



# Sameness and Continuity: The Existence in a Non-Temporal Space

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## ABSTRACT

The aim of this paper is thinking the mind function without time. Is a thought experiment about how could function the mind in a no temporal universe? Starting with the idea that without time, the space will be the only possible way to exist. We argue that all moments exist simultaneously in space. We named these moments as Plans of Existence (PE). Each PE is a wholeness, and the mind inside a particular moment can't perceive another PE. We argue the memory acts as a copy of a PE in another PE, thus, in a no time existence the reality could be seeing as a collection of different moments connected thought memory. Based on this assumption we discuss that life cannot be conceived without time and that time cannot be conceived without life. For this discussion we consider time as a representation. At the end, we briefly discuss memory and perception.

**Key Words:** Philosophy of Mind; Space-Time Problem; Non-Temporal Existence; Thought Experiment

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## Introduction

Apparently, there is a discussion in physics about the reality of time (Unger & Smolin, 2015), if time is an essential aspect of nature or simply a quantity that plays a role just in some scales. In philosophy this discussion lies under the metaphysical theories of time, the different positions are known as the A-theory and B-theory (Burley, 2007). The main difference between the two is in terms of time flow; while the A-theory maintains that time *flows* (past to future), the B-theory maintains that this flow is merely apparent. (Williams, 1996).

Beyond the discussion, the aim of this paper is think about how the mind functions without time. This is done through a thought experiment about how mind functions in a non-

temporal universe. Even if in physics the no existence of time could be seen as speculative (Unger & Smolin, 2015), the philosophical argument for the Unreality of Time by McTaggart (1908) has influenced a number of philosophers' approach to time, and his work has also inspired many philosophers and physicists. However, we do not have a good understanding of how the world could exist if time were unreal (Monton, 2010).

In an existence without time, space would be the only possible way to exist. A similar proposal was made by Kurt Lewin in a topological and vector psychology theory, called Field Theory.

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In a letter to one of the Gestalt Psychology<sup>1</sup> father's, Wolfgang Köhler, Lewin wrote that his first uses of topological representations of psychology were against a then fully accepted philosophical dictum.

In 1936 Lewin first presents his original equation as  $B = f(S)$ , where behavior (B) is a function of the whole situation (S). Was mainly an attempt to understand behaviors: "one can hope to understand the forces that govern behavior only if one includes in the representation the whole psychological situation" (Lewin, 1936, p.12). The whole situation can be split between person (P) and environment (E), thus,  $B = f(S)=f(P,E)$ .

The main point in Lewin's proposal is the notion of Life Space, defined as the totality of possible events (Lewin, 1936, p.14). The vastness of the concept removes the plausibility of a total understanding of the Life Space. However, as representation is possible and indicates the position of persons and objectives in certain regions, "considering the location of events, relation between neighborhoods, boundaries, approximations and withdrawals, and movements of forces in certain directions" (Lewin, 1936, p.51).

The mathematical conception of psychological elements is one of our concerns. The topological psychology is not a consensus. Psychometrics did a remarkable job throughout the 20th century, with statistical and methodological advances used by other areas. However, Lewin, perhaps influenced by his early training in physics, tries to use spatial models. Regarding the mathematical conception of the psychological space, he considers it indifferent if the objects were physical or not. Still, Lewin does not recognize objections to apply the mathematical concept of space to psychological facts

Lewin considered facts that unfold in the Life Space to have concrete effects and develop in a causal chain. Events are derived from other events. At this point we are not concerned about the causality but rather by the time of the events, what he called the problem of contemporaneity. In order to determine the contemporaneity for different points of the Life Space with absolute

exactness one ought to consider in psychology, as is done in modern physics, the velocity of the mediating processes.

In the Life Space Lewin uses a diagram of a path to indicate a movement in a situation. He argues that it is only a symbolical representation, the structure of the Life Space remains constant during the moment. Lewin do not use the expression "moment," but instead uses "interval of time" (Lewin, 1936, p.35), referring to the same "interval of time" as a momentary section. Surprisingly, those time sections are not moments without extension but different time sections. The whole situation in a given moment is dependent upon the previous history, however, past events cannot influence present event, as "past events can only have a position in the historical causal chains whose interweaving create the present situation" (Lewin, 1936, p.35). The spatial configuration of a given moment is derived from all causal previous configurations. At this point we can see that Lewin does not leave the concept of time, and we may argue that without the time dimension it would not be possible to explain the historical causal chains.

The idea of causality will be discussed latter; for now, the core notion is the idea of a whole situation connecting with the purpose of this article, to think about the existence of mind without time. Before starting, it is necessary to mention that we must be careful with our words. It is said that the poet Iezid Abdul-Hamid wrote a thirty thousand and two hundred verse poem without using three of the most used Arab alphabet letters. Explaining the non-existence of time without using a time reference is a similar challenge, because our language references are based mostly on time. Through the exercise expression derived or related to time should be avoid.

Now, since we need to remove the time dimension, if we imagine we can stop time (and maintain our conscience<sup>2</sup>), the only thing left is space. Every part of everything in existence occupies a part of the space, every star or thought has a place, be the hydrogen atoms or neurotransmitters in a neuron. It is the same as Lewin's whole situation (S) and consequently the

<sup>1</sup>Gestalt psychology refers to theories concerning with visual perception. Were developed by German psychologists in the 1920s. The central principle of these theories is that the mind forms a global whole with self-organizing tendencies.

<sup>2</sup>The question about how could the mind maintains the conscience in a non-time existence is beyond our immediate aims. Although is a relevant point to this thought experiment just a little reference will be made at the end of this paper.



same as person and environment (P,E) but without time extension, it is a timeless moment. Starting in this timeless moment, to think of an existence without time there are two central questions: how could another moment exist and how are they connected if we have no time.

### **If there is no time, how could another moment exist?**

Without time, a moment could not generate another one. To generate a consequence movement is needed, but movement is a time function. Thus, if time does not exist, it is impossible to have a consequence of that moment. The simplest explanation for this problem is that must be no consequence.

Nevertheless, existence is not limited to a moment. The Moment (m1) does not exist alone; m1 is near m2, which is near m3, and so on. The consequence is a time function, but proximity is not. The moments could exist side by side. A moment configuration, let's say, m2, is configured by m1 and m3.

McTaggart thought of moments, or collections of moments as series. The notion that past time is finite and future time is infinite (McTaggart, 1908, p. 378), is a model where the universe started a finite amount of time ago at the Big Bang and will continue in existence forever. Since we are not concerned with physical explanations, it is not a question of the beginning and the end of the moments, because beginning and end are time functions. That question is beyond the scope of this paper, and is not necessary solve this enigma to go on. Indeed, if time does not exist and the spatial limitation is not a problem, to call moments m1, m2 and m3 is just a differentiation not a sequence.

However, if moments exist simultaneously, any particular moment could just exist in a different place of the space from another moment. The differences between the moments, the specific configuration of a moment is the position of all matter in a given moment and is a function of all other coexisting moments.

We will raise this conjecture, about how those moments (will hereafter be called Plan of Existence -PE) exist simultaneously in space. Every PE must be different from each other; otherwise, they would be the same Plan. We can consider the existence of all PEs forming a plan themselves. What we called PE is, in fact, the recognition of all perceived particles positions, similar to the Lewin's Life Space.

The difference of the PE and Lewin's Life Space are the connections. To describe the Plans connections Lewin considered the temporal causality, but he did not see the Life Space as existing simultaneously.

Our premise is that what we recognize as another moment, or another PE, is different matter position, but in the same plan, thus, all moments could exist simultaneously. In this thought exercise the use of a bidimensional plan image is just a simplification.

Continuing to assemble the universe without time, we need to lay the foundations of the physical world where such a mind exists, even in a mental experience. The collection of all the moments existing simultaneously could generate a no meaning spatial organization of the matter. We ought to conceive some organization of the matter in space, but we need a force that works without time. Nevertheless, all forces are explained with respect to time, with the possible exception of gravity<sup>3</sup>. Maybe, the key won't be a familiar force, but a simpler concept.

In the no time space, the Pauli Exclusion Principle<sup>4</sup> is still true. Following this reasoning, the differences between the PEs are determined by the position of the particle in space. What determines is if any given particle is in position A in the PE  $\alpha$  and in position A' in the PE  $\beta$  is that the A and A' position are the only positions in which they could be. In other words, the only possible space in which a particle exists. If we imagine a glass vessel crowded full of stones where no force could act<sup>5</sup>, then we shake the vessel, the resultant configuration of every stone will be derived only for the position of the nearest stones.

The particle *a* may not occupy the same place, since the different PE are indeed the same plan. The PEs are independent just if time is added. Therefore, the particle (*a*) does not occupy

<sup>3</sup>Beyond the physical relation to a force with time, like time dilation in a gravitational field as proposed by general theory of relativity, our exercise is thinking a force without time. Gravity could provide a good example, but still is based on movement, a time function.

<sup>4</sup>Pauli Exclusion Principle is Quantum mechanics formulated by Wolfgang Pauli in 1925. It proposes that two identical fermions could not have the same quantum number simultaneously.

<sup>5</sup>We refer to interaction forces between the stones, the vessel, earth, experimenter, and so on. Of course, the forces that keep the stones entire are necessary. In this case the stone represent some elementary particle.



different places in different plans, the particle ( $a$ ) occupies different places in the *same* plane.

The whole situation referred by Lewin is similar to the Wholeness described by Bohn (2005). Lewin used vectors to describe differences in the moments (Lewin, 1936, p.64). Bohn refers to a universal flux:

That is, there is a universal flux that cannot be defined explicitly but which can be known only implicitly, as indicated by the explicitly definable forms and shapes, some stable and some unstable, that can be abstracted from the universal flux (Bohn, 2005, p.15).

This flow does not differentiate mind and matter, as they all belong to the wholeness. The wholeness could be seen as instantaneous states changing every moment. Our question is about these "every moment." It is possible to catch a moment? If we take a photograph of the universe then we catch a moment; of course this is simplification roughly parallel to reality, because at elementary levels the image may be not frozen. Even the colors we perceive are based on differences of time (in terms of wave velocity).

In the flux of a time-space existence a moment cannot be equal to another. Every moment is a different wholeness. In the non-time space, every moment is a different PEs. If all of the PE occupy the *same space*, ought the exits a kind of wholeness of wholeness. At this point we can see that the non-time space reality is not continuously flowing; in the same way that we explain the electricity in a cable as a flow when it can also be explain as electron jumps.

For it to be true that particle ( $a$ ) occupies different places in the *same plane*, each different position of the particle could be a different particle. So the particle  $a$  is in position  $A(x,y)$  while the particle ( $a'$ ), could only be in position  $A(x',y')$ , and the particle ( $a''$ ) could only be in position  $A''(x'',y'')$ . Of course any object is more than a particle, it is the sum of all particles that conform to what we commonly call an apple or a stone. The fact implies that any given particle of an apple or stone at position  $A$  is not the same particle at position  $A'$ .

### How the PEs are connected

A PE cannot be seeing from another PE because the perception is trapped in the plane to which it belongs. This was not the way in which Lewin thinks, but he gives some clues:

The result was that one took past or future facts as causes of present events. In opposition to

this assumption we shall here strongly defend the thesis that neither past nor future psychological facts but only the present situation can influence present events (Lewin, 1936, p.34).

A central question about the reality or unreality of time is flow, Clifford Williams argues that "For anything to be time, it must possess transition" (1998, p.383). Obviously, the flow is the existence of time itself; the logic is that an event  $A$  happens, and then, the event  $B$  happens, as a consequence of the  $A$  event. In fact, is the "causal chain of events". In a non-temporal existence, event is just position of matter, what we call of PE. Follow Williams, "if there were no transition between different moments or events, temporal extension would not differ from spatial extension. There must be something that differentiates the two kinds of extensions, and this can only be transition" (2003, p.79).

However, how we can distinguish different things if the whole situation, to use an Lewin's expression, exists simultaneously. The answer to the question could be in the perception of the present. First, it will be necessary recur to what William James call specious present (1890, p.609):

The relation of experience to time has not been profoundly studied. Its objects are given as being of the present, but the part of time referred to by the datum is a very different thing from the conterminous of the past and future which philosophy denotes by the name Present. The present to which the datum refers is really a part of the past – a recent past – delusively given as being a time that intervenes between the past and the future. Let it be named the specious present, and let the past, that is given as being the past, be known as the obvious past. All the notes of a bar of a song seem to the listener to be contained in the present. All the changes of place of a meteor seem to the beholder to be contained in the present. At the instant of the termination of such series, no part of the time measured by them seems to be a past. Time, then, considered relatively to human apprehension, consists of four parts, viz., the obvious past, the specious present, the real present, and the future. Omitting the specious present, it consists of three ... nonentities – the past, which does not exist, the future, which does not exist, and their conterminous, the present; the faculty from which it proceeds lies to us in the fiction of the specious present. (James, 1890, p.609, quoted from Kelly, pp.167-168)



When we see an event, in fact, we are not seeing to an event, but rather the light emissions of the event. All we can perceive is not the moment we are, but copies of the moment we perceive. If we are stuck in a moment, all of the perceptions the mind has in a PE is a representation of another PE. Thinking in a time existence, this means that all we perceive are past situations. The fact that we can see the image of a star that has already ceased to exist show clearly that what we believe to be the present is in fact the past.

When we said that everything exists simultaneously in space we must consider that the mind doesn't perceive everything, but just the matter organization of the PE that the mind is inside, and just some of the matter organization that sensory organs catch.

A mind can just perceive its surrounding space, and not the present surrounding space, but from another PE as we will see later. In the human example, all we perceive, and all we have in memory, belongs to the surrounding space. The image of a star thousands of light years away is not the galaxy, but a copy of the galaxy printed in light. When our brain perceives and memorizes the image, it memorizes just the light that is in fact in our neighborhood. We memorize only our surrounding space. Following the ray of light from our retina until it is chemically copied to the long term memory, is just a sequence of different cerebral configurations. In the PE it will be seen as a sequence of different brains. Which brain is the actual brain? All of them, stocked in their PEs, but temporally significant in each PE due to memory, due to the copies of the existing plans we carry. Each PE life has memory of his nearest Plan.

In Newton's apple anecdote, the apple that fell from the Newton's backyard tree was not the same that hit his head. The sameness and continuity is a phenomena constructed by memory. Memory connects different PEs, and it could be seen as the ability to keep a reproduction of the mind neighborhood through all PEs since life has existed. Obviously, many perceptions belong to other plans: "past, present and future do not belong to time per se, but only in relation to a knowing subject" (McTaggart, p.13). Memory is defined here as a copy of all the matter positions of a little piece of the space.

All sounds, images and smells if paused, meaning, if you stop the time, will represent a unique and determinate position of the matter in the space. Life could perceive the different

"copies" as sequences in the flow of the time. In that sense, a mind will be a special configuration of the matter that is able to transfer its configuration to another special configuration. At the end, the mind in a non-temporal existence will be all of the special configurations that could be differentiable and able to cope himself.

Life is classically defined as the capacity for growth, reproduction, functional activity, and continual change until death. This is a temporal definition, thus, maybe life cannot be conceived without time, or, vice versa, time cannot be conceived without life. Lives create time through memory; meaning each organism must have memory. Indeed, it's a fact that every organism has a memory since DNA is a memory able to copy itself, but we will discuss better this point later.

### How the mind organizes memory

We have now another problem, how the mind organizes memory. If all existence is spatially simultaneous, and what the mind perceives as past and future are in the same space, then why do we just perceive or have memories from the past?

Every mind in each PE has a memory of his nearest plan. If the mind in the nearest PE has the memory about its nearest PE mind, in the life existing space, the mind in every PE has a copy (a memory) of all PE where life has existed. However, the mind remembers just some PE that is interpreted as past and present<sup>6</sup>, and doesn't remember others, interpreted as future or a past previous to the mind's existence. We can consider that the mind organizes the PE connections in order to structure a particular sequence.

In a non-time existence, the past and future can only be a result from the spatial positions. Indeed, the limitation of the memory from the future is a spatial limitation. The better way to understand is by thinking of a camera recording another camera, just the lens. No image will be seen, maybe just static. Let's consider the Newton's falling apple and one mind through three PE,  $\alpha$ ,  $\beta$  and  $\gamma$ . The mind's representation of the apple in PE( $\alpha$ ) (considering the apple is in position  $x,y$ ) will be copied in the mind PE( $\beta$ ). But the copy of PE( $\gamma$ ) (considering the apple is now in position  $x',y'$ ) will not be copied in PE( $\beta$ ), since

<sup>6</sup>The present refers to the notion that memory and perception could be different parts of the same process, the subject will be discussed latter.



the apple position in PE( $\gamma$ )  $x''$ ,  $y''$  includes a copy of PE( $\beta$ ), the apple in  $x'$ ,  $y'$  position.

Two points must be considered:

First, the mind's perception of the apple in position  $x'$ ,  $y'$  must include  $x$ ,  $y$  position if not, the mind will not perceive movement, or time flow.

The mind can just see other plans, but not its own PE. In the PE, this means that a mind cannot make a copy of your own plan. In other words, the life cannot copy itself in the same plan. If it were otherwise, there would be another spatial configuration which would imply another PE.

Thus, considering three apple positions,  $A=(x,y)$ ,  $B=(x',y')$  and  $C=(x'',y'')$ , each belonging to  $\alpha$ ,  $\beta$  and  $\gamma$  PE, respectively, the mind perception in each PE will be:

$$\beta=A+B$$

$$\gamma=A+B+C$$

The mind perception in  $\alpha$  will be just about the previous apple position, but we must to consider that  $A$  is the sum of all previous apple positions. We have some complexity here, because the sum of all apple positions includes the positions since the mind started to perceive the apple. In the PE, the first PE where the apple was perceived. The mind could perceive the apple as the one that has been seen in another PE, not necessarily a neighbor of  $\alpha$ ,  $\beta$  and  $\gamma$ , but maybe in a PE the mind perceived as a moment from last week.

All configurations,  $A$ ,  $A+B$  and  $A+B+C$ , exist simultaneously; the only difference is that the mind in  $\beta$  cannot see the mind in  $\gamma$  because the memory of the mind in the PE  $\gamma$  copies just events from the nearest PE of existence, meaning,  $\beta$ , but not itself. The apple  $x''$ ,  $y''$  will be seen (perceived and memorized) just in another PE of existence, let's say,  $\delta$ .

Notice that the differences between the memories in each PE create a logical sequence, and such a sequence is perceived by the mind as a time sequence, the causal chain of events. At this point, time flows. However, it is a spatial order, not temporal. The PE  $\beta$  can contain  $\alpha$ , however  $\beta$  cannot contain  $\gamma$  because  $\gamma$  is spatially derived from  $\beta$ . Derived is a temporal expression, as it implies an antecedent, and even a special antecedent implies a temporal sequence. A sequence ought to have a beginning and an end, *au contraire*, doesn't make sense thinking in a order. We argue the space is a whole thing without time, but how can it be limited (note that with question we are concerned with is not the size of the universe, but the size of the time)? The

answer is that the life existence, is limited. Life has a beginning and an end, in a timeless existence limited meaning spatially limited. When we propose to think that memory links the different PEs, we propose that memory gives meaning and organizes the existence.

### Representation of time

Memory can be seen in many ways, but in a strict conception it is the brain's faculty to store and retrieve information, however, a second and broader definition is simple the faculty to store and retrieve. As we said earlier, memory is a life's faculty and every organism carries a kind of memory, DNA. Obviously DNA does not copy the perceptions, as DNA is just an unaltered copy of the organism. In a unicellular organism the DNA is a way to keep the existence of such singular matter configuration.

In more complex organisms, like trees, a kind of memory can fell the neighborhood and regulate the tree's growth or fell the pattern temperature's changes of the seasons to grow leaves or fruits. The human cerebral memory is largely different from those kind of memories, and it can be defined as the storage and retrieval of information by the brain (Izquierdo, 2015). The biological complexity is beyond our aim, which is the different types and the retrieval processes of the human memory. The brain is not a black-box, and the processes of formation and retrieval of memories require a lot of cerebral structures working together. However, following this study's aims and in a radical simplification we took the brain as a singular spatial configuration of a part of the whole matter. In a more radical simplification, we can take the brain as the place where things go when memorized.

If we put that brain in a non-temporal existence, the brain stocked in a moment, all memories of a person will be just spatial configurations of neuronal cells, its dendrites and axons, synapses, neurotransmitters, etc. Of course, such a state is not an existence, so maybe in this isolated situation we would have no life. However, the brain stocked in a moment can show us that all the memories of our life, have a meaningful temporal sequence that is just a singular brain's configuration. If we change any little part of such a configuration, the memory could be misrepresented.

About that point, Danie Dennet makes a good question: How, then, does the brain keep track of the temporal information it manifestly



needs? (Dennet & Kinsbourne, 1992, p.186). Before presenting Dennet's answer, it will be necessary to present the construction he made to reach that point. Daniel Dennett is known partly by his proposal of the Multiple Drafts Model (Dennett, 1992) More than an alternative conception of consciousness from Cartesian Model, it is also a proposal about how the mind deals with the timing of events. In the author's proposal, the Cartesian consciousness is based on the point of view. His question is about where precisely in the brain that point of view is located. It is based on phenomena like phi phenomenon<sup>7</sup> horizon of simultaneity<sup>8</sup>:

The central question is this picture of how conscious experience must sit In the brain Is a natural extrapolation of the familiar and undeniable fact that for macroscopic time intervals, we can Indeed order events into the categories "not yet observed" and "already observed" by locating the observer and plotting the motions of the vehicles of information relative to that point. But when we aspire to extend this method to explain phenomena involving very short intervals, we encounter a logical difficulty: If the "point" of view of the observer is spread over a rather large volume In the observer's brain, the observer's own subjective sense of sequence and simultaneity must be determined by something other than a unique "order of arrival" because order of arrival Is Incompletely defined until we specify the relevant destination. (Dennet & Kinsbourne, 1992, p.184).

Dennet supposed that it would be necessary to have a place in the brain where it all comes together, and he answers his own question that this place, or point, does not exist. The alternative constructed by Dennet is the Multiple Drafts model. I such model, all perceptual

operations are made by "multitrack processes of interpretation and elaboration" (Dennet & Kinsbourne, 1992, p.185). Each Draft reflects the situation at the time it is generated.

Even Dennet does not mention the time of Draft, but presents what he calls "temporal anomalies" of consciousness, in which the temporal ordering of the elements in the consciousness seems to be anomalous. We will not describe the phenomena presented by the author, but just for exemplification we can cite the Color phi phenomenon, described in note XX. According to Dennet, those phenomena show an apparent dislocation in time, contrary to the logical principle that causes precede their effects.

Now we reach the point of confluence with Dennet's thesis. As we said, everything exists in the brain simultaneously in a non-time existence. Considering that the brain can organize these events, should we ask how the brain sees the temporal causality of those events, or as Dennet asks, how does the brain keep track of the temporal information? It will be interesting to transcribe a story here cited by the author:

Consider the communication difficulties faced by the far-flung British Empire before the advent of radio and telegraph, as illustrated by the Battle of New Orleans. On January 8, 1815, 15 days after the truce was signed in Belgium, more than a thousand British soldiers were killed in this needless battle. We can use this debacle to see how the system worked. Suppose on Day 1 the treaty is signed in Belgium, with the news sent by land and sea to America, India, Africa. On Day 15 the battle is fought in New Orleans, and news of the defeat is sent by land and sea to England, India, and so on. On Day 20, too late, the news of the treaty (and the order to surrender) arrives in New Orleans. On Day 35, let's suppose, the news of the defeat arrives in Calcutta, but the news of the treaty doesn't arrive there until Day 40 (via a slow overland route). To the commander-in-chief in Calcutta, the battle would "seem" to have been fought before the treaty was signed - were it not for the practice of dating letters, which permits him to make the necessary correction (Dennet & Kinsbourne, 1992, p.188).

The solution for the problem was simple; communications began to have temporal markings, the arrival time of the signals will be irrelevant for the message. The story tells us that time, as well as space, can be represented. It means that "there is no reason to suppose that the beginning of the representing represents the

<sup>7</sup>The color phi phenomenon is a perceptual illusion described by psychologists Paul Kolers and Michael von Grünau in which a disembodied perception of motion is produced by a succession of still images. The color phi phenomenon is a more complex variation of the phi phenomenon. Kolers and von Grünau originally investigated the phenomenon in response to a question posed by the philosopher Nelson Goodman, who asked what the effect of the color change would have on the phi phenomenon.

<sup>8</sup>Light travels much faster than sound, our perception see the light and hear the sound of a near event, like fireworks, as simultaneous. But if that event occurs beyond 10 meters from the observer's they will be perceived as not occurring at the same time Poppel (1985/1988).



beginning of the represented” (Dennet & Kinsbourne, 1992, p.188). The brain needs to know the temporal content of the events, and thinking in PE, the temporal content is given by the presence of an event itself.

As we said, the PE  $\gamma$  sees that in the PE  $\beta$  the apple was in  $x',y'$  position, and in the  $\alpha$  the apple was in  $x,y$  position, and perceive  $\alpha$  preceding  $\beta$ , because  $\alpha$  doesn't contains the apple position in  $\beta$ . The main point Dennet offers us to conclude that is as follows: “The representation of sequence in the stream of consciousness is a product of the brain's interpretative processes, not a direct reflection of the sequence of events making up those processes.” (Dennet & Kinsbourne, 1992, p.200). In other words, the representation of time in the brain is not based in the time the brain is actually submitted. Dennet's proposition is about a consciousness in a time-space universe. However, the main idea that we keep is about the mind's representation of the time, and the possibility of the mind constructing it experience based in logic independent from the time outside the mind.

### Memory and perception

A last question before the conclusion is about perception. In Matter and Memory, Bergson represents a distinction between memory and perception (Bergson, 1911). Maybe all Bergsonian dualism was based on the analysis of representation which has the memory analysis as basis. The differentiation between perception and memory is too a paradigm for the cognitive sciences; on the other hand, some work on the field, like that of Intraub and colleagues (2008), suggests that memory and perception may be simply two sides of the same coin. We do not make a differentiation between memory and perception. If the brain is a singular matter configuration in any given PE, the memory is a part of such a configuration. Perception depends upon memory due to the way that in a PE the mind can just “see” the mind (every thought is a copy of the mind in another PE). As we said, the mind copies its surrounding space and, in any PE all the mind knows is what was copied from another P., Thus, the mind “see” through memory. Seeing is the experience of consciousness, thus, we are just aware about our memory<sup>9</sup>. From that

argument we can make a proposition: in the PE model, without memory we have no conscience, so basically, we are our memory.

The initial proposal was to conduct a thought experiment about how a min could exist in a non-temporal existence. In order to do this thought experiment, it was necessary to create a kind of mental simulation of the universe without time. We are not concerned about the physical possibility of the proposal, but despite that we had to use some physical conceptions. This exercise was a philosophical thought experiment, which was aimed at the elucidation of concepts, different from scientific thought experiments, whose aim is to draw out consequences of empirical theories of the world (Ludwing, 2007).

The starting point was Kurt Lewin's representation of what he called the “whole situation” one of the initial representation of physical and psychological events together, where the whole situation refers to the person (P) or the mind in our case, and the surrounding environment (E) is equal to the whole situation ( $S=P+E$ ). It was still a temporal proposition, but not one concerned about time. At this point we proposed the PE, similar to the “whole situation” but with no time flow. One of the central ideas is that time does not exists, so the differences perceived by the mind in the space are implied in the existence of several PEs. The differences between the PEs are determined by the position of matter in the space.

Another main idea was about how a PE can differ from another one. When the mind perceives any given (a) particle moving, in fact, the particle is occupying different points in the space in different PEs. Even more specifically, particles in different PEs are not the same. The particle (a) occupies a position in the PE  $\alpha$ , but in PE  $\beta$  it is not possible to have a particle in the same place, since the different PE indeed lay on the same plan. The particle in PE  $\beta$  is in any another possible position. The Plans of Existence are independent just if time is added.

The connection of those PEs is made by memory. Memory could be seen as the ability of keeping a reproduction of the mind neighborhood through all PEs since that life has existed. The mind maintains in each PE the position of the particle in the nearest PE and transmits through memory that history of particle positions. These

<sup>9</sup>Even the relation between consciousness and memory is a point that will be discussed here our position is that

memory is content, and the reality of conscious is building over these contents (Dennett & Kinsbourne, 1992).



histories are a succession of representation or copies of different PEs in the brain. In the brain, all the PEs it has lived exist simultaneously. Thus, “the temporal order of subjective events is a product of the brain's interpretational processes” (Dennett & Kinsbourne, 1992, p.1).

There are obviously a lot of limitations in our proposal. Along with the work, we use the words ‘mind’ and ‘brain’ indistinctively, of course we are based in the idea that “no brain, no mind” and it will have metaphysical consequences which we did not propose to discuss here. Another point we do not deepen sufficiently was about the stream of consciousness in a non-time universe. We use Dennett’s proposition that what matters is not the temporal properties but the temporal properties represented (Dennett, 1991). However, we consider an insufficient solution for a non-time existence.

This is just one approach to the subject; the PE model was thought mostly in order to give ideas and raise discussion about how the mind could to function without time. There may be other better approaches that can deepen the discussion, either through the philosophy of mind or cognitive science.

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