ТЕМПОРАЛЬНОСТЬ

TEMPORALITY

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TEMPORALITY AS A SPATIAL FIELD OF PRESENCE*

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According to Merleau-Ponty in his Phenomenology of Perception, we experience time as a "field of presence." In his words, "It is in my 'field of presence' in the widest sense […] that I make contact with time, and learn to know its course." This field is fundamental. It elucidates my spatial apprehension. In his words: "Perception provides me with a 'field of presence' in the broad sense, extending in two dimensions: the here-there dimension and the past-present-future dimension. The second elucidates the first." In other words, I understand the spatial "here-there" dimension in terms of the temporal dimension. The "there" is what I immediately grasp in still having in hand "the immediate past." In this article, I propose to examine the general conception of time as a field of presence. This examination can be seen as a kind of "thought experiment," where we see what happens when we reverse this relation—i.e., when we elucidate the "past-present-future dimension" in terms of the "here-there dimension." Such a reversal, I will argue, brings to the fore the pragmatic, spatial character of lived time. Not only does it bring about a revision of horizonal structure of the field of presence, it also has consequences for psycho-analytical research.

Keywords: spatiality, field of presence, temporality, perception, Merleau-Ponty, Husserl, Heidegger.

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ТЕМПОРАЛЬНОСТЬ КАК ПРОСТРАНСТВЕННОЕ ПОЛЕ ПРИСУТСТВИЯ*

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Согласно утверждению Мерло-Понти в *Феноменологии восприятия,* мы переживаем время как «поле присутствия». По его словам, «именно в моем "поле присутствия" в широчайшем смысле […] я вступаю в контакт со временем и познаю его протекание». Это поле фундаментально. Им объясняется мое понимание пространства. Мерло-Понти формулирует это так: «Восприятие доставляет мне "поле присутствия" в широком смысле, простирающееся в двух измерениях: измерении здесь-там и измерении прошлое-настоящее-будущее. Второе проясняет первое». Другими словами, я понимаю пространственное измерение «здесь-там» в терминах темпорального измерения. «Там» — это то, что я непосредственно схватываю, удерживая «только что прошедшее». В этой статье я предлагаю исследовать общую концепцию времени как поля присутствия. Это исследование можно считать чем-то вроде «мысленного эксперимента», в котором мы рассматриваем, что происходит при инверсии этого отношения, т. е. при объяснении «измерения прошлого-настоящего-будущего» в терминах «измерения здесь-там». Такая инверсия, как я намерен показать, раскрывает прагматический, пространственный характер проживаемого времени. Это не только способствует пересмотру горизонтной структуры поля присутствия, но и имеет последствия для психоаналитического исследования.

Ключевые слова: пространственность, поле присутствия, временность, восприятие, Мерло-Понти, Гуссерль, Хайдеггер.

According to Merleau-Ponty in his *Phenomenology of Perception*, we experience time as a "field of presence." In his words, "It is in my 'field of presence' in the widest sense […] that I make contact with time, and learn to know its course" (Merleau-Ponty, 2002, 483). The field is structured horizonally. Its sense is that of "the field of presence with its double horizon of primary past and future, and the infinite openness of those fields of presence that have slid by, or are still possible"—namely, the recalled and anticipated fields with their own horizons of past and future (Merleau-Ponty, 2002, 492). What exactly is this field? What is the nature of its horizonal structure? Merleau-Ponty remarks that it has both a spatial and a temporal aspect. He writes: "Perception provides me with a 'field of presence' in the broad sense, extending in two dimensions: the here-there dimension and the past-present-future dimension. The second elucidates the first" (Merleau-Ponty, 2002, 309). In other words, I understand

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the spatial "here-there" dimension in terms of the temporal dimension. The "there" is what I immediately grasp in still having in hand "the immediate past." (Merleau-Ponty, 2002, 309). In this article, I propose to examine the general conception of time as a field of presence. This examination can be seen as a kind of "thought experiment," where we see what happens when we reverse this relation—i.e., when we elucidate the "past-present-future dimension" in terms of "the here-there dimension." Such a reversal, I will argue, brings to the fore the pragmatic, spatial character of lived time. It also has consequences for psycho-analytical research. Although this article will cite Kant, Merleau-Ponty and Heidegger, it is in no way to be taken as a commentary on their positions. Elements of their analyses will enter into its discussions, yet the overall effect will be to reverse their views on the relation of time to space[1].

1. THE CONCEPT OF HORIZON AND ITS TEMPORAL INTERPRETATION

Before discussing the horizonal structure of our experience of time, mention should be made of Husserl's general conception of a horizon. Formally regarded, a horizon is simply a series of experiences which have been connected and, in their connections, determine the further experiences which can join this series. Thus, in the appearing of a spatial-temporal object, the experiences are perspectivally arranged, showing first one side and then another of the object. What, by virtue of past experience, is implicit in the view of the side we see becomes explicit in the sides that come into view. As they do, the experiences that we have had form the actually experienced portion of a larger horizon. This horizon is composed of the experiences that can fit in with the perspectival views we have already had. Such fitting in signifies, negatively, that they do not undermine our understanding of the sense of the object we are experiencing. Thus, as we walk around the object, we do not expect that the object will suddenly vanish when we attempt to view its further side. Positively, fitting in signifies that the views we are having will join with our previous experiences so as to more closely determine the object's sense—e.g., its color, shape, etc. For Husserl, every real object, taken as a "unity of sense," has its horizon of possible experiences, which can continue to enrich and define its perceptual sense. This horizon is not just "internal" to the object; it is also what Husserl calls "external." In the latter case, it links the object to the other objects we experience. As Husserl describes this:

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[1] I am grateful to Prof. Barbara Weber, UBC Vancouver, who first pointed out to me the importance of Merleau-Ponty's conception of time as a field of presence. The claim that this field can be elucidated spatially is, however, my own.

> The individual—relative to consciousness—is nothing for itself; perception of a thing is its perception in a *perceptual field*. And just as the individual thing has a sense in perception only through an open horizon of "possible perceptions," […] so once again the thing has a horizon: an "external horizon" in relation to the "internal"; it has this precisely as a thing of a *field of things*; and this finally points to the totality, "the world as a perceptual world." (Husserl, 1962, 165)[2]

Thus, the perception of a chair in the bedroom is linked to that of the bed, and the bedroom itself, with its various furnishings, is perceptually linked to the other rooms in the house. My perceptual experience, as I walk through the house, leads me from the perceptions of the objects of one room to those of the others. The ultimate referent of this perceptual flow is, as Husserl writes, the world as perceived by us. This is the world as the horizon of all the experiential horizons that define and link individual objects (Husserl, 1962, 145).

How are we to think of the experiences forming these horizons? Are their connecting links to be taken as primarily temporal or spatial? Should we understand spatial relations in terms of temporal relations or vice versa?[3] In the tradition that stretches from Kant to Husserl, the links are pre-eminently temporal. According to Kant, "Time is the formal condition of all appearances whatsoever." He explains this by writing: "all presentations […] belong […] as determinations of the mind, to our inner state." This inner state, however, "belongs to time" (Kant, 1963, 77). This means that if we do not have access to this inner state, i.e., to the flow of our experiences, we have no sense of time. In his words: "if we abstract from our mode of inwardly intuiting ourselves […] then time is nothing" (Kant, 1963, 110). For Kant, it is only by turning inward, i.e., regarding not only our present experience but also our remembered and anticipated experiences, that we can speak of time as a dimension embracing the past, present, and future. If we limit ourselves to what is sensuously available in outer perception, we can see neither the past nor the future. Thus, regarding the financial pages of the paper, I cannot see tomorrow's stock prices. Neither can I directly see the past. The world that I grasp in outer perception is always now.

Husserl also embraces this primacy of time. His focus, however, is on our grasp of existents. Time, for him, is the form of all appearances because, as he writes, "[t]emporalization is the constitution of existents in their temporal modalities." His basic point is that the temporal arrangement of the experiences in a given order is required for me to grasp them as experiences *of* some existent—say a chair. Were these experi-

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[2] Unless otherwise noted, all translations from German in this article are my own.

[3] For the purposes of this thought experiment, we exclude the position that such relations are equi-primordial.

ences disordered, no such apprehension would be possible. Behind this view is a temporal conception of existence. For Husserl, an existent is "a present existent with the past of the same existent, with the future coming to be of the same." Temporalization, in its generation of retentions and protentions, allows us to grasp this past and future. By virtue of these short term or "primary" memories and anticipations, we grasp our experiences in the order of their appearing[4]. The object that appears through them is, in Husserl's words, the existent understood as "an original, concrete presence, a persisting presence that 'includes' the past and the future as dependent components in the streaming of the present"[5].

2. EMBODIMENT AND THE FIELD OF PRESENCE

What is striking in these accounts is the fact that the body plays no part in them. Yet, as is obvious, embodiment informs visibility. The foreground-background structure that characterizes the visual field is ordered according to the "near to" and the "far from" my body. The horizonal structure of my field of presence is based on this ordering, which my bodily movement sets in motion. When the "far" becomes the "near," when, for example, I approach a distant object, a new "far"—a new background for the near—opens up[6]. This transition from the near to the far is accompanied by an ordered flow of experiences. Things, as I move among them, show first one side (the side facing me) and then another. In all this, my body is both my openness to my surrounding world and that which gives it a concealing character. I see because my face has eyes, but this very fact

[4] Such short term or primary memories are to be distinguished from long term memories. The former are originally perceptive. In Husserl's words, "But if we call perception the *act in which all 'origin'* lies, the act that *constitutes originally,* then *primary memory is perception.* For only in primary memory do we *see* what is past, only in it does the past become constituted—and constituted presentatively, not re-presentatively. The just past, the before in opposition to the now, can be directly seen only in primary memory; it is its essence to bring this new and original past to primary, direct intuition, just as it is the essence of the perception of the now to bring the now directly to intuition" (Husserl, 1991, 43). As for long term memories, they recall this original grasp. They are not perceptive, but rather reproductive (Husserl, 1991, 39).

[5] „Zeitigung — das ist die Konstitution von Seiendem in Zeitmodalitäten. Seiendes, gegenwärtig Seiendes mit Vergangenheit desselben Seienden, künftig Seinwerden desselben. So ist im ursprünglichen Sinne Seiendes eine ursprünglich konkrete Präsenz, es ist dauernde Präsenz, die als unselbständige Komponenten im Strömen der Präsenz Vergangenheit und Zukunft ‚einschließt'" (Husserl, 2002, 274).

[6] At play, here, is the etymological sense of the word "horizon," which comes from the Greek, *ὁρίζων* (horízōn). Its root *ὅρος* (hóros), signifies boundary. Thus, we can speak of the horizon as the border between the earth and the sky. This border is the limit of what we can see. As we advance, it recedes before us. It always remains "far from" us.

means that seeing what is in front of me is not seeing what is behind me. What is behind me forms, like what is far from me, a part of the horizon of possible experiences that I could have were I to undertake the appropriate bodily motion. Thus, the view I have of some object is understood as included in a horizon (or connected series) of views that I could have were I to shift my body's position and see the object from elsewhere. Every time I do take a new position, a new view of the object achieves prominence. It becomes the foreground, while the other perspectives form the background. As Merleau-Ponty notes, it is impossible to dispense with this structure. Were we to attempt an "absolute" grasp of the object, one that viewed it from all sides simultaneously, we would leave consciousness behind. In his words, "the absolute positing of a single object is the death of consciousness" (Merleau-Ponty, 2002, 82). This is because the foreground-background structure is inherent in consciousness. It is a principle implicit in the ordering of its visual experiences—a principle that is founded on its embodiment.

This understanding of the horizon in terms of the "near" and the "far" is a spatial understanding. The same understanding is present when we speak of the intentionalities that traverse our field of presence. To understand them spatially is to see them as based on spatial motion, the very motion that unfolds the horizons that situate us. Merleau-Ponty comes close to this understanding when he speaks of "motility as basic intentionality." Intentionality is the property that consciousness has of being consciousness *of* something. It is its directedness towards an object or situation. To understand intentionality in terms of motility is, accordingly, to make the directedness of consciousness a function of its embodied mobility. This implies, as Merleau-Ponty writes, "Consciousness is in the first place not a matter of 'I think that' but of 'I can'" (Merleau-Ponty, 2002, 159). The I-can-move founds the directedness or intentionality of consciousness. In Merleau-Ponty's words, "Consciousness is being-towards-the-thing through the intermediary of the body […] to move one's body is to aim at things through it" (Merleau-Ponty, 2002, 160–161). Such movement sets the horizon of the "near" and "far" in motion. Doing so, it brings objects close, letting them appear through the horizons of experiences that define their presence. In this view, it is not as if we first have a representation of an object and then move towards it. The representation forms as we move towards it. Our motion unfolds the experiences, whose unity is the object's sense. Thus, initially, the object is given as a direction of our motion. It is that which draws us to project ourselves forward. In Merleau-Ponty's words,

> In the action of the hand which is raised towards an object is contained a reference to the object, not as an object represented, but as that highly specific thing towards which we project ourselves, near which we are in anticipation, and which we haunt. (Merleau-Ponty, 2002, 159)

Thus, reaching toward the glass we are to drink from, we are, in anticipation, already there at the goal. The goal, which is our grasping the glass, is not a representation but a *destination*. It is, as an anticipation, a guide for the motility that will disclose the glass. It is a destination that guides the unfolding of our experiences as we move, the very experiences we synthesized into a bodily sense-filled presence. The spatiality implicit in this conception of intentionality is obvious. To intend implies traversing space. Spatiality is inherent in the directed motions through which we bring things close[7].

3. THE PRAGMATIC UNDERSTANDING OF THE FIELD OF PRESENCE

Concretely regarded, bringing close—such as reaching for a glass or setting out for a destination—is a pragmatic activity. I perform such activities as means to an end—such as drinking from the glass or arriving at the destination. This implies the intentionalities in question are themselves pragmatic[8]. This is the position Heidegger adopts in *Being and Time*. In his account, our directedness to objects—our intentionalities—are a function of bringing close. This bringing close does not just reveal the perceptual sense of the object—e.g., the sense of the glass in the unfolding of the perspectives as I bring it close. It also reveals its *pragmatic sense*—its sense as something to drink from. The same holds for the pragmatic senses of the things I use to accomplish my purpose. Suppose, for example, I intend to cross the lake in a sailboat. Doing so, I understand the wind as wind to fill my sails. Its sense is grasped in terms of my goal[9].

According to Heidegger, my intentional relation to the goal is projective. In deciding to cross the lake, I understand this as a possibility I am capable of and project it forward as the future I will actualize. Engaging in this activity, I don't just exhibit

[7] Merleau-Ponty would object to this interpretation. Referring to our temporal retentions and protentions, he writes, "Time is not a line, but a network of intentionalities" (Merleau-Ponty, 2002, 484). The implications of Merleau-Ponty's remarks on "motility as basic intentionality," however, point *not* to time, but rather to space as fundamental to this network. Space, in the form of the "near" and the "far," make possible the horizonal structure of the field of perceptual presence, a structure that becomes that of an actual horizon through our mobility. The intentionalities that determine the horizonal unfolding of our perceptual experiences are directed to objects or situations. Since their intent is to bring these close, they are, we contend, primarily spatial.

[8] The pragmatic context excludes such activities, such as dancing, that can be seen as being performed for their own sake.

[9] The same holds generally. Viewed pragmatically, i.e., as means, "[t]he wood is a forest of timber, the mountain a quarry of rock; the river is water-power, the wind is wind 'in the sails' and so on" (Heidegger, 1967, 70).

myself as actualizing this possibility—this through disclosing my being as the person who has crossed the lake—I also exhibit both the boat and the wind as means for my purposes. This example illustrates how I make my way in the world. I do so by intending the world as an "equipmental totality"—i.e., a totality of equipment or tools needed to actualize my pragmatic possibilities. Interpretation is interpretation of such uses. It is the apprehension of sense in terms of use value. In Heidegger's words, interpretation "appresents the what-it-is-for of a thing and so brings out the reference of the 'in-order-to,'" i.e., its use in a particular project (Heidegger, 1985, 261). The result is the articulation of the world according to the uses of its objects. For Heidegger, the essential point in this account is the role of my projective, intentional being in such articulation. *Understanding something as something*, e.g., wind as wind to fill my sails, and *projecting myself forward* as the person who will accomplish one of my possibilities, e.g., that of crossing the lake, are, for Heidegger, the *same* process. In his words, "As understanding, *Dasein* projects its Being upon possibilities." This "Being-towards-possibilities, which understands, is itself a potentiality-for-Being; and it is so because of the way these possibilities, as disclosed, exert their counter-thrust [*Ruckschlag*] upon *Dasein*" (Heidegger, 1967, 148)[10]. Their counter-thrust is their role in the defining of *Dasein*'s being as having realized one of his or her possibilities.

Inherent in this pragmatic view is the conception of the horizon as a series of means-ends relations. For Heidegger, the objects of the world are linked in terms of the uses we can put them to. The nail, for example, is linked to the hammer used to drive it; and both are understood in relation to the boards we are nailing. These objects are understood in terms of the thing that we are making—say, a bookcase. The latter, in turn, is intelligible in terms of the books that we are making it for; and these books are, themselves, grasped in terms of further references. Things, here, are always interpreted in terms of their relations with other things, the ensemble corresponding to the possibilities we have of engaging with them. Such possibilities, which are essentially those of the "I-can," set the horizons of our world. The sense of this world is the totality of uses we can put its objects to. It is the horizon of the horizons set by our individual, practical projects. In such a world, as Heidegger notes, "An interpretation is never a presuppositionless apprehending of something presented to us" (Heidegger, 1967, 150). It articulates a tacit understanding—a way of being in and using the world—that is set by our goals.

Is this projecting forward of ourselves in terms of one of our possibilities temporal or spatial? For Heidegger, it is clearly temporal. The point of his descriptions

[10] Here, I follow the translation Heidegger (1962, 186).

in *Being and Time* is to exhibit "temporality as the meaning of the being that we call *Dasein*." This involves "the repeated interpretation … of the structures of *Dasein* […] as modes of temporality" (Heidegger, 1967, 17). Thus, for Heidegger, our projecting ourselves forward in terms of some goal—i.e., our envisaging ourselves as having accomplished it—is what futurity signifies. At its basis is the fact that, in intending something, "*Dasein* has already compared itself in its [present] being with a[n unrealized] possibility of itself" (Heidegger, 1967, 191). This means that "*Dasein* is already ahead of itself in its being. *Dasein* is always [in considering this possibility] 'beyond itself' ['*über sich hinaus*']" (Heidegger, 1967, 192). The future is accomplished in realizing this possibility. I accomplish it by closing the gap between my present self and the self that realizes some given possibility—e.g., the possibility of my crossing the lake. In Heidegger's words, "This […] letting itself *come towards* itself [*auf sich Zukommen-lassen*] […] is the original phenomenon of the *future*" (Heidegger, 1967, 325). For Heidegger, then, closing the gap is a temporal phenomenon. My contention, based on the same pragmatic interpretation of the field of presence, is that it is, first of all, spatial. How can the issue be decided?

4. TIME AS IMPLYING SPACE

Should we interpret this "closing the gap" temporally or spatially? If we understand it temporally, then the field of perceptual presence is primarily temporal. This means that the temporal dimension elucidates the "here-there" and "near-far" spatial relations that characterize this field. In Merleau-Ponty's words, "I 'hold,' I 'have' the distant *object without any explicit positing of the spatial perspective*." I have it "as I still 'have in hand' the immediate past" Merleau-Ponty, 2002, 309). The alternative is to consider this closing the gap as primarily spatial with a corresponding spatial interpretation of the field. In this view, bringing close is closing the spatial divide between ourselves and our goal. Thus, in our example, closing the gap between the present self who stands on one shore of the lake and the self that has crossed to the other shore involves traversing the spatial divide between the shores. The "I can," in this view, is an embodied "I can"; the focus is on the "I can move" by which the gap is closed. If this interpretation is correct, then the apprehension of spatial motion is fundamental to our understanding of time. It elucidates "the past-present-future dimension."

Heidegger notes that when we take time as a series of nows, we face "the problem of the continuity of time." How can something made up of now-points be continuous? (Heidegger, 1967, 423). For Heidegger, this problem points to the forgetting of the "ekstatical [*ekstatischen*] stretching along of the temporality" that pertains to

Dasein (Heidegger, 1967, 423). This stretching is *Dasein*'s being ahead of itself. It is its projecting itself forward. Aristotle, in spite of Heidegger's criticism of him, also describes the difficulties implicit in this sense of time. Having noted that neither the past nor the future exists, since the past "has been and is not" and the future "is going to be and is not yet," Aristotle raises the question of the now: if to be is to be now, the now certainly exists; but can we say that the now is a *part* of time? A part measures the whole, which is made up of its parts. But the present has no extension. In this, it is like a point on a line. Neither nows nor points can be summed up to give a definite quantity (Aristotle, 1993, 61). The paradox, then, is that the past and the present do *not* exist and the now that *does* exist is not part of time. What this paradox points to is the non-self-subsistent quality of time. Time, understood as a series of nows, must depend on something outside of itself in order to be. For Heidegger, this is our projective being. Such projective being, however, is, for him, not outside of time. For Heidegger, it is time itself.

The tradition that extends from Augustine to Husserl also attempted to resolve this paradox. Its solution is to assert that the past and the future subsist in our minds. Thus, Augustine accepts that to be is to be now, which implies that the past and the future, like the present, must be now if we are to grant them existence. They are, however, now, not directly, but in a modified manner in our memories and anticipations. This means, he writes, they "exist in the mind, and I find them nowhere else: the present of things past is memory, the present of things present is sight, and the present of things future is expectation"[11]. Husserl follows Augustine's lead[12]. He asserts that extended time exists for us first through the retentions and protentions that are present in our consciousness. As for the now, it exists as the changing moment of our present perception.

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[11] In Augustine's words, "there are three times, a present of things past, a present of things present, a present of things future. For these three exist in the mind, and I find them nowhere else: the present of things past is memory, the present of things present is sight, the present of things future is expectation" (Augustine, 1993, 19).

[12] As Rudolf Bernet writes, "The personal copy of the *Confessions* kept at the Archives shows that Husserl carefully read Book XI. This is not surprising since, in his phenomenological description of internal time-consciousness, he is so inspired by the observations and implicit presuppositions of Augustine's analysis of time that one may candidly speak of Husserlian 'marginalia' to Augustine" (Bernet, 1985, xi). Husserl himself remarks: "Even today, anyone occupied with the problem of time must still study Chapters 14-28 of Book XI of the *Confessiones* thoroughly. For, in these matters, our modern age, so proud of its knowledge, has failed to surpass or even to match the splendid achievement of this great thinker who grappled so earnestly with the problem of time" (Husserl, 1966, 3).

Heidegger would remark that this explanation falls within the common error of equating presence and existence. It understands nows as a series of things present to hand (Heidegger, 1967, 422). This contention, however, does not touch the central element of the paradox that Aristotle presents: If the moments of time do not have any extension, what prevents them from collapsing into each other? The question is: What "spaces" them, as it were? What gives them the "outside of each other" that we associate with space? To answer this question, it is instructive to turn to the oft-noted fact that our experience of time is dependent on our experience of change. As John Locke observed, we have no sense of time in dreamless sleep. To experience its flow, we have to experience the change or succession of our "ideas" or perceptions[13]. Thus, without change, our sense of time freezes. The now ceases to "flow" when the contents occupying it remain the same. It is only when we experience the present moment with an ever new content, that we apprehend it as temporal—i.e., as a streaming, changing present. Now, if we ask what lies behind this change of content, we have to turn to space. The alterity that we experience, e.g., the different positions of the clock's hands—presupposes space. What we register is other because it occurs in space. In space, it changes its color, its position, its shape, its relation to what surrounds it, and so on. Space, in its extension, that is, in its having "parts outside of parts," provides the framework for such change. It supplies a necessary condition for the alterity that we register as time. This does not mean that the alterity of contents is itself responsible for separating the different moments of time. Space, rather, is the ultimate reason why the moments with their different contents do not coincide. Thus, what distinguishes the appearances of a moving body are not the moments that they inhabit; it is the spatially distinct positions of its path. It is the outside-of-one-another of such positions, the *extension* of the path, that translates itself into the extension of time. Without this spatial extension, the path would collapse as would the moments presenting the appearances of the motion along it.

The same point holds for our own mobility. The sequence of experiences that form our horizons depend on our embodied I-can-move. But our movement is only

[13] In Locke's words, "That we have our notion of succession and duration from this original, viz., from reflection on the train of ideas, which we find to appear one after another in our own minds, seems plain to me, in that we have no perception of duration but by considering the train of ideas that take their turns in our understandings. When that succession of ideas ceases, our perception of duration ceases with it; which everyone clearly experiments in himself, whilst he sleeps soundly, whether an hour or a day, a month or a year; of which duration of things, while he sleeps or thinks not, he has no perception at all, but it is quite lost to him; and the moment wherein he leaves off to think, till the moment he begins to think again, seems to him to have no distance" (Locke, 1995, 122–123). Hume makes the same observation (Hume, 1973, 35).

possible in space. Its apartness is what separates the experiences. Such separation can be thought of as the presence of space in time: its presence as spacing time's moments. Time, in this view, does not subsist in our minds. It subsists in our I-can-move—i.e., in the space traversed by our movement, in the apartness space brings to our experiences. Space here elucidates time. The parts outside of parts that characterize space explains the distinction of contents that makes time flow.

What is the relation of the conception of space as "parts outside of parts" to our previous conceptions, namely space as involving the "near and the far" and as defined as a pragmatically structured horizon? The latter two involve motion—the motion that brings the "far" to the "near" and that involved in our pragmatic activities. The conception of parts outside of parts, however, seems static. When we gaze at a representation, it does not seem to move. Its extended features seem to have a fixed relation to each other. Here, of course, we should be cautious of speaking of space as a representation. From a phenomenological perspective, representations are constituted phenomena. As we noted, they gain their sense through our synthesis of the unfolding of experiences, such unfolding being a function of motion. Thus, my representation of a chair involves the synthesis of experiences of approaching it, viewing it from different sides, sitting in it, feeling its softness or hardness, etc. All of these enter into my representation of the chair. They are what allow me to take it as a real object—i.e., as a "unity of sense" (Husserl, 1976, 120). Learning how to see involves learning how to assign such experiences to a single referent. Only then can we take it as something *of which* we are having experiences[14]. Given the dependence of representation on motion and motion on space, we cannot say that space is itself a representation. It is, rather, a formal condition for representation. Understood as the relation of "parts outside of parts," it is a necessary condition for our taking space as the relation of the "near" and the "far" of as the "bringing close" that characterizes space as a pragmatically structured horizon[15].

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[14] As Husserl notes, "in infancy we had to learn to see things." For the infant, "the field of perception" does not yet contain such objects (Husserl, 1963, 112). An indication of such learning is presented by the neurologist, Oliver Sacks, in his article, "To See and Not See." He reports that those who are born blind and have their sight restored through surgury, face "great difficulties after surgery in the apprehension of space and distance—for months even years" (Sachs, 1993, 63). Reporting on one particular individual, Virgil, he writes: "He would pick up details incessantly—an angle, an edge, a color, a movement—but would not be able to synthesize them, to form a complex perception at a glance" (Sachs, 1993, 64). He was, in other words, unable to form a complex visual field, let alone represent objects as he approached them. A rewriten version of this account appears in Sachs (1996, 244–296).

[15] Here, it should be noted that the notion of space as sensory contents spreading out in perceptual field and forming relations with other contents is a derivative one. It depends on the constitution of

5. SPACE AS ELUCIDATING THE TEMPORAL FIELD OF PRESENCE

What would it mean to take the perceptual field of presence as primarily spatial? How would we interpret the temporal dimensions? Understood spatially, these dimensions are measures of the time that it takes to bring things physically close. Thus, depending on your body—on whether it is a child's, an adult's, an old person's, healthy, ill, or crippled, etc.—the future stretches before you differently. Your body can allow you to race up the hill. Alternately, it can cause you to proceed with difficulty, employing a cane. It can, if you are small, present you with a shelf too high to reach, where the distance (and the time) to reach the object depend upon getting a stool to stand on. Alternately, it can make the shelf easily (and immediately) within reach. Time, here, is elucidated in terms of the distances to be crossed and the bodily "I can" that traverses them. Such distances can be short ranged, as in moving one's fingers while knitting; they can also involve complicated, non-repetitive activities like preparing a meal. Alternately, they can involve our traversing longer stretches. In each case, the spatiality of the activity determines our experience of time that stretches before us.

Once we take our projective being as an embodied I-can, this view of the future can, with modifications, be assimilated to Heidegger's pragmatic account. The case is quite different with the past. The past, for Heidegger, is viewed in terms of the resources it offers for my projects. Thus, for Heidegger, "*Dasein* can authentically *be* past only insofar as it is futural" (Heidegger, 1967, 326). It depends on what I plan to realize—i.e., the possibilities within me that I project forward. Thus, my possibility of winning a marathon depends on my given physical makeup, i.e., on a past that includes the facts of my birth and subsequent physical development. It also depends on how much I have *already* trained for the event and on my living in a culture that has developed the tradition of running marathon races[16]. In providing me with my possibilities, this accumulated past allows me to be ahead of myself. This dependence does not mean that the past determines the future. Rather, the line of dependence is such that the future is determinative. In Heidegger's words, "*Dasein* 'is' its past in the manner of *its* being, which roughly speaking, occurs from its future […] Its own past […] does not follow after *Dasein*, but rather is always in advance of it" (Heidegger, 1967, 20). His point is that, while the past gives me the possibilities for my future action, it is only in terms of such action that they can be considered possibilities at all.

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the perceptual field in passive genesis, a genesis that first fixes the relations of sensory contents. See note 16.

[16] As the word "marathon" indicates, this tradition stretches back to ancient Greece.

For Heidegger, the past and the future are complementary, but not symmetrical. Yet if we understand them in terms of the bringing close objects and situations, a certain symmetry appears. The past, like the future, is understood in terms of the time that it takes to bring something close. Say, for example, that I have left the bedroom of my apartment and am now in the living room. To ask on a pragmatic level how long ago I was in the bedroom is to ask how long will it take me to return to the bedroom and occupy the position I had in the past. This determines the "recall"—the bringing close—of the past. If I drop a glass, which shatters, then this past is irretrievably distant. I can never, no matter how much time I take, retrieve the past where the glass was whole. One can, of course, object that I could have left the bedroom hours ago or that less than a minute may have passed since I let slip the glass. The time it takes to return to the bedroom, which may be only a matter of a minute, hardly measures how long ago I was there. The same holds for the indefinite time it would take to repair the glass that I just dropped.

This objection holds if we assume that time is clock time. If we do, the time of return is not set by *my* motion, but rather by the motion of the hands on the clock face. The time it takes to return to the moment of the shattering of the glass would, then, be measured by imagining the clock's hands moving back to their original positions. In this view, the time of bringing close is understood in terms of two simultaneities: (1) the simultaneity of the start of the action and initial positions of the hands on the clock and (2) the simultaneity of the end of the action and the new positions of the clock's hands. Here, the distance traveled, as designated by the numbers on the dial, gives the numerical measure of the time. This view, like the one I propose, is essentially pragmatic. It elucidates time in terms of a spatial closing of the gap. The motion it relies on, however, is mechanical and regular. Understood as standardized clock time, this conception is now universal. It determines our pragmatic grasp of our collective activities. Yet, as Jimena Canales, the cultural historian, writes, the conception of a standardized clock time is surprisingly recent. "In 1922," she notes, "the clock at the Paris Observatory and those regulating the city disagreed by 9 minutes and 21 seconds." Both disagreed with railroad time, which was set by the city of Rouen, the seat of the railway system's directorship. This meant that, "in Paris, the time inside a railway station differed from that outside by 5 minutes" (Canales, 2015, 256–257). In fact, the whole notion of clock time dates from the period of sundials and water clocks, whose localization prevented standardization. Previously, it was measured, if at all, by the motion of the sun and the stars. In any case, such measurements of time by motion do not contradict, but rather reinforce the claim that bringing close, i.e., traversing a spatial divide, is what determines time as a field of presence. This holds,

whether the bringing close is understood in terms of the motion of a clock or whether we take its basis to be our I-can-move. For the vast part of human existence, the standard was set by the human possibilities of motion. The future was understood not in terms of hours and days, but in terms of the time to achieve some objective. The same, I am suggesting, holds with the past. Its primitive, pragmatic sense was not that of clock time, but rather was expressed what would be required to restore a given situation. This is the time still experienced by small children who have not yet grasped the concept of a clock. Time for them is the time of events and, as such, seems inherently reversible in terms of the possibilities of bringing close (Forman, 2015).

Such an understanding, of course, flies in the face of our current acceptance of the irreversibility of time. The law of entropy is understood as setting time's arrow. From a scientific perspective, which is determined by clock time, this is certainly the case. Such time, however, is not that of our pragmatically structured field of presence. We have to first overlay this with non-reversible measuring processes—for example, those of clocks that can only advance—to see the time that is determined by our motion as incapable of return. For much of the ancient world, time was not unidirectional, but rather circular, being measured by the repeating motion of the heavens. It was the time of repeating seasons of human activity, of the periodic rise and fall of civilizations. Such repetitions inherently involved a return. It is important to note that, from a pragmatic perspective, the possibility of a return does not mean that all distinctions between the future and the past disappear. To close the distance to an anticipated future—say, to cross a lake—is to establish a situation—e.g. that of being on the other side of the lake. Closing the distance with regard to a remembered past is to reestablish the past situation. The former involves newness, the later, repetition.

What about the fact that, given the law of entropy, we cannot actually restore some situations? While I can enter a room that I left an hour ago, I cannot return to being a child. I can, perhaps, return to the house where I was a child, but not to the time when I was a child. For the latter to be possible, I would have to reverse all the actions that brought me to my present state. In terms of entropy, this would be like expecting the ink drop dissolving in a glass of water to reform itself into the original drop. Like the glass that I shatter, such a restoration would take an impossible length of time. This point holds even though we interpret entropy spatially—i.e., see its increase as a function of the fact that spatial possibilities of disorder indefinitely exceed those of order[17]. Yet, this practical impossibility does not prevent us from returning

[17] Such spatial interpretation is possible since entropy expresses the number of different conditions that a system defined by microscopic variables—e.g., the particles of ink in the glass—could assume (Ligrone, 2019, 478).

through memory and imagination to our childhood. In fact, time travel, featured in H. G. Well's novel, *The Time Machine*, has become a staple of science fiction, which features journeys both to the past and the future. What is behind this imaginative acceptance of time travel? Why don't we inherently reject the reversibility of time?

6. REVERSIBILITY

The answer is that such reversibility is inherent in our grasp of time. As such, it appears in the self's temporal dimensions. When the self projects itself forward in terms of some goal, it appears as a future self. For example, while I am cooking dinner, I am guided by what I want to achieve—the completed dinner. Implicitly, I see myself as having cooked it: I project myself forward as the self that regards the finished meal. From the perspective of the projecting self, this projected self is *future*, while the projecting self is *present*. From the perspective of the projected self, however, the self that regards the finished meal is present and the projecting self is *past*. Both perspectives are necessary to think of time as a field of presence. Because of their reversibility, the self is regarded as past, present and future. As such, to cite Merleau-Ponty, it makes "contact with time" and learns "to know its course."

To elucidate this reversibility, we have to turn to our embodied habitation of space. Space, taken as a pragmatically structured horizon, involves the reversibility of the "here" and the "there." Every "here," as we depart from it, becomes a "there." The "there" that we arrive at becomes our new "here." Thus, the original "there" can always become a "here" and vice versa. To ask what is behind this possibility is to focus on our bodily mobility. Because of it, my being "here" always implies the possibility of my being "there." My "here" is that of a body capable of movement: as such, it is a "here" that always implies a "there." For Heidegger, "*Dasein* is already ahead of itself in its being." But this, we contend, is because such being is embodied. As an embodied I-can-move, Dasein inhabits space by moving in it—i.e., by moving among the objects that form its environment. In short, what gives it the possibility to be "ahead of itself" is its bodily mobility. It is such mobility that elucidates *Dasein's* projective being, since it is what allows bringing close, i.e., the closing of the gap that, in Heidegger's words, is *Dasein's* "letting itself *come towards* itself."

While the reversibility of perspective allows the self to regard itself as past, present or future, it cannot grasp itself as all three at once. In my nowness, I imply the other temporal dimensions, but, objectively, I escape being placed in more than one at a time. Thus, when I take up the stance of the self that regards the already cooked meal, the self that is cooking the meal is no longer my present self. It is a past self—the

self that *was* cooking the meal. It stands as object to me, the projected, present self that regards it. This subject-object split between the regarding and the regarded self affects my identification with the temporal field. Its three dimensions are implicit in my projective being, but I can only identify with one of them at a time. As present, I can be either the projecting or the projected self, but not both at once.

To elucidate this in terms of space we need only refer to the fact that I cannot be in two places at the same time. My being here excludes my being there. This fact is inherent in the very notion of space, which is that of having parts outside of parts. It is this circumstance that spatializes time. Giving it an extent, it allows the distinction between the temporal dimensions, for example, that between the present and the future. Without this, we could not temporally distinguish between the projecting and the projected self. We could not see the future in terms of the closing of the gap between them. What closes the gap is the spatial I-can-move. But this spatial motion presupposes our locality, i.e. the fact that we can only take one spatial position at a time. The same holds for the temporal positions of the time that registers our motion.

7. THE PARADOX OF OUR RELATION TO THE TEMPORAL FIELD

As Merleau-Ponty notes, we cannot really speak of time as an objective flow. The common simile, time is like a river, forgets that the river, unlike time, neither comes to be nor expires. As Merleau-Ponty writes:

> the water which will flow by tomorrow is at this moment at its source, the water which has just passed is now a little further downstream in the valley. What is past or future for me is present in the world. (Merleau-Ponty, 2002, 478)

Here, both the water that is to come and the water that has passed me are equally present—i.e., simultaneous. When I regard the river as a whole, there is no sense of expiration. The same point holds when, instead of being at the bank of the river, the observer is situated on a boat flowing with the river. In this case, as Merleau-Ponty writes:

> we may say that he is moving downstream towards his future, but the future lies in the new landscapes which await him at the estuary; and the course of time is no longer the stream itself: it is the landscape as it rolls by for the moving observer. (Merleau-Ponty, 2002, 478)

The difficulty is that the landscape is, like the river, simultaneous.

The point of such examples is that time is not simply that which passes by, but the relation of this to the observer. In Merleau-Ponty's words, "if I consider the world itself, there is simply one indivisible and changeless being in it. Change presupposes a certain position which I take up and from which I see things in procession before me" (Merleau-Ponty, 2002, 477). The observer placed at this post has to be apart from the flow. He has to be that in relation to which things flow by. "Time," in Merleau-Ponty's words, "presupposes a view upon time" and this view does not flow with time (Merleau-Ponty, 2002, 477). Thus, "the subject must not be himself situated in [time], in order to be able to be present in intention to the past as to the future" (Merleau-Ponty, 2002, 481). But, as Merleau-Ponty notes, this leads to the question: "has not a consciousness, liberated in this way, lost all notion of what the future, the past, and even the present might be?" (Merleau-Ponty, 2002, 481). To have such a sense, consciousness must itself unfold in time. Time must be for it, not just a constituted object, but also something determinative of its being: It must experience itself as a flowing stream of experiences. The paradox, then, is that our consciousness of time demands that we both be and not be in time. How is this possible?

The answer, once again, involves the spatial elucidation of our relation to time. I am both a non-temporal observer of time and present in the time I observe because, as embodied, I am and am not part of the perceptual field. Merleau-Ponty writes, in this regard: "The perception of the world is only an expansion of my field of presence; it does not transcend its essential structures, and the body always remains an agent in and never becomes an object of this field"[18]. Thus, the structures of the field are set by my embodiment. Its spatial location determines what counts as near and far; its motion, its agency, brings about the perspectival unfolding of objects—i.e., their horizonal exhibition. Yet as an agent, as the embodied action of bringing things close, I remain here. I do not unfold like the things I bring close. Since I cannot stand over against myself, I cannot regard myself as "there,"—i.e., as an object among the other objects, between which I move, towards which I advance, and from which I depart. Accordingly, I can say that I am not in space. I am, rather, a moving view of space. Nonetheless, in my very ability to traverse space, it also follows that I am in it. I am spatial, not by departing from my "here," but through this "here's" transformation. As I move, the "here" changes; as the "here" becomes a "there," it experientially departs from itself. This self-departure elucidates the experience consciousness has of itself as always other—i.e., as a flow of experiences, which, moment by moment, transforms

[18] My translation. See (Merleau-Ponty, 2002, 354). The French is: « la perception du monde n'est qu'une dilatation de mon champ de présence, elle n'en transcende pas les structures essentielles, le corps y reste toujours agent et n'y devient jamais objet » (Merleau-Ponty, 1945, 351).

its content. Thus, the spatiality of the self, its I-can-move-in-space, affects its relations to the objects that surround it. It yields the observer of the objects that show their different sides as she moves among them. The fact that this observer is and is not in space is at the basis of her being and not being in time. She is constantly now. Yet in this being now she is constantly other because in being constantly "here," this "here" is constantly other as she moves in space.

8. PSYCHOLOGICAL IMPLICATIONS

The psychological implications of this position can be seen by turning to the child's sense of time. Small children, we noted, do not have a sense of clock time. They understand time by events rather than events by time. Thus, the child grasps the time of his father's arrival as coming *after* he has had his afternoon nap and *before* he eats dinner. Time here is determined by the order of events. To determine events by time, would, by contrast, be to say that the child's nap is set from 3:00 PM to 4:30 PM, the father's arrival for 5:00 PM and dinner for 6:00 PM. As numerous observers have pointed out, this chronological sense of time comes late to children. Before this, it makes no sense to say to them that their father "will come at 5:00 PM" (Cosentino, 2018). As the psychologist, Helen Forman, points out, the sense of time as ordered by events was common throughout most of human history. The concept of a universal flowing time was foreign to their sensibility. Even sundials and water clocks did not measure a time that flowed equitably. Their hours were adjusted to the season (Forman, 2015). In fact, until we reach a certain age, the temporal field that extends beyond the day has only a vague presence. As Chris Chatham reports:

> Around 75 % of 3-year-olds cannot correctly report an event that occurred yesterday, nor can they correctly report an event that will occur tomorrow. In fact, similar numbers of children can't even name something that *didn't occur* yesterday, or *won't occur* tomorrow. (Chatham, 2007)

For a concrete sense of a young child's grasp of time, we can turn to Freud's description of a game played by a year-and-a-half old boy with a wooden reel tied to a long piece of string. In Freud's words:

> What he did was to hold the reel by the string and very skillfully throw it over the edge of his curtained cot, so that it disappeared into it, at the same time uttering his expressive 'o-o-o-o'. He then pulled the reel out of the cot again by the string and hailed its reappearance with a joyful "da" ["there"]. This, then, was the complete game—disappearance and return. (Freud, 1961, 9)

The "o-o-o-o" was his attempt to say "fort"—gone. Freud interprets this in terms of his "allowing his mother to go away without protesting. He compensated himself for this, as it were, by himself staging the disappearance and return of the objects within his reach" (Freud, 1961, 9). The child, here, has a spatial representation of the absence and then presence of his mother. In his game, the two events are reversible. One recalls the past—the mother's presence—by symbolically bringing it close again. The child restores it by pulling the reel out of the concealment of the cot. This spatial reversibility is behind his developing sense of time. In the game, as the psychiatrist, Heinz Weiss writes:

> there is already an emerging concept of time which links the idea of a *present absence* with the imagination of a *future presence*. The phantasy enacted in the play then functions like a link inasmuch as 'past, present and future, are strung together […] on the thread of the wish that runs through them', as Freud says on another occasion. (Weiss, 2018, 232)

The link, we would say, is founded on the spatial aspect of the child's field of presence. It is this which allows the wish for the mother its spatial expression in the game, an expression that is at the basis of the child's emerging sense of time.

Phenomenologically speaking, we do not lose this initial sense of time. Each development in our growing sense of time depends on what we accomplished previously. As a result, the genesis of this sense expresses itself in a series of ongoing dependences. Thus, beneath our sense of clock time is a sense of judging time by events. Beneath this is their interpretation in spatial terms—i.e., in terms of bringing close events such as the presence of the mother. A striking example of this earlier sense of time in an adult is provided by Freud in the case of the woman and the stain. Each day, he reports, this woman

> would run out of her room into the adjoining one, there take up a certain position at the table in the center of the room, ring for her maid, give her a trivial order or send her away without [one], and then run back again (Freud, 1965, 272). On the cover of the table was a large stain. The woman "stood by the table in such a way that the maid could not miss seeing this mark." (Freud, 1965, 273)

The woman was initially at a loss to explain her actions. But one day, having overcome her reservations, she related that

> ten years previously she had married a man very much older than herself, who had proved impotent on the wedding night. Innumerable times on that night he had run out of his room into hers in order to make the attempt, but had failed every time. In the morning he had said angrily: "It's enough to disgrace one in the eyes of the maid who

> does the beds," and seizing a bottle of red ink which happened to be at hand he poured it on the sheet, but not exactly in the place where such a mark might have been [justified]. (Freud, 1965, 273)

For Freud, this act is like the *fort — da* game. It is a symbolic way of returning to the past by reinstating its situation. For the child, the past that is made close is the mother's presence—the "da" (here) of the reel. His wish, which threads the events, is for her return. For the woman, the past consists of the events of the wedding night. The wish, however, is not for a return, but rather for a repair of the original situation. In Freud's words, "in the calling of the maid, to whom she displays the mark," she refutes her husband's remark, "It is enough to disgrace oneself before the maid. In this way he, whose part she is playing, is not ashamed before the servant, the stain is where it ought to be." Unlike the child in the *fort-da* game, "she has not merely repeated the scene, rather she has continued it, and corrected it, transforming it into what it ought to have been." In the repetition, there is no longer "impotence." Her action says: "No, it is not true, he was not disgraced before the maid, he was not impotent" (Freud, 1965, 274).

This attempt to return to the past is doomed to fail. Its failure is not so much a matter of the practical impossibility imposed by the law of entropy as of the fact that the past it attempts to reach never existed. Spatially regarded, the compulsive attempt to redo the past shatters on the contradiction of wishing to return to a "here"—a given situation—and yet not have it be this "here." No matter how often the patient attempts to recall the past by bringing it close through a symbolic re-enactment, the result remains the same. The wish that drives this cycle can never be satisfied. As Weiss points out, the result of such neuroses is a kind of timelessness, where the patient remains marooned in a repeating cycle. To break out of it, one has to face "the experience of loss […]. It is only then that mourning and guilt can proceed and that reparation can emerge." The key, for Weiss, is to acknowledge "irreversibility," i.e., admit that one cannot reverse the relation of the past and the future. One cannot have the past be what one would have wanted, i.e., be a future that one can change. A return to the past, if successful, only repeats it. Only the actual future, we noted, is capable of newness. Given this, as Weiss writes, "irreversibility has to be acknowledged in order to create new meaning and new life" (Weiss, 2019, 136).

It is important to note that the problem is not with our primitive sense of time as event time, a sense that sees no problem with reversing the order of events. Psychological disturbances that manifest themselves as temporal disturbances refer rather to *failed* attempts to bring things close. They attempt to recall the past *and transform it*. The timelessness that results is that of a past that never existed—a non-existent

"there" that one can never bring close. The cure consists not in eliminating our primitive sense of time. It involves breaking the cycle of an impossible return. The cycle is based on our primitive sense of time—but it exists not as a development of it but rather as its disturbance.

REFERENCES

Aristotle. (1993). Physics. In J. Westphal & C. Levenson (Eds.), *Time* (60–72). Indianapolis: Hackett Publishing Company.

Augustine. (1993). Book XI. In J. Westphal & C. Levenson (Eds.), *Time* (6–28). Indianapolis: Hackett Publishing Company.

Bernet, R. (1985). Einleitung. In R. Bernet (Ed.), *Edmund Husserl, Texte zur Phänomenologie des inneren Zeitbewusstseins (1893–1917) (Hua X)*. Hamburg: Felix Meiner.

Canales, J. (2015). *The Physicist and the Philosopher, Einstein, Bergson, and the Debate that Changed our Understanding of Time.* Princeton: Princeton University Press.

Chatham, C. (2007). Lacking More Than Foresight: Do Children Even Comprehend Time? *Developing Intelligence.* Retrieved from https://scienceblogs.com/developingintelligence/2007/04/19/predicting-the-future-do-child

Cosentino, S. (2018). Children and the Concept of Time. *Mother for Life.* Retrieved from https://www.motherforlife.com/child/3-to-5-years-old/development/learnings/5733-children-and-the-concept-of-time.thtml

Forman, H. (2015). Events And Children's Sense of Time: A Perspective on the Origins of Everyday Timekeeping. *Frontiers of Psychology.* Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4356002

Freud, S. (1961). *Beyond the Pleasure Principle* (J. Strachey, Trans.). New York: W. W. Norton & Company.

Freud, S. (1965). *A General Introduction to Psycho-Analysis* (J. River, Trans.). New York: Washington Square Press.

Heidegger, M. (1962). *Being and Time* (J. Macquarrie & E. Robinson, Trans.). New York: Harper Collins.

Heidegger, M. (1967). *Sein und Zeit.* Tubingen: Max Niemeyer.

Heidegger, M. (1985). *History of the Concept of Time* (T. Kisiel, Trans.). Bloomington: Indiana University Press.

Hume, D. (1973). *A Treatise of Human Nature* (L. A. Selby-Bigge, Ed.). Oxford: Clarendon Press.

Husserl, E. (1962). *Die Krisis der Europäischen Wissenschaften und die transzendentale Phänomenologie* (W. Biemel, Ed.). The Hague: Martinus Nijhoff.

Husserl, E. (1963). *Cartesianische Meditationen* (S. Strasser, Ed.). The Hague: Martinus Nijhoff.

Husserl, E. (1966). *Zur Phänomenologie des inneren Zeitbewusstseins* (R. Boehm, Ed.). The Hague: Martinus Nijhoff.

Husserl, E. (1976). *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie, Erstes Buch* (R. Schuhmann, Ed.). The Hague: Martinus Nijhoff.

Husserl, E. (1991). *The Phenomenology of the Consciousness of Internal Time (1893–1917)* (John Brough, Trans.). Dordrecht: Kluwer Academic Publishers.

Husserl, E. (2002). *Späte Texte über Zeitkonstitution (1929–1934), Die C-Manuskripte* (D. Lohmar, Ed.). Dordrecht: Kluwer Academic Publishers.

Kant, I. (1963). *Critique of Pure Reason* (N. K. Smith, Trans.). London: Macmillan and Company.

Ligrone, R. (2019). *Biological Innovations that Built the World: A Four-billion-year Journey through Life & Earth History.* Cham, Switzerland: Springer.
Locke, J. (1995). *An Essay Concerning Human Understanding*. Amherst: Prometheus Books.
Merleau-Ponty, M. (1945). *Phénoménologie de la perception*. Paris: Librairie Gallimard.
Merleau-Ponty, M. (2002). *Phenomenology of Perception* (C. Smith, Trans.). London: Routledge.
Sachs, O. (1993). To See and Not to See. *The New Yorker*, 10, 59–73.
Sachs, O. (1996). *An Anthropologist from Mars, Seven Paradoxical Tales.* New York: Vintage Press.
Weiss, H. (2018). Erwartung und unbewusste Phantasie. Kontroverse oder Begegnung zwischen Psychoanalyse und Philosophie? In E. Angehrn & J. Küchenhoff (Eds.), *Erwartung. Zukunft zwischen Furcht und Hoffnung* (228–244). Weilerswist: Velbrück Wissenschaft.
Weiss, H. (2019). Ist Umkehrbarkeit eine Illusion? Gedanken zum ‚Reversibilitätsprinzip' von Henry Rey. In H. Weiß & E. Horn (Eds.), *Zeitlose seelische Zustände* (115–139). Frankfurt am Main: Brandes & Apsel.