adopted by whoever wants to avoid the contradiction. The first option is obviously to reject hypothesis 1\*). But what is the reason for rejecting it? It is interesting to note that a solution similar to the first solution to the Problem of Temporary Intrinsics cannot be reproduced here. It does not make sense to say that an instant of time has temporal parts. We cannot therefore say that an instant of time does not maintain its identity through time because it has different temporal parts.

A presentist may reject the first pre-theoretic hypothesis by claiming that an instant of time exists only at the present time without maintaining its identity through time. Even if this is a viable alternative, it has not been adopted as far as I know. Different philosophers maintain different theories concerning the identity of instants of time: some philosophers assume that instants of time exist eternally or atemporally and therefore they maintain their identity through time,<sup>5</sup> others assume that they have counterparts as ersatz worlds<sup>6</sup> or they exist in the mind of God<sup>7</sup> and this is what allows them to maintain their identity through time.

If assumption 1\*) is accepted, the only way to avoid the paradox is to deny 2\*). 2\*) can be denied in principle by adopting two different strategies. It can be maintained (and this is the first strategy) that any temporal property characterizing an instant of time is temporary without being intrinsic. Or it can be maintained (and this is the second strategy) that any temporal property characterizing an instant of time is intrinsic without being temporary. The two strategies obviously avoid the paradox; it is an important and difficult philosophical problem to establish whether either of the two solutions accounts for the passage of time or whether they solve the paradox at the cost of denying the passage of time. I am not going to

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<sup>5</sup> This is usually maintained by supporters of the B-Theory of time (see for example Mellor (1981)) or of the hybrid A-B Theory (see for example Smith (2003)).

<sup>6</sup> This is suggested by Lewis (1986), and it is endorsed for example by Crisp (2007).

<sup>7</sup> See for example Rhoda (2009).

consider this problem here, my concern is the difference between the change in objects or events over time and the passage of time.<sup>8</sup>

For the present occasion, let me observe that the proposed problem of the passage of time is not a simple application of Lewis's Problem of Temporary Intrinsic. First, the two problems pre-theoretically concern different subjects, in one case they are pre-theoretically believed to concern objects and events existing at different instant of time, in the other case they are pre-theoretically believed to concern instants of time, which are instantaneous by definition. Moreover the solutions to the two problems are quite different: Lewis's solution to the problem of temporary intrinsic cannot be applied to the problem of the passage of time, moreover the presentist solution to the problem of temporary intrinsic is not actually applied in the case of the problem of temporal change. And the difference between the solutions to the two problems is a clear indication of the difference between the two problems themselves.

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<sup>8</sup> I discussed the two solutions to the paradox of time so conceived in Paganini (2005).