Chapter 3
Temporal Aspects of Points of View

Antonio Manuel Liz Gutiérrez and Margarita Vázquez Campos

Abstract Time has a highly unstable place between the objective and the subjective. On the one side, there are very well known philosophical arguments trying to show that time has only a subjective reality, even that it is merely a subjective epiphenomenon. On the other side, we are compelled to take points of view as non dispensable elements of reality, at least of a reality capable of containing beings like us. And points of view offer a world of temporal entities existing in an objective way. Moreover, points of view themselves appear to be temporal entities among other temporal entities. We analyse both aspects of time. Our main focus will be McTaggart's arguments against the reality of a fluent time, what he called temporal series of kind A. We will distinguish three very different arguments in McTaggart works. We analyse them in detail. And we reject their conclusive character. Our final target is to maintain that there is a room for fluent time in what is internal to points of view but external to the subjects adopting those points of view.

Is time a merely subjective epiphenomenon? Are there conclusive reasons against the objective reality of time? What is it to adopt a temporal point of view? Are points of view, themselves, temporal, or tensed, entities? If so, how to characterise their peculiar dynamics? We will try to offer some answers to these questions. And the first thing we will do is to face directly McTaggart's well known argumentative strategies against the reality of time.[1]

This work has been granted by Spanish Government, "Ministerio de Economía y Competividad", Research Projects FFI2008-01205 (*Points of View. A Philosophical Investigation*), FFI2011-24549 (*Points of View and Temporal Structures*), and FFI2014-57409-R (*Points of View, Dispositons, and Time. Perspectives in a World of Dispositions*).

[1]We will focus on McTaggart [13, 14].

A.M. Liz Gutiérrez (✉) · M. Vázquez Campos
University of La Laguna, Tenerife, Canary Islands, Spain
e-mail: manuliz@ull.es

M. Vázquez Campos
e-mail: mvazquez@ull.es

M. Vázquez Campos and A.M. Liz Gutiérrez (eds.), *Temporal Points of View*,
Studies in Applied Philosophy, Epistemology and Rational Ethics 23,
DOI 10.1007/978-3-319-19815-6_3

1 McTaggart's Arguments

In McTaggart's approach to time, we can distinguish three different arguments against the reality of temporal A-series, the ones constituted by the application of the characteristics "to be past", "to be present" and "to be future". One argument is merely negative. It tries to show that there is no reason for believing that temporal A-series are real. According to McTaggart, the A-series necessarily require some external reference outside the series themselves, but it is very difficult to imagine what that external reference can be. The other two arguments are positive. They offer reasons for believing that the A-series cannot be real. One of these positive arguments is based on the thesis that A-series are themselves contradictory. The other positive argument puts the emphasis on the fact that temporal determinations in the A-series are circular or regressive. We will maintain that none of these three arguments is conclusive. That being so, the doors would be open for an ontological analysis of the ways in which an A-theory of time, i.e., a theory maintaining the reality of temporal A-series, could be formulated and defended.

1.1 What Is the Issue?

Time is a central topic in McTaggart's philosophy. And the rejection of the reality of time is a constant thesis in the various stages of his thought.[2] At first sight, that rejection of the reality of time is surprising when we consider the strong dependence that McTaggart's approach has on Hegel's philosophy. McTaggart explicitly says that Hegel, together with Spinoza and Leibniz, maintained that time is not real. However, this is in sharp contrast with the standard interpretation of Hegel. According to that interpretation, the notion of time is crucial in order to understand Hegel's system. Heidegger, for instance, criticised Hegel for having over-conceptualised temporality. According to Heidegger, the problem was not that Hegel maintained that time is unreal, but that his conception of time was abstract and not personal.

A central part of McTaggart's approach to time is the claim that time implies change, and that change only is possible if things take temporal positions with respect to a distinction between future, present, and past. Applications of these temporal characteristics constitute the temporal series of kind A. McTaggart argued that relations like "earlier-than", or "later-than", together with "simultaneous to", would not make enough room for change. There would not be any change in an event with "temporal parts" placed earlier than others, and hence the last ones being placed later than the first ones. According to McTaggart, temporal positions with respect to relations like "earlier-than", or "later-than", and "simultaneous to", constitute temporal series of kind B. And the B-series depend on the A-series.

[2]This is so, at least, from McTaggart [13] to McTaggart [14].

Properly, the B-series only are "temporal" series thanks to their dependence on a certain A-series. Hence, there cannot be time without change. And there cannot be change but with respect to A-series.

Many authors have focussed their attention on that part of McTaggart's approach to time, the dependence of a B-series on an A-series. For some of them, the B-series would not depend on any series of kind A. Also, it has been claimed that change only requires different positions in a B-series. Usually, both claims are maintained by the same people. To have a B-theory of time consists in that. We will not take part in this discussion.

We will not address McTaggart's conception of events as "substances" that could be placed in one position or another in the A-series and B-series either. This is a very strange way of understanding the notion of an event. On an ordinary reading, "event" and "change" are nearly synonymous. "To be an event" means "to suffer a change". On more sophisticated readings, there also could be events consisting in "resisting change through a certain period of time". In any case, the notion of event and the notion of change are strongly interconnected.

Nowadays, we have two main theories of events: Davidson's theory of events and Kim-Goldman's theory of events. In both of these theories, events are temporal, or tensed, entities. Davidsonian events are primitive entities with no structure. But they have a temporal nature, they are tensed entities. According to Kim-Goldman, events are objects instantiating a property, or relation, in a certain time or period of time. Here, again, events are tensed entities. So, events would have an "essential" tensed character in our two most important theories of events. But, if events are tensed entities, then they have to have by themselves a position in time, both in the A-series and in the B-series. In the B-series, they have a stable position. In the A-series, their position is not stable. In any case, events do not seem to be substances, in the sense of being the "substrata of change", or the "subject of temporal determinations". In other words, if they are substances, they seem to be essentially "tensed substances".

The issue is not only terminological. On the one hand, it would be to beg the question of the "unreality of time" to say, without argument, that what is placed in the A-series and B-series are timeless substances having an unproblematic real existence. That way, the A-series and B-series could be no more than two families of predicates we can attribute to a timeless reality. This would convert the A-series and B-series into a mere epistemological, or descriptive, recourse. On the other hand, to say that what is placed in the A-series and B-series are tensed events would be to beg the question in the opposite direction. It would entail that some positions in the A-series and B-series have a direct ontological value. There is, however, a crucial difference between these two options. In the first option, it is very difficult to understand why there are A-series and B-series. In other words, what could it be the point of having them? This is not a problem for the second option. Simply, reality is itself tensed. And through A-series and B-series we would try to conceptualise the temporal nature of reality.

In the frame of the second option, we need to give more ontological weight to A-series and B-series. We need to claim that events are essentially tensed. They

have, in themselves, some ontological positions in A-series and in B-series. Moreover, whereas their positions in the ontological B-series are stable, their positions in the ontological A-series are not so stable. These events can be future events, present events, or past events according to their own, let us say, "internal temporality". That way, to try to place events into some other A-series, or into some other B-series, would always be to make an epistemic guess about some very special sort of "coordination" of their internal temporality, which is essential to them, with other attributed temporalities, perhaps with our own temporality.

We can conclude this preliminary discussion by saying that McTaggart's conception of events seems to be not only unclear, but deeply misleading. However, as we have said, this is not the issue we want to be concerned with here.

There are other problems we want to avoid. We will avoid, for instance, the problem posed by temporal appearances. Even if we come to have very strong reasons against the reality of time, we will continue perceiving and feeling time and change. We acquire new beliefs, and we abandon others. There seem to be histories and news. And we seem to communicate to each other, and to share, those perceptions and feelings, those beliefs, histories (trying to distinguish between histories and stories), and news (for instance, in newspapers). We adopt an impressive variety of intersubjective points of view about a fluent time. Moreover, to communicate something, and to make assertions and arguments, takes time. We will not discuss in depth here, either, the status of all such appearances. But they have an enormous weight.

McTaggart tries to make sense of temporal appearances through another way of ordering events, the C-series.[3] An alphabetic order would be an example of such C-ordering. McTaggart uses as an example an order like M,N,S,T. By themselves, C-series of events do not constitute a temporal series. In particular, they lack a determinate direction. The previously mentioned order, for instance, is symmetrical. It can also be seen as T,S,N,M. Again, it is only together with an A-series that a C-series can determine a temporal B-series. However, C-series can exist objectively. And McTaggart claims that they can give an "objective support" to our temporal appearances. That way, our temporal appearances could be "well founded".[4]

Indeed, McTaggart's treatment of time is complex. His arguments against the reality of time are entangled with a huge number of other claims. And we cannot fully understand and assess McTaggart's arguments in isolation from other aspects of his philosophy.[5]

[3]Mainly, he does it in book VI of his *The Nature of Existence* (1927).

[4]The notion of a "well founded apparent relation", a "*bene fundata* appearance", would come from Leibniz. This topic will be discussed in other chapters of the book.

[5]About that complexity, see Nyiri [17]. She also offers a very interesting overview about the different reactions to McTaggart's arguments in the last hundred years, in particular their connections to Einstein-Minkowski's conception of space-time. We will not address any of these topics here.

Having said all of that, what then is the issue we are going to discuss? The issue we want to discuss is whether McTaggart's arguments against the ontological reality of temporal A-series are conclusive. We will argue that they are not.

We would not be in a comfortable position if we could admit only the C-series as real. Nor we would be in a comfortable position if we could only say that even though no temporal A-series can be real, change does not need any such temporal series, but only some B-series. Neither the C-series nor only a B-theory of time is what we expected to have in order to understand time. C-series are completely independent of time. And B-series are completely independent of what can be taken as the paradigm of change: our experience of a fluent time.[6]

We would not be in a comfortable position either if we considered that both past and future are unreal, or inexistent, and that only the present has reality or existence in a full sense; or that past and future are just as real as the present; or that only the past, a "growing past", is real. Nor would we be in a comfortable position if we simply considered that the problems posed by McTaggart, about the reality of B-series and A-series, and about the reality of change and time, will be alive "for ever".

The three most important philosophical theories of time rejecting the reality of the A-series are Presentism, Eternism, and the Growing Block Universe Conception. Roughly, they can be characterised as follows

Presentism claims that only exists the present.
Eternism claims that past and future are just as real as the present.
The Growing Block Universe Conception claims that only is real the past, a growing past.

What is extremely puzzling with these three philosophical theories is that they are usually explained in terms of the A-series (more or less, in the way we have done). Only Eternism can preserve a certain sense in terms of the B-series.[7] Moreover, if these three theories are understood as theories of the physical time, they will have serious problems concerning the identification of the "present", and its distinction from the "past" and from the "future". The Special Theory of relativity entails that the identification of the present is relative to the place where we

[6]That A-series are essential to our experience of time, and that an adequate account of time needs them, are the two main claims about time of Lynne Rudder Baker ([2], Chap. 7). In her own words, "[…] both the B-series (that orders time in terms of unchanging relations like "earlier than") and the A-series (that orders time in terms of changing properties like "being past", "being present", and "being future") are needed for an adequate account of time. Neither series is dispensable, and neither by itself is a sufficient account of time. […] it is a deep fact about time that it can be experienced only as transient." (pp. 155–156).

[7]Suppose this situation: either I am singing, or I have sung, or I will sing. What is it ultimately real of that situation? For Presentism only that I am singing at the present time is real. For Eternism, that I have sung and that I will sing would be as much real as that I am singing at the present time. For the Growing Block Universe Conception, only that I have sung would be real. It is very difficult to reformulate this example exclusively in terms of B-series! Only Eternism seems not to depend on a sharp distinction between the "past", the "present", and the "future".

are doing the identifications. So, the correct answer to the question "What is it real in the universe?" would depend on the "place" or "position" where we were answering it.[8] Again, only Eternism seems to be capable of having a chance to deal with this problem. Simply, for eternism all temporal positions would be real, without any further qualification.

In any case, Eternism, Presentism and the Growing Block Universe Conception would reject the reality of the A-series, i.e., the reality of a fluent time. So, our experience of a fluent time would be only a "mere illusion". Indeed, this is not a comfortable position. Moreover, it cannot be a comfortable position if we do not have any good explanation of why we come to have that temporal illusion.

Fortunately, we can do something better. We can resist McTaggart's arguments. In particular, we can resist McTaggart's arguments against the reality of temporal series of kind A.

1.2 Three Arguments

As we have said, we can distinguish in McTaggart three different arguments against the reality of temporal series of kind A. One of them is a negative argument offering reasons for "not assuming" their reality. The other two arguments are positive arguments offering reasons for "rejecting" that reality.

The negative argument is based on the need to appeal to a certain element X, external to the A-series, in order to construe the series. According to McTaggart, it is very difficult to say what that element X could be. And this would offer a negative reason against the A-series. We would have a negative argument in the sense that it is not an argument for rejecting the A-series, but only an argument for not assuming it. One of the positive arguments for rejecting the reality of an A-series is based on the existence of an internal contradiction in the concepts involved in it. The other positive argument is based on the existence of circles or regressive situations when we try to place something in an A-series. Usually, the negative argument has been ignored in the literature, and the two positive arguments have been considered to be one and the same. This is a mistake.

In the most famous passage of his book *The Nature of Existence* (1927), Chap. 33, McTaggart himself combines the two positive arguments. Let us see the full scene:

1. McTaggart argues that the only genuine source of time we can get is the one involving change. That is, there is no time without change.

[8]Very often, the "spacialisation of time" in Special Theory of Relativity is assumed without taking into account its metaphysical consequences in relation to Presentism, Eternism, and the Growing Block Universe Conception. For Presentism and the Growing Block Universe Conception, what is real would be relative to our place or position. With respect to the physical world, only Eternism seems to have clear advantages.

2. Then, he argues that "the only change we can get is from future to present, and from present to past" (#329). That is, a change in the temporal positions of some event according to an A-series.
3. Then, he affirms that "being past", "being present" and "being future" are incompatible determinations or characteristics. If something is past then it is not present or future, if something is present then it is not past or future, etc.
4. After that, he claims that "every event has them all" (#329). That is, every event would have to be past, present, and future. All the three characteristics would belong to each event (or at least two of them, if we consider the first and the last elements of an A-series).
5. There is a direct contradiction between 3 and 4. The intended conclusion is: "The reality of the A-series, then, leads to a contradiction and must be rejected" (#333).
6. McTaggart considers the most obvious way of trying to escape from that contradiction: "The characteristics are only incompatible when they are simultaneous, and there is no contradiction to this in the fact that each term has all of them successively" (#329).
7. But he rejects that strategy arguing that we cannot make sense of that "successive character" except in a viciously circular or regressive way. He says: "Thus, our first statement about [an event] M—that it is present, will be past, and has been future—means that M is present at a moment of present time, past at some moment of future time, and future at some moment of past time. But every moment, like every event, is both past, present, and future. And so a similar difficulty arises" (#331).
8. The consequence of rejecting the above strategy would again be that, "The reality of the A-series, then, leads to a contradiction and must be rejected" (#333).
9. The final conclusion is that, "Nothing is really present, past, or future. Nothing is really earlier or later than anything else or temporally simultaneous with it. Nothing really changes. And nothing is really in time" (#333).

In that argumentation, we can distinguish two different positive arguments against the reality of temporal series of kind A. There is a first argument constituted by 3, 4 and 5. And there is a second argument constituted by 6, 7 and 8. As is stated in 9, the conclusion of both arguments would be the same. However, it is important to appreciate that they are very different arguments. The second one is an argument against a certain way of trying to resist the first one.

We will argue that the first argument 3-4-5, based on the existence of an internal contradiction in the very notion of an A-series, depends crucially on other theses of McTaggart. And that these theses are far from being acceptable. Also, we will argue that the second argument 6-7-8, based on the existence of a circle or regress when we try to place something in an A-series, does not necessarily lead to the conclusion that the time defined by such A-series is not real. Once the two positive arguments are rejected, McTaggart's approach only has the support of the negative argument. We will argue that this is a very weak support.

1.3 The First Positive Argument: The Existence of an Internal Contradiction in the Very Notion of an A-Series

The most contentious claim of the argument 3-4-5 is 4. It is the claim that every event would have to be past, present, and future. Why accept that claim?

This is one of the clearest cases where it is necessary to place McTaggart's arguments against the reality of time in a broader context. As it stands, claim 4 is simply unacceptable. Moreover, in the text mentioned, McTaggart does not offer any clear reason why we should have to accept it. The only loose explanations McTaggart gives of that claim appear in fragments like the following one:

> The characteristics, therefore, are incompatible. But every event has them all. If M is past, it has been present and future. If it is future, it will be present and past. If it is present, it has been future and will be past. Thus all the three characteristics belong to each event. How is this consistent with their being incompatible? (#329)

Our question remains open. In what sense would all the three temporal characteristics of the A-series have to belong to each event? It is in the context of the second argument, 6-7-8, that we find a clue:

> But what is meant by 'has been' and 'will be'? And what is meant by 'is', when, as here, it is used with a temporal meaning, and not simply for predication? (#331)

There is here a very important distinction between "temporal meaning" and "predicative meaning". It is in the predicative meaning that all the three temporal characteristics of the A-series would have to belong to each event.

In the predicative meaning, we would have to accept conditionals such as the following ones, let us call them conditionals T:

- If M has been future (with a temporal meaning), then M is future (with a predicative meaning).
- If M will be past (with a temporal meaning), then M is past (with a predicative meaning).
- If M is present (with a temporal meaning), then M is present (with a predicative meaning).

The predicative meaning is an "absolute" and "tenseless" meaning. And it is in that sense in which every event M would have all the three temporal characteristics of the A-series (we are leaving apart the first and the last events in time).

So, 4 is true "only" in a predicative sense. This point is crucial. However, not all commentators have noted this aspect of McTaggart's arguments. Generally, the emphasis is placed on in the second positive argument. Paul Horwich is an exception. He says[9]:

[9]Horwich [9], Section "McTaggart's argument for the unreality of time".

> *If events are located in a real A-series, then each event acquires the absolute properties past, now and future*. A real A-series entails that for every event such as E, there is a fact, included in the totality of facts that constitutes the universe, consisting of E's having the quality of *presentness*, that is,
> E is (or, E is now)
> but also the universe must contain the facts
> E will be (or, E is future)
> and
> E was (or, E is past)
> Given what is meant by 'a real A-series', such facts are not relations between events and times. They are not, in other words, the exemplifications of merely *relative* properties, which can both apply and fail to apply to the same event relative to different frames of reference. Rather, such facts consist in the exemplification by events of absolute properties.

Hence, in a predicative (absolute, timeless) sense, every event would have to be past, present, and future. One of the best analogies for understanding the predicative sense of temporal predicates, and so the absolute character that temporal characteristics can have, is to think of reality as a movie in a box (or in a CD, or DVD, or any other format). In a certain sense, in the predicative sense intended by McTaggart, all the events of the movie really are in the box.

Another good analogy would be offered by the music contained in a score, in comparison with a particular performance of the score, and with the A-series created by such a performance. Also, we can think of some written text, for instance a book, in comparison with a particular reading of the text, beginning with some parts, ending in other parts, and with the A-series created by such a reading. Anyway, let us continue using the analogy of "the movie in the box".

The movie in the box constitutes a C series. And it would be a temporal B-series only in relation to the movie being displayed in a certain way, i.e. in relation to a certain A-series. If the movie were to be displayed in some "non-standard" way, for instance beginning at the end, we would obtain a different B-series from exactly the same C series. For McTaggart, some C series (some movies in their respective boxes) would constitute the ontologically most basic, and epistemologically most objective, structure of reality. McTaggart is a pluralist (in clear contrast, for instance, to Bradley). Reality is not Parmenidean, but plural. And that plurality is organised into a complex set of different series of kind C.

In any case, we can ask, why does the predicative meaning have to be the only relevant meaning in our discussion? More precisely, why does the predicative meaning have to be the only "ontologically" relevant meaning? Why cannot the temporal meaning be the basic one?

Before answering these questions, it will be relevant to comment on an important point made by Dummett. He sees a crucial difference between "time" and things like "space" or "personality".[10] The case of personality is less clear (and surely very close to the case of time). So, let us consider only the case of space.

In relation to space, we can also identify positions both according to perspectival properties like "here" and "there" (a kind of let us say, "spatial A-series") and

[10]Dummett (1978, v.o. 1960) [5].

according to non-perspectival, or absolute, properties like "near to" and "far from" (a kind of let us say, "spatial B-series"). Let us focus on expressions like "here" and "there". They are token-reflexive expressions. When a token-reflexive expression occurs in a sentence, the sentence can have different truth values according to the circumstances of its utterance. In relation to space, every position can be described both with the help of expressions like "here" and "there" and with the help of expressions like "near to" or "far from". Dummett agrees with McTaggart in that A-series are essential to time. And this is what establishes a sharp contrast with space. For whereas, as we have said, the use of token-reflexive expression is not essential to our descriptions of objects as being in space, it seems to be essential to our descriptions of objects as being in time.[11]

According to Dummett[12]:

> … a description of events as taking place in time is impossible unless temporally token-reflexive expressions enter into it, that is, unless the description is given by someone who is himself in that time (1978: 354)

In fact, McTaggart rejected the reality of space and personality. They are not really such as they seem to be. And Dummett is right in that McTaggart does not reject them through the reasons he uses for rejecting the reality of time. The reasons for rejecting the reality of space and personality, such as they seem to be, are connected in McTaggart with the reasons for rejecting the existence of "matter". Anyway, the crucial question is the following: Why cannot the contrast Dummett is emphasising have a correspondence in reality? In other words, why cannot the essential character of token-reflexive expressions in our descriptions of "things being in time" be real but in the form of a psychologically epiphenomenal A-series having a pale ontological correlate in some C-series?

Dummett gives a very revealing answer to that question. His answer is that McTaggart's rejection of the reality of time ultimately rests on the assumption that there has to exist, at least in principle, a "complete description of reality in absolute terms". That would be the assumption that reality can be thought of as completely contained in "a set of movies in their respective boxes". Dummett says:

> I think the point is that McTaggart is taking for granted that reality must be something of which there exists in principle a complete description. […] The description of what is really there, as it really is, must be independent on any particular point of view. Now, if time were real, then, since what is temporal cannot be completely described without the use of token-reflective expressions, there would be no such thing as the complete description of reality[13]

[11]According to Dummett, the case of personality would be similar to the case of space. However, it can be claimed that token-reflexive expressions are also essential for describing something as a particular person, for instance for describing something as being "me".

[12]Dummett [5].

[13]Dummett ([5]: 356).

We arrive at the core of the first positive argument of McTaggart. According to Dummett, we have two exclusive options:

1. The existence of complete absolute descriptions of reality entailing the unreality of time.
2. The reality of time entailing the non-existence of complete absolute descriptions of reality.

Faced with these two options, in the same text Dummett asks whether the thesis that what is in time cannot be fully described without token-reflexive expressions could not be taken

> … rather as demonstrating the reality of time in a very strong sense, since it shows that time cannot be explained away or reduced to anything else?

The question, then, following Dummett, would be this: Why not adopt the option 2?

McTaggart's own answer can be found in the first two chapters of *The Nature of Existence*. There, McTaggart makes "reality" and "existence" equivalent. Furthermore, both notions are taken to be undefinable. If we try to define them, we become involved in circularities and regresses. But, even if the notions of reality and existence are not definable, McTaggart claims that we can identify the general sorts of things that are real, or existent. McTaggart argues that there is no other reality apart from the reality that exists in an absolute sense. In the last instance, for McTaggart there are not perspectival properties; there are not degrees of existence either; and there is no other possibility apart from actuality.

McTaggart rejects any non-actually existent reality. In particular, he rejects

1. the reality of propositions: semantically evaluable abstract objects of belief, desire, etc., that can have reality even when they are false and thus when there is nothing in reality corresponding to what is believed, desired, etc.
2. the reality of non-existent characteristics: properties that do not have actual instances,
3. the reality of non-existent facts: facts that are not actual facts, and
4. the reality of non-existent possibilities: real possibilities apart from what is actual.

In his own words[14]:

> It would seem, then, that there is nothing which compels us to believe in non-existent reality. There is nothing which makes it necessary for us to accept the reality of propositions, or of non-existent characteristics, facts, or possibilities. And these are, as far as I know, the only things which have been asserted to be real without existing.
> But are we entitled to go further, and conclude that there are reasons for positively rejecting non-existent reality? With regard to characteristics and possibilities, the course of our argument has justified us in asserting positively that they cannot be real without existing. For we saw, to begin with, that all characteristics were existent. And all statements of

[14]All the following fragments of McTaggart in this section come from ([14]: #35–36).

> possibilities have been reduced either to statements about existent knowledge or to statements about the implications of characteristics, and are therefore statements about the existent.

Let us focus on the case of possibilities. This would be of help in order to better understand McTaggart's first positive argument against the reality of time. McTaggart assumes that the notion of possibility is ambiguous. "It is possible that…" can have two meanings: an epistemological meaning and an ontological meaning. And he argues that, in either of these two senses, the notion of possibility involves anything which is real but not existent.

In the epistemological sense, possibility would mean a "limitation of our knowledge" in the following sense:

> Thus, if I say that it is possible that it may rain to-morrow, the most obvious sense of the words is that I do not know whether it will rain or not.

It is clear that this does not involve anything real but non-existent. As McTaggart says,

> In this case, clearly, it is a statement, not about any non-existent reality, but about my existent knowledge

The ontological sense would be present when we say things like, for instance, "It was possible that I should not have sneezed yesterday, although I did sneeze". According to McTaggart,

> In this case the possibility means, I think, that there is nothing within some particular field of circumstances to ensure my sneezing. For example, it might have meant that the fact that I was alive on that day did not ensure my sneezing on it, as it did my breathing on it.

And McTaggart claims that

> … when possibility is taken in this sense, it is an assertion about the implication of one characteristic by another. And we have seen that the implication of one characteristic by another is always an existent fact. It is therefore no more necessary to accept the reality of anything non-existent when possibility is taken in this sense than when it is taken in the other.

Now, we can state the key point. Possibility in the ontological sense would mean that there is "an implication between characteristics that do exist". Hence, because the only objective correlate of an A-series would be an absolute and tenseless ordering according to some C-series, the assertion of temporal possibilities would have to mean that there are some sorts of implications between characteristics that do exist in some particular C-series (as "the events of a movie" do exist in the box).

McTaggart's generalised use of the expression "unreality of time", instead of using the expression "non-existence of time", is closely connected to that point. McTaggart does not want to argue simply that time does not exist. His precise and specific target is to argue that time is not "something that can be taken as real but in some cases non-existent, in the sense of non actually existent".

McTaggart applies to "temporal" possibilities this general position about possibilities. Can we accept his proposal? Certainly, the intended meaning of our

assertions of temporal possibilities is not necessarily the epistemological one.[15] However, when it is not, it is plausible to argue that our assertions do not have the ontological meaning described by him either. Simply, our assertions of temporal possibilities do not seem to be assertions about implications between characteristics that do actually exist in some kind of C-series.

Why do we have to accept that McTaggart's ontological meaning is "the only adequate ontological meaning" that can be given to assertions of temporal possibilities? At this point, McTaggart's argumentation becomes badly circular. The predicative sense in which we would have to accept the above introduced conditionals T is taken to be the only ontologically relevant sense because temporal possibilities are considered to have "the same nature" as all the other possibilities. And with respect to all these other possibilities, McTaggart has claimed that, if our assertions of possibility do not mean limitations of our knowledge, then they have to mean "implications between characteristics that only exist in some kind of C-series". Assertions of possibility can only express either limitations of our knowledge or implications between characteristics.

However, the crucial feature of temporal possibilities is that they are "temporal". In contrast with other possibilities, when they have an ontological sense, they cannot be reduced to implications between characteristics that only exist in some sort of C-series. If we lose the temporal sense of temporal possibilities, then we lose them completely. If they are reduced to the nature of the other non-temporal possibilities, then their peculiar nature is eliminated. Hence, we cannot argue that temporal possibilities are no more than implications between characteristics "because" they are like all the other non-temporal possibilities. This would prejudge the issue.

In one of the texts above quoted, McTaggart says of propositions, of non-existent characteristics, of non-existent facts and of non-existent possibilities that they are, as far as he knows "the only things which have been asserted to be real without existing" (#36). The problem is right here. The problem is that temporal possibilities are "peculiar".

Hence, one can reject that temporal possibilities, in particular non-existent (always in the sense of being non-actually existent) temporal possibilities like "to be future", or "to be past", can be approached in the same way in which other possibilities are approached. It can be claimed that they do not only mean either limitations of our knowledge, or implications between characteristics that exist, in an absolute and tenseless sense, in some kind of C-series. In other words, it can be claimed that the temporal sense of possibilities like "to be future" or "to be past" cannot be reduced to any predicative sense. And it can be claimed that the temporal sense of "to be present" is not reducible to its predicative sense either!

[15]When, for instance, we say something about the future, we are not necessarily only expressing our ignorance. Moreover, the contrast between the past, the present, and the future (including here the asymmetry and directionality of a fluent time) cannot be reduced to a simple question of more or less knowledge.

Apart from his general metaphysical framework, there is nothing in McTaggart's arguments that excludes these claims. But, these claims would make conditionals T unacceptable. And they would put McTaggart's first positive argument against the reality of time in serious trouble.

We have arrived at a very important result. There are two ways of assuming it. One way of assuming it would be stronger than the other one. We can say that even if with respect to non-temporal possibilities the conditional

- If x is G in a non-temporal modal sense, then x is G in a predicative sense

were to be accepted, for any property G, one could reject the following T conditional:

- If x is G in a temporal modal sense, then x is G in a predicative sense

This would be the weak way of assuming our result. However, we could also say that because the "actualisation" of every non-temporal possibility always involves some temporal aspect, there is always something in non-temporal possibilities that cannot be "reduced" to a mere predicative meaning. It is easy to see that this second way of taking our result is very much stronger than the first one.

Let us conclude this section by saying that there is a crucial "change of meaning" in McTaggart's thesis that every event would have to be past, present, and future. In that thesis (4 in our reconstruction above), "past", "present", and "future" have a predicative, absolute, tenseless meaning. But this is not the temporal meaning that "past", "present", and "future" have in the A-series. Moreover, this is not the meaning that these words have when it is stated that each one of those characteristics is incompatible with the other ones (3 in our reconstruction).

The temporal meanings only entail the predicative meanings if we assume all the other metaphysical theses of McTaggart concerning the identity between reality and existence, and the implicit inclusion of temporal possibilities in his rejection of non-existent but real possibilities. However, there is much room for controversy with respect to all these matters. Therefore, there is no conclusive contradiction between 3 and 4, in the argumentative line above presented. And therefore, McTaggart's first positive argument against the reality of time is not conclusive.

1.4 The Second Positive Argument: The Existence of a Circle or Regress When Something Is Positioned in an A-Series

McTaggart's first positive argument was that the predicates "past", "present", and "future" involve a deep contradiction because, on the one hand, they are incompatible predicates and, on the other hand, all three apply to every event (for simplicity, we will follow McTaggart's use of the term "event"). As we have seen, a natural reply is that the predicates which apply are not simply "past", "present", and

"future", but rather, for instance, "will be past in the future", "is present in the present", and "was future in the past", these new predicates being compatible. McTaggart's response to this reply is that it cannot offer any help. And that response constitutes his second argument, 6-7-8 in our reconstruction.

Dummett clarifies this point as follows[16]:

> Instead of three, we now have nine predicates, each of which still applies to every event and some of which are incompatible, for example, the predicates "was past" and "will be future". Admittedly the objector may again reply that the predicates which really apply to the same event are "is going to have been past" and "was going to be future", and that these are again compatible. But McTaggart can counter this move as before, and so on indefinitely

Dummett's conclusion with respect to McTaggart's reply is:

> If there is a contradiction connected with the predicates of the first level, the contradiction is not removed by ascending in the hierarchy [of temporal qualifications]

However, as we have said, there is no internal contradiction connected with the predicates of the first level. McTaggart's first positive argument is not conclusive. And if there is no such internal contradiction in the notion of an A-series, then the existence of a circle or regress when something is positioned in that series cannot lead to that contradiction either. The existence of such a circle or regress may constitute a hard problem, but it does not lead to the intended contradiction.

The majority of authors commenting on McTaggart's refusal of the reality of time have focussed on the supposed contradiction pointed out by the second argument. However, there is no such contradiction. There is only "a threat of circularity or regress". Once the conclusive character of the first positive argument against the reality of the temporal A-series is rejected, the second positive argument, i.e. the argument presented through 6-7-8, has to be reconsidered.

Nevertheless, the circles and regresses involved in the second argument pose an important problem. What is "that" problem? Let us introduce the main elements from which it arises.

We begin with a set of temporal predicates, or properties, or characteristics: "to be past", "to be present" and "to be future". And our task is to attribute some of these temporal characteristics to things that suffer a change. But, we cannot do it in an arbitrary way. There is the following "normative restriction" regulating our attributions:

(R) Nothing that changes can have in any of its temporal positions more than one different temporal characteristic, i.e., it has to be either "past", or "present", or "future"; and only the characteristic "to be in the future" could be had more than one time.

[16]In Dummett (1978, v.o. 1960) [5]. All the fragments of Dummett in this section come from here, pp. 351–352.

R is crucial. It establishes that nothing that change can have the same temporal position both in the past and in the present, nor both in the past and in the future, nor both in the present and in the future. And that only with respect to the future may there be more than one temporal position.[17]

The future is very peculiar. A thing that has changed only can have a position in the past. A thing that is changing only can have a position in the present. However, a thing that will change can be placed at different positions in the future. Not only because we can be ignorant of when it will change. To the extent that determinism "can be false", different positions in the future of a thing that will change are consistent with supposing a complete knowledge.[18]

R establishes a restriction that is not relativised to a particular A-series. Nothing that changes can be past according to a certain A-series and be present according to another A-series. Nothing that changes can be past according to a certain A-series and be future according to another A-series. And nothing that changes can be present according to a certain A-series and be future according to another A-series. In a literal sense, these things cannot occur "at the same real time". This is how our attributions of temporal characteristics work.

R does not exclude an "open future", i.e., different future possibilities. This can give sense to the asymmetry between, on the one hand, the past and the present and, on the other hand, the future. But R does not entail that the future is open either. Moreover, the same event could be placed more than one time in the future even though there were not but one only future. By themselves, our attributions of temporal characteristics according to R do not exclude "fatalism".[19]

Now, the whole problematic situation involving circles and regresses in McTaggart's second positive argument can be taken in two very different ways:

1. either as one in which the attributions of temporal characteristics to events are supposed to be "done", and we consider the results of those attributions, or
2. as a situation in which the attributions are something we are "doing", some sort of "work in progress".

Let us consider the characteristic "to be in the present". Let us call it Pr. That characteristic, Pr, has to have an extension E(Pr). E(Pr) is constituted by the class of all the things that are Pr, and only by those things. Even if E(Pr) is the null class, E(Pr) has to exist objectively as such a class. And it has to exist independently of the stable,

[17]Of course, persisting things could be placed "at the same time" in the past, the present and the future. R would not apply to them. However, we can think of A-series applied to persistent things something derivate from applications to the temporal positions of changing things.

[18]Fatalism can be defined as the thesis that determinism is "necessarily" true. The sort of distinction we are making between, on the one hand, the past and the present and, on the other hand, the future was a very important subject for Prior. See Prior [20, 21]. In fact, very often we think of future events as events that can happen in "one or another" point in the future.

[19]However, R would exclude other temporal scenarios. And it is important to note it. For instance, the possibility of having a perfect circularity of events in time: a circular time in which "absolutely identical events" (numerically identical events) would repeat again and again.

or unstable, character of the things that are Pr. Simply, if those things are not stable with respect to being Pr, then E(Pr) would not be stable either. The other characteristics would also have extensions E in that sense. Let us say that E(P) is the extension of "to be past", and E(F) the extension of "to be future". Again, with independence of the stable, or unstable, character of the things that are P, or F, the extensions E(P), and E(F), have to exist objectively. The only restriction, according to R, is that nothing can belong "at the same time" to more than one of such extensions (the last part of R would not be relevant here).

Also, let us introduce the notion of an "ostensive specification" of the above mentioned temporal characteristics. The ostensive specification of "to be present", let us call it O(Pr), would be constituted by our listing, or enumerating, the things that have the characteristic Pr. O(Pr) is a "doing". We can say that whereas E(Pr) has always a "closed texture", O(Pr) has always an "open texture". It is, we can also say, an "open doing".

E(Pr) is an objective class of things. E(Pr) is something "done", or the result of something "done". In contrast, O(Pr) is some sort of "work in progress". The other temporal characteristics of A-series also would have ostensive specifications. So, we can speak of O(P) and of O(F). Again, it does not matter whether these ostensive specifications have an unstable character or not. As we know, "time flies". Anyway, what continues being crucial is the normative restriction R. In our ostensive specifications, we cannot attribute more that one different temporal characteristic to the same things, and only the future can be attributed "more than one time" to the same things.

E and O are different things. But, there is a very important kind of dependence of extensions E on ostensions O. The determinations of the extensions E of temporal characteristics depend on their ostensive specifications O in the following sense:

We would only have a clear reason to believe that temporal characteristics have null extensions E if the ostensive specifications O were to be in some sense "defective".

In other words, even having a very unstable character, we think that non-null extensions E of temporal characteristics can exist to the extent that our ostensive specifications O are not defective.

Are temporal ostensive specifications O defective? Here is where McTaggart's second positive argument against the reality of time calls our attention to a very serious problem. However, the problem is not one of obtaining a contradiction, as in the first argument 3-4-5. The crucial problem is that there seems to be "no other way" of determining that the restriction R is fulfilled except by means of "some temporal ostensive specifications O".

Note that in order to follow R, and in order to know whether we are following R correctly, we have to assume for our temporal specifications themselves a temporal position with respect to the past, the present, and the future. In particular, we need to distinguish our present specifications from our past specifications and from our future specifications. This generates very directly a circular or regressive situation. And this situation can create the wrong feeling that temporal ostensive specifications O(P), O(Pr), and O(F), are "deeply defective".

Here is an example. Suppose that I have some doubts about whether an event *e* has to be ostensively specified as belonging to O(Pr). Perhaps, I guess, it was present in some very recent past, and now *e* has to be ostensively specified as belonging not to O(Pr) but to O(P). Or, perhaps, *e* is now only in the near future, and so it has to be ostensively specified as belonging to O(F). Very soon it will be present, but it is not present now. According to R, we can correctly attribute to *e* only one different temporal characteristic (and only the characteristic "to be in the future" could be had more than one time by the same thing). But, in order to attribute to *e* any temporal position, we have to ascend a Dummettian level. We have to attribute a temporal position to the very moment at which we are attributing temporal characteristics to *e*. Is that moment the present moment? Or, did that moment happened in a recent past? Or, will that moment happen in the near future?

Is there something wrong in that? The problem can be rephrased as follows: Are temporal ostensive specifications O(Pr), O(P), and O(F), defective because there is "no other way" of determining that R is correctly satisfied apart from making, in a circular or regressive way, some other temporal ostensive specifications? We said that only if temporal ostensive specifications were defective, we would have a clear reason for maintaining that the temporal characteristics of A-series have null extensions E. But, are they defective, moreover "deeply defective", simply because they involve the above circularity or regress?[20]

In the first chapters of *The Nature of Existence*, McTaggart considers that reality and existence are non-definable. According to him, they have to be taken as basic, or primitive, notions. He argues that they have to be so taken because when we try to define them, we can only use those notions in circular or regressive ways. McTaggart's approach has close connections with Moore's views about the un-definability of "good" and other moral characteristics. Anyway, the important point is this: Why does it have to be different with time? Why do circularity and regression have to entail non-definability, and a "basic, or primitive, ontological nature", in the case of reality and existence, and something "deeply defective" in the case of time?

The important thing is that to treat time in the same way in which reality and existence are treated would entail that our temporal ostensive specifications cannot be defective only because they involve circularity or regression. McTaggart's second positive argument for the unreality of time, the one based on the existence of a circle or regress when something is positioned in an A-series, is not conclusive.

[20]The point we are making is closely connected to the idea expressed by Dummett in one of the fragments previously quoted: "… a description of events as taking place in time is impossible unless temporally token-reflexive expressions enter into it, that is, unless the description is given by someone who is himself in that time" (Dummett 1978: 354). This involves circularity and regression, but not necessarily of a defective (or vicious) sort.

1.5 The Negative Argument: The Search of a Relational Element X

We have considered the two positive arguments that McTaggart offers against the reality of time. There is also a negative argument. McTaggart introduces this argument in the following way:[21]

> If, then, anything is to be rightly called past, present, or future, it must be because it is in relation to something else. And this something else to which it is in relation must be something outside the time-series.

His conclusion is this:

> We have come to the conclusion that an A-series depends on relations to a term outside the A-series. This term, then, could not itself be in time, and yet must be such that different relations to it determine the other terms of those relations, as being past, present, or future. To find such a term would not be easy, and yet such a term must be found, if the A-series is to be real.

This is the negative argument against the reality of A-series. To place something in a real A-series requires an external term. It requires something "outside" the A-series. But to find such a term, McTaggart claims, is not an easy task.

How to respond to the negative argument? The first thing would be to distinguish two senses in the condition that the entity X has to be placed "outside the A-series". Let us call it condition O. Condition O can have an epistemological sense and an ontological sense:

1. In the epistemological sense, the condition O would entail that the "correction of our specifications" of the changing relations between the past, the present, and the future is "independent of" our making those specifications.
2. In the ontological sense, the condition O would entail that "what fixes" the changing relations between the past, the present, and the future has an "existence independent" of the relations so fixed.

We can proceed according to those two senses. The way we have resisted McTaggart's "second positive argument" against the reality of A-series would offer a clue to deal with the epistemological sense in which the condition O would have to be satisfied. And the way we have resisted McTaggart's "first positive argument" would offer a clue to deal with the ontological sense in which the condition O would have to be satisfied.

Let us begin with the epistemological sense. In order to be correct, our ostensive temporal specifications have to satisfy restriction R. And they can be correct ones even though we have to make, again and again, other ostensive temporal specifications. So, our ostensive temporal specifications could be "correct specifications"

[21] McTaggart ([14], #327–328).

with independence of our making them. Circularity and regress do not pose any further problem here.

Now, let us turn to the ontological sense. For the condition O to be satisfied in the ontological sense, "what fixes" the changing relations between the past, the present, and the future needs to have an existence independent of the relations fixed. Is there something capable of doing this work?

In fact, we would have such a thing if what fixes the changing asymmetric relations between the past, the present, and the future is, by itself, something that, being real but not actually existent, is able to become something real and actually existent and, then, can become again something real but not actually existent. The "actualisation of possibilities" establishes a "before" and an "after" which is independent of any temporal determination. And that settlement of a distinction between a "before" and an "after" can be repeated again and again. So, the actualisation of some possibilities could fix asymmetric relations between the past, the present, and the future from the "outside" of those temporal determinations.

In the ontological sense of condition O, "what fixes" the changing relations between the past, the present, and the future needs to have an existence independent of the relations fixed. The actualisations of certain possibilities can do the work. The actualisations of some possibilities could fix the changing relations between the past, the present, and the future in such a way that the existence of those actualisations is independent of the relations that are so fixed. The actualisation of some possibilities would be the basic, or primitive, phenomenon able to constitute "the source of a fluent time". Condition O can be ontologically satisfied in that way.

We have offered some answers to the negative argument against the reality of A-series. We have made some proposals for giving content to the epistemological and ontological senses that the expression "outside the A-series" can have in condition O. However, our proposal in relation to the ontological sense invites consideration of a potential "plurality" of A-series. And this is a very important new problem.

If the source of a real A-series, i.e., the source of a fluent time, is the actualisation of some possibilities, then it makes sense to say that perhaps there are "more than one" real A-series. The actualisation of some possibilities would support A-series from the "outside" of any A-series. Those actualisations have an existence independent of the A-series. This generates the possibility of a "temporal pluralism". Simply, different actualisations could support different A-series.

It is possible to discard temporal pluralism through an "ad hoc" stipulation. We could claim that the actualisation of possibilities never will generate a pluralism of different A-series. However, this would have to be considered some sort of "last recourse". So, how to deal with the possibility of such temporal pluralism? How to avoid, for instance, the problem of "comparing temporally" a variety of A-series fixed by actualisations of different possibilities?

Let us guess at some answers. When we are placing "ourselves" in an A-series, it is easy to avoid those problems. In that case, when we are placing ourselves in an A-series, the ontological and epistemological senses of condition O could be one and the same. More precisely, the actualisations of certain possibilities fixing

ontologically the changing temporal relations between the past, the present, and the future in our own case could be simply the various temporal specifications of our position in an A-series made from some temporal points of view able to produce correction. The "relevant actualisations of possibilities" would be a number of "correct temporal self-specifications".

When we are placing "ourselves" in the A-series, our making the temporal specifications we make (perhaps in a large part unconsciously) is the term "outside the A-series" on which the positions on the A-series depend. The correction of our making such temporal specifications is independent on our making them. That correction requires to satisfy R. And circularity and regress do not introduce necessarily any fatal problem. That way, condition O is satisfied in the epistemological sense. What about the ontological sense? We can say that our making temporal specifications in a correct way (surely, many of them unconsciously) entails the actualisation of relevant possibilities. These possibilities can be understood as some dispositions settled on us. But they may have an existence independent of the temporal relations fixed.

That hypothesis has a very important consequence. There has to be some relevant sort of temporal convergence in our own case. Our temporal self-specifications are self-correcting. This follows directly from condition R: nothing that changes can have more than one different temporal characteristic, and only the future can be had more than one time by the same things. When R is applied repeatedly to different temporal self-specifications, both actual and counterfactual, it leads to temporal convergence.

Each change I have suffered places me in the past; and this excludes that I have exactly that change in the present or in the future. Each change I am suffering places me in the present; and this excludes that I have exactly that change in the past or in the future. Each change I will suffer places me in the future, perhaps in more that one only place; and this excludes that I have exactly that change in the past or in the present.[22]

At the end, applying repeatedly the restriction R, there could not be more than one "correct" temporal specification of our own position in an A-series. At the end, there could not be any irreducible temporal pluralism with respect to our own temporal position.

Now, in order to understand the relationships between our correct temporal self-specifications and the temporal relations constitutive of "other" objects, events, processes, etc., different from ourselves, three options are open:

1. The first option consists in saying that a correct temporal specification of other objects, events, processes, etc., is simply a "good temporal measure" of them, in a purely operational sense. In other words, any other temporal specification would be a correct one if, from our temporal perspective, it is a useful way to

[22]Something can change "at the same time" with respect to more than one property. This does not pose any serious problem. We can say that X changes with respect to property F at the same time than it changes with respect to property G iff X changes with respect to H at that time, being H a certain combination of properties F and G.

describe those objects, events, processes, etc., or to predict them, or to control them, etc.

2. The second option consists in saying that the correct temporal specification of any other objects, events, processes, etc., is "reducible to the correct temporal specification of our own personal temporal relations". Another way to express this idea would be by saying that a subject making such temporal specification becomes a "temporally extended reality involving those other objects, events, processes, etc.".
3. The third option would be a blend of the other two. Perhaps with respect to some objects, events, processes, etc., even with respect to some objects, events, processes, etc., belonging to our bodies, or to our mental makeups, the first option is the most adequate; and with respect to other objects, events, processes, etc., the second option is the most adequate one.

The three options try to avoid temporal pluralism. They try to avoid the problem of the real existence of more than one A-series. Option 1 does it by means of an operationalist reduction of the meaning of "correct temporal specifications of other objects, events, processes, etc., different from ourselves". Option 2 does it by "reducing any such correct temporal specification to the case of our own temporal self-specifications". Option 3 does it in both ways.

The first option is very clear. There are normative contexts defining what can count, or cannot count, as a "good temporal measure" for many kinds of objects, events, processes, etc. Science provides us with a lot of such contexts. And so does ordinary knowledge. This option tries to avoid problems about the real existence of a plurality of A-series introducing a mere operational meaning for all the other temporal specifications apart from temporal self-specifications. This is quite a radical option. The sense in which we talk about our own temporal reality, the temporal reality of each one, and the sense in which we talk about the temporal reality of any other objects, events, processes, etc., would be "completely different". Moreover, they seem to be incommensurable.

The second option is no less radical than the first one. But its strategy is just the opposite of the strategy followed by the first option. The first option is operationalist. The second option is realist. It strongly suggests that there are other temporal, or tensed, entities apart from ourselves.

The realism of the second option calls our attention to a very important point. There is a sharp contrast between persons and other sorts of entities. That contrast has also a temporal face. And when the claim that there are other temporal, or tensed, entities apart from ourselves is combined with the possibility of a temporal pluralism, the result is very puzzling.

Those temporal, tensed entities would have parts. And those parts also would have to be temporal, or tensed, entities. Now, if we were to admit the possibility of a real existence of a plurality of A-series, then the entity itself could be temporally placed in different past, present, and future times than its parts. It is not that the entity can be "extended in time", or that it can have "temporal parts" extended in

time, for instance some parts in the past and the present, other parts in the present, other ones in the future, etc., but that the entity and its parts could be in "different presents", in "different past times", and in "different future times".

In contrast with that, let us consider "persons". Strictly speaking, persons do not have parts. My hands are parts of my body, but they are not part of "me" as a person, as the person I am. I am no less a person if I lose my hands (or I am less a person only in a metaphorical sense). Hence, even if we admit the real existence of a plurality of A-series, that would not affect me as a person. I cannot be in a present (or past, or future) which is different from the present (or past, or future) of my parts simply because I do not have parts.[23]

With this contrast in mind, we can obtain a better understanding of the second option above introduced. According to it, our making temporal specification of some other objects, events, processes, etc., would entail for ourselves to become "extended realities" involving those other objects, events, processes, etc. They would be integrated, so to speak, into "my personal reality". And, in so becoming, there would not be any problem about a real plurality of A-series. This option is very suggestive. But it is also very radical.

Both option 1 and option 2 seem too radical. Perhaps a certain combination of the two might be not so radical. Option 3 would consist in a compromise between option 1 and option 2. What kind of compromise?

For persons, in the last analysis, there can be only one time, There is only one A-series. Moreover, interpersonal relations try to preserve that singular time. More concretely, what can be called "intersubjective temporal points of view" try to preserve that time. Other persons can become integrated into my personal reality. And I can become integrated into their personal reality. Perhaps the same can be said of other entities connected to us in some, let us say, "personal" ways. All of that would give a unifying sense to our "common history". In these cases, the option 2 seem to be completely acceptable. Moreover, it is full of important insights.

However, very often, when we try to specify the temporal relations of many other objects, events, processes, etc., what we try to obtain is simply a "good temporal measure" of those objects, events, processes, etc., in a purely operational sense. And in these cases, option 1 seems to be the best acceptable one. With

[23]The peculiarities of our personal experiences of time are emphasised by Russell [22]'s logical construction of time out of "sensibilia". Russell defends a relational, constructive (anti-Kantian and anti-Newtonian) Leibnizean theory of time. In his construction, time comes to be internal to a construed space of perspectives without being internal to the subjects from which that space of perspectives is construed. There is an asymmetry between determinations of temporal positions in the case of our own experiences and determinations of temporal positions in other cases. Whereas the first ones are direct, the second ones are indirect. And that indirect character entails the intervention of processes that, when they are projected over a physical space of perspectives, "take time". The construction of a Russellian space of perspectives, and of a physical space-time containing physical objects, matter, and perspectives, is explained in other chapters of this book.

respect to these cases, fluent time would be only a projection. A-series would be only a useful way of speaking.

1.6 Time Is not an Absolute Frame, nor a Kantian Scheme Either

Let us summarize our main results. None of the three arguments that McTaggart uses against the reality of temporal A-series is conclusive. The crucial point in the first positive argument is the rejection of any real but not actually existent possibility. We have found that this claim can be resisted. It depends on general metaphysical assumptions adopted by McTaggart. Real but non-existent temporal possibilities are assimilated to other modalities, and excluded without any clear justification. So, there is no internal contradiction in the reality of temporal A-series. Therefore, the second positive argument cannot lead to that intended contradiction either. However, the second positive argument poses a serious problem of another kind. And we have discussed it. The problem was that temporal specifications seem to be always circular or regressive. We have tried to show that this does not entail that they are defective. Such circularity or regress also can be taken as a symptom of undefinability.

Finally, we have addressed McTaggart's negative argument against the reality of time. According to it, to place something in a real A-series would require something outside the series. And it was not easy to say what that thing can be. We have distinguished two senses of "outside the A-series": an epistemological sense and an ontological one. In the epistemological sense, the correction of our temporal specifications in the A-series has to be independent of our making those specifications. In the ontological sense, what fixes the temporal relations of the A-series has to be independent on the relations fixed. We have claimed that the epistemological sense of the negative argument can be resisted in the same way in which we have rejected the conclusive character of the second positive argument. And that the ontological sense of the negative argument can be resisted in the same way in which we have rejected the conclusive character of the first positive argument. Following that strategy, we have faced the problem of "temporal pluralism": the problem posed by the possibility of a real existence of a plurality of A-series. In order to handle with that problem, we have considered two opposite and very radical options. And we have argued for a compromise between them.[24]

We have suggested that both reality and existence are tensed, at least in part. The past, the present, and the future are real. But the reality of both the past and the future depend in many ways on the reality of the present. The reality of the present is a present reality. Only the present actually exists. And only the present can be

[24]The BA-theory of time defended by Baker [2] would embrace the temporal duality present in the option 3.

known with accuracy. However, not only what actually exists is real. This is the common sense view of time. It is also the Aristotelian view. Sometimes, Aristotle seems to claim that time "is change". Other times, he says that time is simply something operational, "the measure of change". Both things can be true. In any case, change consists in something that is possible becoming actual, or in something that is actual becoming again only possible. And change, so understood, can be the source of time.

Perhaps the notion of time is as undefinable, as basic, as primitive, as the notions of reality and existence. Perhaps time is not detachable from reality and existence, or from certain parts of reality and existence. So understood, time could not be simply a Newtonian "absolute frame", or a transcendental "Kantian scheme", where real or existent things can be placed in one way or another. At the end of the day, McTaggart's rejection of the reality of time comes from understanding the A-series only as a kind of "absolute frame", or "Kantian scheme".

2 Temporal Points of View

Our points of view are full of indexical ingredients. Sometimes, that indexical character involves emplacement in space. Other times, it involves a relative position concerning some properties and relations instantiated by the subject and the environment. Other times, it involves emplacement in time.

Emplacement in time is especially important for subjects which are "persons". A person can become massively confused about her position in space, and about her relative position regarding many, perhaps all, of the properties and relations instantiated by herself and her environment, but she cannot become massively confused about her position in time. Being a person, at least a person like us, entails having a temporal perspective with a minimum of correction. Such correct temporal perspective, or temporal point of view, could be "internal" to our points of view. It could stand without any more "external", or more "objective", support. But, it has to exist.

Among the classical analyses of what it is to have a temporal perspective, or a temporal point of view, we have to make reference to Kant, Bergson, Husserl, McTaggart and Prior. Let us introduce very briefly some of their approaches.

For Kant, space and time would establish the conditions of possibility of having experiences of an "external world". We can say that there is in Kant a peculiar "transcendentalisation" of the Newtonian absolute concepts of space and time. Time also is crucial with respect to our "internal world". Without time, we could not have any "internal intuition", nor any kind of "self-intuition" of ourselves either.[25]

[25]See, in his *Critique of Pure Reason*, "Transcendental Aesthetic".

Bergson was very critical about conceiving of time in the same way as space. According to him, time has very peculiar features. Mainly, time is directional and it is not inert. The essence of time is "duration". Duration eludes any scientific approach. It can be only grasped through intuition. From a subjective point of view, the expression of time as duration is "memory".[26]

Husserl analysed in detail the phenomenological structure of temporal intentionality. According to him, "internal time" has a very complex structure. The present is never like a point. It is always some sort of "present continuous". It includes what has been just present, and also what is going to be present. Husserl's conception of time was very influential in the philosophy of the 20th century, mainly in Continental philosophy through Heidegger and Merleau-Ponty.[27]

We already know McTaggart's arguments against the reality of time. According to McTaggart, time is only a merely epiphenomenal subjective appearance. In contrast, Arthur Prior took very seriously temporal appearances.

Prior is the founder of modern temporal logic. Prior's central idea is that there is an internal representation of a "fluent time" in our language and thought, and that this internal time becomes crucial in the logical analyses of many inferences. Prior offered a huge variety of different logical systems defining temporal operators which are applied to propositions. The semantics for such systems are generally similar, with some extensions, to the ones for modal logic.[28]

All these authors and proposals insist on one idea: the essential role of our temporal points of view in order to constitute our identity as personal subjects capable of taking any other point of view.

2.1 Time and Temporal Points of View

We need to distinguish between

(A) The problem of understanding the existence and structure of time in reality; in particular, the problem of the real existence of a "fluent time" having the structure of McTaggart's A-series.
(B) The problem of understanding the existence and structure of temporal points of view.

Beyond all the discussions about problem A, it is plausible to claim that the existence of temporal points of view (hereafter, TPoV) cannot be denied. The existence of TPoV is something as manifest as the fact that you are "now" reading

[26]See, for instance, Bergson [3, 4].

[27]See Husserl [10], Heidegger [8], and Merleau Ponty [16].

[28]See Prior [19–21]. In the line of Prior, see Kamp [12], and more recently Øhrstrøm and Hasle [18], and Areces [1].

some words and phrases, perhaps "after" having read other ones, and "before" (we hope) reading still others.

As Prior argued, there are TPoV simply because our thoughts and our languages are tensed. To deny the existence of TPoV would be like denying that we have points of view involving the existence of an "external world", or points of view involving the existence of "other minds", etc. Even if there is not an external world, even if there are not other minds, it is very difficult to deny that we have points of view involving those things.

2.2 *Defining Temporal Points of View*

What is a TPoV? We can say that a temporal point of view is originated when different explicit non-conceptual contents of a point of view are identified, either non-conceptually or conceptually (or in a mixture of both sorts of identification), as changes of content in relation to distinct positions in an A-series.

The proposal is very simple, but it has important consequences. As we will see, our proposal can make sense of (1) the crucial difference between "histories" and "stories"; (2) the possibility in principle of a "variety of temporal perspectives" regulated by the normative requirement that in the end only one of them has to be the correct one; (3) the existence of "temporal experiences" with relative independence from "temporal concepts"; and (4) the notion of a "non-absolute but not merely subjective either fluent time", in contrast with a "merely subjective time". In addition, (5) our proposal would be capable of integrating in a single and unified way many of the ideas of McTaggart, Prior, Kant, Bergson, and Husserl.

We are going to define the notion of temporal points of view (TPoV). But we need the help of a conception of points of view (PoV) according to which any point of view can be seen as having the following canonical structure:

PoV = <*B, R, non-CC, CC, Cp*> , where

1. B is the bearer of the PoV (in personal PoV, a subject like us),
2. R is a set of relations connecting B with the explicit contents of the PoV,
3. non-CC and CC are the two kinds of contents that can be explicitly included in the PoV: non-CC is a set of non-conceptual contents and CC is a set of conceptual contents, and
4. Cp is a set of possession conditions for having the PoV.

Now, let us think of TPoV. It is neither necessary nor sufficient for the existence of a TPoV that there be more than one PoV, or that there be a change of PoV. In all these cases, we would have either a variety of PoV, or a PoV changing in time. However, strictly, we would not have a TPoV.

In order to have a TPoV, what we need is to identify, or recognise, certain "differences in content" as "changes of content". More precisely, we can define a TPoV in the following way:

Temporal Points of View (TPoV) are PoV with explicit contents EC*, either non-CC or CC, identifying certain differences in some explicit non-CC, let us call them EC, as changes in time, or permanencies in time, with respect to distinct positions in an A-series (past, present and future).

TPoV only focus on some explicit non-CC. That is, EC only contains non-CC. The other possible explicit contents of a PoV, its CC, do not change. There is no change when we have in perspective, for instance, that 2 + 2 = 4. However, to have in perspective that we have in perspective 2 + 2 = 4 is to have in perspective a non-CC, and hence to have in perspective a set of (actual and possible) changes. The conceptual world (concepts, propositions, sets, numbers, etc.) is "outside the perspective" of our TPoV. Only the world we experience is a changing world. However, this world includes us having in perspective all sorts of CC.

In the minimal case, we would have in temporal perspective two explicit non-CC contents, one of them being placed in the past and the other one in the present or in the future, or one of them being placed in the present and the other one being placed in the future. And our TPoV identifies a change. However, there may be TPoV with a much greater temporal complexity.

A TPoV also could take some non-CC as displaying a certain "permanence in time", i.e., as something continuing from the past to the present, or from the past to the future, or from the present to the future. We can deal with this issue very easily. We can consider that the identification of a permanence in time is dependent on the possibility of identifying changes. That way, to identify a permanence would be to identify possible but not actual changes.

The complexity of TPoV can give place to "histories" and to "stories". When intentional actions are involved, this important distinction can be defined as follows:

In the case of "histories", but not necessarily in the case of "stories", some of the non-CC contents EC, which are identified through some EC* as changes of content, also have to be contents, either explicit or implicit, of other PoV.

Both histories and stories are TPoV. However, in contrast with stories, histories need the existence of other PoV. A history is a TPoV about something that belongs to other PoV. The bearer of a history does not need to be the same as the bearer, or bearers, of those PoV. If it is the same bearer, then the history becomes a "biography".

In our definition, we have assumed McTaggart's idea that there is no TPoV without reference to a certain A-series. However, in principle, there could be more than only one A-series. According to the way we have introduced the notion of TPoV, there could be many pasts (not only many possible reconstructions of the past, but "many pasts"), many presents (not only many possible ways of living the present, but "many presents"), and many futures (not only many possibilities of imagining the future but, again, "many futures").

We have not required that TPoV logically entail only one unique present and one unique past, beyond the possibility of having an open variety of futures. In

principle, the existence of a variety of TPoV in which the past, the present, and the future are not univocally identified is possible. We have to make room for these possibilities. Some supposed cognitive disorders consist precisely in having a number of TPoV offering more than one single "past", or more than one single "present", or more than one single "future".

These are serious possibilities. However, all of them are balanced by the normative restriction R regulating our attributions of temporal characteristics. According to R, nothing that change can have more than one different temporal characteristic in any of its temporal positions, and only the future can be had by the same things more than one time.

We said that restriction R is not relativised to any particular A-series. Now, we can say that it is not relativised to any particular TPoV either. Both things can be taken to be equivalent. Restriction R partially defines the way we see the "real time". It forces us to choose only one different temporal characteristic for each temporal position of a thing that suffers a change. We can have doubts about where to place in time the temporal positions of something that change. However, according to R, at the end, each temporal position of a thing that changes has to be placed either in the past, or in the present, or in the future; and only in the future it could to be placed more than one time. We attribute temporal characteristics trying to follow R. Only in that way can our temporal attributions be "correct" ones.

The normative restriction R regulates the constitution and dynamics of TPoV involving things that change.[29] In the long run, nothing that change can have at the same time more than one different temporal characteristic, and only the characteristic "to be in the future" can be had more than one time. If something has changed, then it has to be placed in the past. If something is changing, then it has to be placed in the present. If something will change, then it has to be placed in the future. And only things that will change can be placed more than one time in the future.[30]

The normative restriction R has a special relevance both when we consider our own "personal identity" through time and when we consider that temporal points of view also can be "intersubjective". We can define the last notion as follows:

Intersubjective Temporal Point of view (ITPoV) are TPoV shared by different subjects.

What is shared in ITPoV are certain temporal identifications. A number of different subjects identify in the same temporal ways some EC. Some differences in

[29]We have assumed that to identify permanencies in time is to identify "possible but not actual changes". Without the possibility of changes, we could not identify permanencies either.

[30]Perhaps something "changing" requires that "it has changed" a bit, and also that "it will change a bit". Being this true, the present will always need a small portion of past and a small portion of future. In other chapters of the book, it will be argued that this is just the case. More precisely, it will be argued that the present is part of a "now" that always includes a certain past and a certain future. In any case, when we attribute temporal positions in terms of A-series to a thing changing, we try to be maximally selective. We try to refer to the present in the narrowest way.

non-CC are taken as changes in time, or some non-CC are taken as permanencies in time. And these temporal identifications can be made either in a conceptual or in a non-conceptual way (or in a mixture of both).

ITPoV are crucial in our life. To share a TPoV is to "share a time". More precisely, it is to share a past, a present, and a future. And this shared time can exist, and have objectivity, even though there is no time except in relation to some PoV.

That way, a time with the structure of A-series, i.e., a fluent time, can be something "internal to some PoV", and have objectivity, without being something "internal to the subjects" having those PoV. Moreover, it can be internal to a number of PoV, possessed by different subjects, and have a "shared objectivity".

Other important consequences of our definition of TPoV are the following ones:

1. We have said that to have more than one PoV, or to have a change of PoV, does not entail having a TPoV. Changes in the bearer B of the PoV, or changes in the relations R connecting B with the explicit contents of the PoV, or changes in the possession conditions Cp, do not entail the existence of a TPoV either. To change the bearer B of a PoV, or to change the relations R (psychological attitudes in personal cases) towards the explicit contents of a PoV, or to change the possession conditions Cp of the PoV, are changes producing a different PoV. However, by themselves, those changes do not generate a TPoV.
2. In principle, the temporal identification can be made through explicit contents EC* which can be either non-CC or CC. This includes the possibility of identifying changes of explicit contents EC through the help of some explicit contents EC* which are non-CC. And this means that it would be possible to identify changes with respect to distinct positions in an A-series without possessing the concepts of "past", "present", and "future" in a fully developed sense. It would be possible to experience some contents as "past", or "present", or "future" events, or facts, or objects, etc., with relative independence from the full possession of these concepts.

   This would give a robust sense to the notion of "temporal experiences", and to the possibility of having those temporal experiences without the possession of "temporal concepts" in the sophisticated sense in which personal subjects, with high cognitive capacities, can have those concepts. That way, some non-human animals, pre-verbal children, etc., would be capable of having a TPoV.
3. We can give a very simple answer to the problem of whether temporal concepts (in particular, the concepts of "in the past", "in the present", and "in the future") are primarily applied to propositions, as Prior maintained, or whether they are primarily applied to events, or facts, or objects, etc. Prior's approach would be directly relevant when the explicit contents EC* involved in a TPoV are CC. And the other approaches would be directly relevant when the explicit contents EC* involved in a TPoV are non-CC.
4. According to the above way of understanding the internal structure of a PoV, it is possible to distinguish between what is "internal/external to a PoV" and what is "internal/external to the subject which is the bearer of that PoV". We have made use of that distinction in relation to ITPoV. This has a very special

relevance in relation to the notion of an "external time". Even leaving open the question of the absolute existence in reality of a time of kind A, in the sense of having an existence external to, or independent from, all PoV, we would have enough room for distinguishing between two sorts of temporal series of kind A:

(a) Temporal A-series internal to some TPoV, but external to the subjects which are the bearers of those PoV.
(b) Temporal A-series internal to some TPoV, and also internal to the subjects which are the bearers of those PoV.

Temporal A-series of the first sort could have enough "objectivity" (certainly a non-absolute objectivity, but enough objectivity) to make sense of a "not merely subjective" reality of time. Temporal A-series of the second sort would be obtained when the EC present in a TPoV involve only the subject which is the bearer of the TPoV.

The first sort of temporal A-series also would provide an important sense in which a fluent time can be real even though it is not real in the sense of having an "absolute objectivity". It can be real in the sense of existing inside some TPoV without being subjectively epiphenomenal, i.e., without being merely determined by the subjectivity of the bearers of the TPoV.[31]

As we are seeing, our distinction between those two sorts of temporal series of kind A can be of help in order to get a better understanding of the distinction between an "objective, but perhaps relative, i.e., non-absolute, fluent time", and a "completely subjective fluent time". We can find the need to introduce these two kinds of fluent time in many authors. In particular, we find it in Kant, Bergson and Husserl. The objective, but perhaps relative, non-absolute, time would be connected to temporal A-series of the first sort. The second kind of time would be connected to temporal A-series of the second sort.

5. At first look, there are close relations between TPoV and reflective PoV. In a certain sense, TPoV are reflective PoV. But, if reflective PoV entail the possession of "conceptual" capacities, then TPoV cannot be a kind of reflective PoV. In order to be precise, the thesis would have to be the following:

   To have a TPoV entails adopting "something like" a reflective PoV in which (1) some differences in the explicit non-CC of a certain PoV are identified, perhaps only in a non-conceptual way, as changes in time, or some explicit non-CC are identified as permanencies in time, and (2) the bearer of that PoV is identified, perhaps only in a non-conceptual way, as being the same as the bearer of the TPoV.

[31]That way, we could maintain what D. Mellor called an A-theory of time, or what L. Baker calls a BA-theory of time, in opposition to a B-theory of time that only would admit the reality of temporal B-series. See [15] and Baker [2].

This has very important consequences. In order to have a TPoV, it is necessary to have certain explicit non-CC in perspective, identifying or recognising some differences as changes in time, or identifying in those non-CC some permanencies in time, with respect to distinct positions in an A-series. And it is necessary to identify the bearer of the TPoV as being the same as the bearer of the PoV having those explicit non-CC. Indeed, this entails a peculiar reflective move over the contents of our PoV. However, we have assumed that this reflective move can be made in non-conceptual ways. Hence, a TPoV would be "something like" a reflective PoV. But, strictly speaking, it would not be a reflective PoV. So, entities without conceptual capacities could harbour TPoV even though they cannot harbour reflective PoV.

In other words, it is possible to have reflective points of view which are not temporal. And it is possible to have TPoV without being able to have reflective PoV in the sense of requiring conceptual capacities. However, only subjects with a minimum of reflective non-conceptual capacities would be subjects capable of adopting TPoV.

6. The notion of an "intersubjective" PoV is different from the notion of a "collective" PoV. We have used the first notion in our discussion of ITPoV. There is something to say of the second one also. In intersubjective PoV, a number of different subjects share certain contents. Collective PoV have a collective subject as their bearer. The claim that there are collective subjects can have a more or less strong sense. In any case, many of the above points would apply to TPoV of a collective sort. We can talk about "individual TPoV", and also about "collective TPoV". We can talk about "individual histories" and "individual stories", and also about "collective histories" and "collective stories". We can talk about "individual temporal experiences", and perhaps also about "collective temporal experiences", etc.

2.3 From a Temporal Point of View

A TPoV is originated when different non-CC of a PoV are identified as a change in time, or when some non-CC are identified as a permanency in time, in relation to distinct positions in the past, the present, and the future. The contents so identified can belong to other PoV. And the identification can be made either in conceptual or in non-conceptual ways.

There are many important issues that can be unified and clarified by paying attention to that characterisation of TPoV, in combination with the distinction between understanding the existence and structure of time in reality (our previous problem A) and understanding the existence and structure of TPoV (our previous problem B). We will mention three of them, apparently disconnected. They have to do 1) with the role of science in order to understand TPoV, 2) with the lack of need to be engaged in the problem of understand time in reality (problem A) when we are

interested in epistemological or logical questions involving temporal perspectives, and 3) with the so called "time travel paradoxes":

1. Disciplines like physics or neurology have little relevance with respect to the existence and nature of TPoV (problem B).
   We can say that physics, neurology, etc., only can be relevant with respect to the existence and nature of TPoV if they are relevant with respect to the existence and nature of PoV. However, it is not clear how they could facilitate an understanding of PoV. What can physics, neurology, etc., say about the existence and nature of things like "content"? Moreover, what can they say about the crucial distinction between the merely "subjective" aspects of a PoV and its "objective" aspects? It can be claimed that TPoV are sensitive to content and to the distinction subjective/objective in non-reducible ways.
   So, even though a natural discipline like physics is very important in order to understand the existence and structure of time in the physical world, and even though a natural discipline like neurology is very important to understand the existence and structure of time in the context of neurological processes, all of that is far from providing a complete, even clear, understanding of the existence and structure of TPoV.
2. We do not need to be engaged in discussions about the existence and structure of time in reality (problem A) when we are dealing with epistemological or logical questions involving temporal perspectives; for instance, when we are trying to combine temporal and epistemic components in order to logically analyse temporal discourse.
   The last projects would not try to understand time in reality (problem A), but only TPoV (problem B). It is plausible to argue that the problem of understanding what time is in reality has to be answered from the basis of all we know, and aim to know about reality. In contrast, to understand TPoV only has to do with some parts of reality: some peculiar sorts of PoV. Neither the epistemology of attributions of temporal features, nor the logic of time, needs to understand "previously" the existence and structure of time in reality.
3. The discussion of the ontological and epistemological aspects involved in "time travel paradoxes", in particular the ones derived from the possibility of travelling to the past, can be clarified paying attention to our characterisation of TPoV.

Let us consider the temporal paradox of myself going to the past in order to kill my grandfather before he knew my grandmother. It involves

1. A TPoV intending to identify some particular non-CC as past, present, or future. In particular, a TPoV intending to identify a certain future killing, planned by me now, as coming to occur "in the past".
2. A TPoV according to which a certain killing seems to affect the same person who, from other PoV, would count as "my grandfather".

The paradox only appears when 1 and 2 are interpreted in some peculiar ways. The paradox appears

- when 1 is interpreted as really involving the killing coming to occur "in the past", and
- when 2 is interpreted as really affecting "my grandfather".

However, 1 and 2 also can be interpreted in other different ways. For instance, the time travel can be interpreted not as travel "to the past" but as travel "to the future", to a certain very unexpected future. If we reinterpret 1 in that way, and we so modify our TPoV, then there is no problem with 2. In that unexpected future I can perfectly well kill my grandfather. He could be alive again and I could kill him.

We can also reinterpret 2. The person that seems to count as my grandfather can be taken to be only some kind of "twin-grandfather", i.e., someone close to being qualitatively identical to my grandfather, but in any case not numerically identical to him. Under that reinterpretation, there would not be any problem with 1. From that new TPoV, I could perfectly well travel to the past and kill that other person.

Perhaps we could not travel to the past. But, even if we could travel to the past, there would not be any paradox if we reinterpret 2 in that way. In general, if we adopt any of the two alternative TPoV indicated, the paradox generated by the supposed possibility of travelling to the past and killing my grandfather (or my father, or altering the past in any other problematic way) would disappear.

The last issue is connected with the other two. It is not clear at all how physics or neurology could decide how to interpret the two TPoV mentioned in the third issue. Epistemological and logical questions like the ones posed by time travel paradoxes have to be answered in their own terms.

3 The Dynamics of Points of View

Reflection about points of view shows that they are temporal entities. Points of view also change with time. Mainly, they may change according to changes in their explicit non-conceptual and conceptual contents, they may change according to how those explicit contents interact each other, and they may also change with changes in the relations that the bearer of the point of view maintains with those contents.

We can have reflective points of view about our points of view. And we can also have temporal points of view (TPoV), or temporal perspectives about them. Whereas the first ones have always a conceptual character, the second ones can be non-conceptual. Without conceptual capacities, we could not reflect about our own points of view. However, we could have the capacity of experiencing and feeling the tensed nature of our perspectives even though we would not have conceptual capacities.

Many of the dynamical peculiarities of points of view come with the implicit non-conceptual contents linked to the peculiar "attitudes" that the subjects are

maintaining towards the explicit contents of the point of view. This is especially important in personal points of view.

The role of the implicit non-conceptual contents linked to the attitudes is manifold and complex. In relation to time, those implicit contents accomplish an essential function: they can counterbalance both the changes due to the explicit contents of the point of view, and the changes due to how these explicit contents are interacting each other.

Just as there may be compensations, and situations of equilibrium, among the explicit non-conceptual and conceptual contents of a point of view, there may be compensations, and situations of equilibrium, between all those explicit contents and the implicit contents of the point of view, the contents linked to the attitudes.

Here, a very relevant distinction has to be made between, on the one hand, changes "in" a point of view and, on the other hand, changes "of" point of view. There may be changes in the explicit contents of a point of view without any change of point of view, and there may be changes of point of view without any change in the explicit contents of the point of view.

In the first case, the changes in the point of view would compensate each other in such a way that they do not cause any change "of" point of view. In the second case, the change of point of view would be caused by changes in the attitudes articulating the point of view, with independence from the explicit contents included "in" it.

The second case is very important. There could be three main sorts of changes "of" point of view which would be crucially promoted by the implicit non-conceptual contents linked to the attitudes:

1. Changes in focus: Here, some of the explicit contents of the point of view become more salient than others, as a result of changes in the attitudes involved. Wittgenstein's discussion of "the duck-rabbit drawing" offers a classical example of that kind of change.[32]
2. Radical changes of perspective: The point of view becomes completely different even though there is no change in the explicit contents, either non-conceptual or conceptual, involved in it. Some cases of religious conversion are of that kind.[33] Also, some radical changes in political perspective could be included here. Wittgenstein is referring to that kind of change when in the *Tractatus* he says that, "the world of a happy man is a different world than the world of an unhappy man".
3. Structuring changes: Some changes in the implicit contents linked to the attitudes of the point of view originate changes in the internal structure of the explicit contents of the point of view. For instance, a change in the attitudes towards logics, as an effect of the improvement of logical skills, can give place to very different ways of organising our thoughts and discourses. Structuring changes can even change the explicit contents of a point of view. Here, to change the ways of "seeing the world" entails changes in "the world that is seen".

[32]Wittgenstein (1953).

[33]See James [11], and Unamuno [23].

The three kinds of changes are worthy of emphasis. They call our attention to some very significant dynamical phenomena that cannot be reduced to changes "in" the explicit, non-conceptual or conceptual, contents of the points of view.

Furthermore, the third sort of change could have an important explanatory power in relation to the "constitution" of the explicit contents of a point of view.

In that sense, a very suggestive hypothesis is that the implicit non-conceptual contents of a point of view put all kinds of pressures over the ways in which the point of view can have some peculiar sorts of non-conceptual and conceptual explicit contents. Through those pressures, the point of view becomes capable of having the particular sorts of non-conceptual and conceptual explicit contents it is able to have. In the last term, that process of, let us say, "modulation", or "tuning", would produce in a subject the various "types" of explicit contents that can be tokened in one way or another.

According to that hypothesis, the different types of explicit contents a point of view can have would be the result of a process of "modulation", or "tuning", of the implicit contents of the point of view. For subjects like us, the implicit contents of our points of view would be a "precondition" of their explicit contents.

The third sort of change would also be crucial in order to understand the formation of TPoV. The key feature of TPoV is to take some differences in non-CC as changes in time (and some possible but not actual differences as permanencies in time). How can we explain that transformation? Another suggestive hypothesis would be that it is a case of "structuring change" in the internal structure of a point of view.

That structuring change would be provoked by a peculiar kind of attitude toward the explicit non-CC of the point of view. We can call them "temporal attitudes". They are attitudes prone to identifying changes in time beyond mere actual differences in content, and prone to identifying permanencies in time beyond mere possible differences in content. Some subjects have the dispositions to have these "temporal attitudes", and other entities do not have them.[34]

Of course, we only can say that, i.e., we only can guess one such explanation, from a speculative stance. We adopt a reflective point of view about our points of view, and about other points of view. But, there is nothing necessarily wrong in that.[35]

---

[34]The generation of conceptual contents in "conceptual spaces" of qualitative dimensions, and the formation of these qualitative dimensions from identifications of similarities and differences among experiential contents, would offer a very interesting approach in order to understand the last two points. See Gärdenfors [6] and Hautamäki [7].

[35]We have suggested that the constitution of TPoV could be understood as the formation of a new qualitative dimension in a conceptual space. Some differences in non-CC are taken as temporal differences according to a past, a present, and a future. As any other qualitative dimension, that temporal dimension could be interpreted phenomenally (for instance, from the temporal values of a psychologically extended "now", including a certain past, present, and future) or scientifically (for instance, using the theoretical values of some metric applied to brain processes). The comparisons between the two interpretations would be comparisons between "two different conceptual spaces". See again Gärdenfors [6] and Hautamäki [7].

We have considered changes "in" the explicit contents of a point of view, non-conceptual and conceptual ones, provoked by the implicit non-conceptual contents linked to the attitudes (changes in focus). Also, we have considered changes "of" a point of view produced by those implicit contents without any change in the explicit contents of the point of view (radical changes of perspective). And we have considered changes "in the internal structure" of the explicit contents of a point of view produced by those implicit contents (structuring changes). In all these different kinds of changes, the interactions among different points of view can have a very relevant role. They can have direct effects on the attitudes involved in each point of view. In many cases, those interactions are the main source of changes both "in" a point of view and "of" point of view.

The significance of the normative restriction R is clear when we consider ITPoV. In the long run, no temporal position can have at the same time more than one different temporal characteristic, and only the characteristic "to be in the future" can be had more than one time. Nothing can be past and present; nothing can be past and future; nothing can be present and future; and only the future can be such that something can have more than one position in the future. In the case of our "personal identity" through time, R also has a very important role. We can never have more than one past; we can never have more than one present; and perhaps our future is open, or perhaps we simply do not know all the details.

Ontologically, all of that entails that, if TPoV exist in reality, and they are the source of an objective fluent time that is internal to them, but not merely internal to the subjects, then in the long run (in the very "long run" of the whole of reality displaying all its potentialities) there would have to be only one such fluent time!

References

1. Areces, C., & Ten Cate, B. (2006). Hybrid logics. In P. Blackburn, J. van Benthem & F. Wolter (Eds.), *Handbook of modal logics* (821–868). New York: Elsevier Press.
2. Baker, L. R. (2007). *The metaphysics of everyday life*. Cambridge: Cambridge University Press.
3. Bergson, H. (1911). *Creative evolution. 1998*. New York: Dover.
4. Bergson, H. (1896). *Matter and memory. 1994*. New York: Zone Books.
5. Dummett, M. (1960). A defence of McTaggart's proof of the unreality of time. In *Truth and other enigmas. 1978* (pp. 351–357). Harvard: Harvard University Press.
6. Gardenfors, P. (2000). *Conceptual spaces. The geometry of thought*. Cambridge: MIT Press.
7. Hautamäki, A. (1992). A conceptual semantics approach to semantic networks. *Computers & Mathematics with Applications, 23*(6–9), 517–525. [Also In F. Lehmann (Ed.), *Semantic networks in artificial intelligence* (pp. 517–525). Oxford: Pergamon Press].
8. Heidegger, M. (1962). *Being and time* (p. 1990). Albany: State University of New York Press.
9. Horwich, P. (1990). *Asymmetries in time*. Cambridge: MIT Press.
10. Husserl, E. (1928). *On the phenomenology of the consciousness of internal time. 1990*. Dordrecht: Kluwer.
11. James, W. (1902). *The varieties of religious experience. A study in human nature. 2012*. Oxford: Oxford World's Classics.

12. Kamp, J. A. W. (1968). *Tense logic and the theory of linear order*. Ph.D. thesis. Los Angeles: University of California.
13. McTaggart, J. (1908). The unreality of time. *Mind, 17*, 457–474.
14. McTaggart, J. (1927). *The nature of existence*. Cambridge: Cambridge University Press.
15. Mellor, D. H. (1998). *Real time II*. London: Routledge.
16. Merleau Ponty, M. (1945). *Phenomenology of perception* (p. 2012). New York: Routledge.
17. Nyiri, K. (2008). Hundred years after: How McTaggart became a thing of the past. *Proceedings of the 6th European Congress of Analytic Philosophy* (*August 21–26, 2008*). Kraków: European Society for Analytical Philosophy.
18. Øhrstrøm, P., & Hasle, P. (1995). *Temporal logic: From ancient ideas to artificial intelligence*. Dordrecht: Kluwer Academic Publishers.
19. Prior, A. (1957). *Time and modality*. Oxford: Oxford University Press.
20. Prior, A. (1967). *Past, present and future*. Oxford: Oxford University Press.
21. Prior, A. (1968). *Papers on time and tense*. Oxford: Oxford University Press.
22. Russell, B. (1918). The relation of sense-data to physics. In *Mysticism and logic, and other essays* (pp. 113–140). London: George Allen & Unwin.
23. Unamuno, M. (1912). *Del Sentimiento trágico de la vida* [*The tragic sense of life. 1954.* New York: Dover].