

## **Time: A Social Construction?**

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### *Abstract*

In physical theory, the Now and temporal change are assumed to be subjective phenomena. Mental presence and the temporal presence are thus assumed to be one and the same. The paper asks what this identity thesis means for psychology and the social sciences.

### *1. Introduction*

For beings living in the Now, presence is the ultimate mode of existence. Whatever it is that we perceive and deal with, it is bound to present itself in the present. Not even past and future exist if not re- or pre-presented, respectively. Accordingly, whatever reality is constituted or constructed, its origin lies in the present.

Presence, however, is a strange mode of existence. Only individual temporal states of the world can, successively, be fully present. The mode in which the world exists in the Now consists in the temporal becoming and vanishing of states. On the other hand, it is always now. It has been now since time began to pass. Presence, thus, is afflicted with a fundamental ambiguity. It unifies what is supposed to resist unification. In the mode of presence, permanence and

passage are united. Even though the Now as such endures, the world presenting itself in the Now is subject to spontaneous and relentless change.<sup>1</sup>

A mode of existence uniting permanence and passage is without prospects of winning scientific approval. The only mode of existing that science acknowledges is reality. Reality, far from being restricted to successive individual states of the world, encompasses the totality of the states which the material world exhibits. The sciences, above all physics, consider something as real if it can be substantiated by measuring, no matter when such measurement takes place.

The passing of time cannot be measured, as there is no reference point beyond the Now. Clocks, therefore, measure something different from passage of time. They are mechanisms designed to count recurring states. The act of counting constructs a distance that can be represented as a one-dimensional continuum which, however, is something fundamentally different from the process we experience as the passing of time. The one-dimensional continuum represents the path along which the Now is moving when time passes. It is insufficient to represent both the movement of the Now and the velocity at which the Now is moving.

From the perspective of experience happening in the Now, any reality other than present, and any measured time, are *conceptual constructs*. Conceptual constructs turn into social ones when they become binding as facts whose recognition or denial is independent of individual preference.<sup>2</sup> Reality beyond presence and linear time beyond the present moment are examples of constructs that have acquired such binding force.

These constructs are not made of thin air. They are socially recognised facts because they have withstood the test of everyday practical life. On the other hand, they also exhibit a strange tendency of becoming independent of their

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<sup>1</sup> Edmund Husserl calls this confluence of enduring and waning the arch-impression of the both standing and flowing Now. Cf. Husserl 1905; for a discussion see Franck 2004.

<sup>2</sup> David Bloor even suspects that this is the way that objectivity, understood scientifically, emerges. Cf. Bloor 1976, ch. 5.

origin. They break loose from the place of their production as soon as – and to the extent that – the respective concepts are sharpened and made consistent. It seems ironical, yet it is an obstinate fact, that the way physics conceives reality and defines time does not leave any room for the Now. These constructs apparently have an irresistible tendency of denying their genetic origin in the Now.

## *2. Objective and subjective time*

Reality beyond the Now, be it history or nature, cannot be denied its socially objective existence. Clock time has become the temporal measure of society. The one-dimensional continuum is the construct that transforms the states surfacing in the Now into processes susceptible to measurement and calculation. By means of this construct, society, as a process, is organised. Linear time has long ceased to be a conceptual construct only - it has become sociological reality.

This sociological reality is cemented by unquestioned acceptance. Yet, the nature of the construct time is such that what it eliminates will not disappear altogether. The construct involves a good deal of abstraction, as it implies that time must emancipate itself from experiencing subjectivity. Experience only happens in the mode of mental presence. Without a distinction between presence and non-presence it would be impossible to state where in time experience could occur. The difference between presence and non-presence, however, is not part of the description of time as one-dimensional continuum. All points along the continuum have the same quality and they only differ with respect to their position. Indeed, those differences in position completely consume the degree of freedom embodied in the single dimension. In order to account for a process, i.e. for relative movement, an additional degree of freedom would have to be introduced, which would mean loosening the assumption of strict one-dimensionality (cf. Franck 2003).

Such loosening seems to be out of the question. Anyone trying to cast doubt on the one-dimensionality of time is not taken seriously. Although no one denies that it is difficult to reconcile subjective experience with objective description, this problem is handled by admitting that something like subjective time exists which, – precisely because it is subjective, evades objective delimitation.

In fact, essentially, the velocity at which time passes is subjective. It is subjective in the sense that the “time” needed by the Now to cover chronometric distance can only be experienced as the *duration* of one’s mental presence. One hour may last shortly or very long, depending on one’s mood and on the intensity of conscious experiencing. One hour seems to fly past when we enjoy ourselves or when we are engrossed in some interesting activity; another hour may last forever when we are bored or feel pain. This varying duration is known as the subjective time paradox: hours rich in experience that have flown past seem, in retrospect, to have lasted very long, while hours that seemed unending appear short in retrospect. An hour, a day, or a week seem long in retrospect when detailed episodic recollection would take up much time; they seem short, if there isn’t much to remember. (For an account of the subjective time paradox see Pöppel 1997.)

A powerful - if not overwhelming – confirmation of the view that what we experience as duration is subjective has been supplied by relativistic physics. In relativistic space-time there is no universal simultaneity and therefore no objective Now. The Now, Einstein explains, loses its objective meaning in the spatially extended world.<sup>3</sup> Einstein insists that presence is a subjective phenomenon which is not and cannot be part of physics.<sup>4</sup> Expressed differently, Einstein concluded that temporal presence only occurs in connection with mental presence.

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<sup>3</sup> "The four-dimensional continuum is now no longer resolvable objectively into sections, all of which contain simultaneous events; 'now' loses for the spatially extended world its objective meaning." Einstein 1919, p. 149 (Appendix V)

<sup>4</sup> Rudolf Carnap mentions a conversation in which Einstein seemed to be seriously worried about the Now. But Einstein insisted that the difference between past, present and future is nothing physical and cannot even occur in physics. Cf. Carnap 1963, p. 37.

### 3. *The collective Now: A convention?*

Einstein's conclusion relieved not only natural scientists but also philosophers of nature, since it lessened their persistent difficulties to take presence as a mode of existence seriously. If the interplay between permanent presence and spontaneous change is just a subjective phenomenon, it seems legitimate to simply relegate the matter to philosophical phenomenology. However, that discipline, too, is struggling with the phenomenon, since to this day human experience of time has not been convincingly captured by human thought. Anyway, we are used to running into problems with subjective phenomena. Science, on the other hand, wards off any predicament by declaring that phenomena are something subjective.

The problem remains partially unresolved, however: not in all sciences can the phenomenology of the subjective be simply ignored. If the Now is declared to be a subjective phenomenon, psychology and sociology run into trouble. If the equation between presence and mental awareness holds, psychology has so far largely missed its subject. Also, if the Now is a subjective phenomenon, sociology will have to explain how the presence of individual consciousness is synchronised inter-subjectively and how it can move in social unison.

If the present exclusively occurs as mental presence, then it would be consciousness – and nothing but it – that makes time pass (cf. Franck 2003). No passing of time without the present in which changing states are surfacing. If consciousness alone makes time pass, many findings of psychology about consciousness become irrelevant. Consciousness, then, far from being a weak epi-phenomenon would be the most powerful force in this world. Compared to the force exerted on us by the passing of time, the hold of the so-called laws of nature over us is mild. No advances in knowledge or technology have in the slightest loosened the relentlessness with which the Now is moving on. Traditional psychology is not well equipped to explain this force and power.

If the present exclusively occurs as mental awareness, then there are as many nows as there are mentally present subjects. Psychology, when it does concern

itself with phenomenological consciousness at all, assumes that the different states of consciousness are produced by the individual brain. However, if presence is a product of the individual brain, then why should the individual nows be synchronised inter-subjectively? We generally assume that the individual spheres of consciousness are isolated from each other. We have no insight into another person's consciousness; we are only able to communicate indirectly with one another, via physical stimuli. However, we can only communicate with each other if the states of physical reality, which we experience as being present, are inter-subjectively synchronised. We must, expressed differently, ride the same wave of presence across the ocean of world states in order to be able to say "we" with good reason. Who puts us on this wave, if presence only exists as individually present consciousness?<sup>5</sup>

To this day, there is no scientific explanation for the occurrence of the process experienced by us as the passing of time (for a clear statement of this fact see Primas 2003). The abstraction of the wave of presence does not seem to affect the conception of reality as something apart from the conjecturing mind, but no underlying physical objective process has been detected, either. If it is the case that the wave of presence only moves across the block of world states by being subjectively experienced as such, then inter-subjective synchronisation of the world state experienced as present can only be brought about collectively. In other words, synchronisation of the process of temporal change must be due to some sort of convention.

However, if one proceeds from the assumption of collectively experienced, sociologically objective passing of time, the conception of time as social construct raises further questions. It would seem that not only linear time but also the social unison of individual temporal presence are social constructions - an interesting but also sobering conclusion. If not only reality conceived as independent of conscious experience, but also reality as collectively experienced are constructs, this is interesting. The sobering aspect is that we

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<sup>5</sup> The eminent Leibniz recognised this problem. He conceived the subjective spheres of experience as windowless monads. The monads, by themselves, are not able to synchronise their individual experience; rather, through the systematic function of *pre-stabilised harmony*, they are, from the very beginning, synchronised by an initial impulse that moves on forever, unperturbed, like a wave passing through a perfectly homogenous medium. (Cf. Franck 1994).

cannot explain how, exactly, such a collective Now could be brought about by social convention.

#### *4. The temporal present and presence of consciousness*

Reality, as we experience it both subjectively and together, inter-subjectively, always is just one section cut out of the block of world states. This section results from singling out one among the multitude of states as being present, while the presentation - or, rather, presentification - of the rest is suppressed (cf. Pavsic 2001). In space-time there are no three-dimensional objects (what we know as things), but only four-dimensional world-lines, or world-threads, which encompass the totality of the respective object states indifferently. For an experience of reality as a collection of "res" - i.e. three-dimensional *things* - to happen, only one of the multitude of states must surface at a time. Since the surfacing state changes continuously, the process of presentification is to be visualised as a wave moving across the four-dimensional ocean of states. Only by riding this wave do we experience reality as a collection of concrete things, and only by riding the wave together do we jointly experience reality as the same collection of concrete things. (On the association of concreteness and presence see Franck 2004.)

Enthusiastic advocates of constructivism in the cultural sciences<sup>6</sup> must be excited by the prospect of unmasking factual reality as a social construct. Indeed, this unmasking seems to be just round the corner, for the equation between mental presence and the temporal present does not seem to allow anything except conventional establishment of the collective Now. If the subjectivity of presence is an inescapable consequence of natural-science conceptualisation, then natural-science rigor and cultural-science relativism meet and supplement each other strikingly. Reality, as supposed to exist independently of being experienced, arises from rigorous objectivisation of

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<sup>6</sup> I.e. of constructivism as appraised in Hacking 1999.

time, while reality as we experience it in the sociologically objective sense, arises from the social synthesis of subjective time.

Unfortunately, this *coincidentia oppositorum* is too beautiful to withstand closer scrutiny. Who or what would be able to bring about a convention that decides which world state is singled out as being present? Are there any traces or clues suggesting that such a convention has ever been negotiated or silently established? Who or what could possess the power to subject us all to an inexorable law forcing us to march through time in unison? Also, are human beings the only creatures subjected to this law? Aren't animals, too, consciously present, aren't they riding the wave of presence with us? What about synchronisation of the animals' experience before the advent of human beings?

Closer inspection reveals the assumption that individual mental presence is synchronised by social convention as an absurdity. There is no chance that we will ever identify a convention or silent agreement able to bring about this synchronisation. The process of presentification, if it is not a collective hallucination, must have some counterpart in nature conceived as that kind of reality which is out of reach for individual disposition and social convention. If the natural sciences have so far not managed to identify such a process, this does not question but rather confirms the postulate that the identification of time with a homogeneous continuum of dimensionality 1 has been premature.

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