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# TIME, DEATH, AND DURATION

"Gibt es ein Leben nach dem Tod?" Die Sinnlosigkeit dieser Frage ergibt sich hier nicht aus einer materialistischen Weltsicht. Vielmehr ist es die Voraussetzung eines *temporalen Idealismus*, die den metaphysischen Traum vom Leben nach dem Tod sinnwidrig macht. Sie motiviert stattdessen die folgende Frage: „Wenn Zeit durch bewusstes Leben bedingt ist, wie ist es dann, tot zu sein?" Meine Überlegungen beziehen sich auf einen Brief Albert Einsteins, in dem anscheinend die Distanz aller Ereignisse den Ausgangspunkt für seine Versöhnung mit der Endlichkeit des menschlichen Daseins bildet. Aus dem temporalen Idealismus folgt indessen, dass Sterben dem Kollabieren eines jeden erlebten temporalen Abstandes zu einem ausdehnungslosen *Jetzt* gleichkommt.

I argue that the question 'Is there a life after death?' should be put aside as meaningless; the reason for this has nothing to do with materialism or physicalism, however. On the contrary, it is a consequence of *temporal idealism*: Man's metaphysical quest for a meaning of death cannot be satisfied by dreams of an afterlife and should be substituted by the question 'If time is a human phenomenon, then what is it like to be dead?' My point of departure is a letter of Albert Einstein's regarding the distance between things in space–time as a way of coming to terms with human finitude and mortality. Contrary to this view, far from revealing the temporal distance between things, death arguably means the collapse of any experienced duration or temporal extension beyond the present *Now*.

## 1

In 1955, after the death of his close and long-time friend Michele Besso, Einstein wrote the following words to the relatives left behind:

> And now he has preceded me briefly in bidding farewell to this strange world. This signifies nothing. For us believing physicists the distinction between past, present, and future is only an illusion, even if a stubborn one. (Dukas, Helen & Hoffmann, Banesh 1972 p. 257 f.)

These words are frequently quoted, and for good reason. They give expression to the existential importance ascribed by Einstein to relativistic physics as part of a general commitment to scientific rationalism. Taking an impartial stance beyond what happens to be a person's Now makes the distance between the living and the dead less frightening, he suggests; in effect, reducing the time of physics to John McTaggart's (1908) so-called *B-series*.

As distinct from the temporally tensed *A-series*' absolute or intrinsic terms past, present and future, the tenseless B-series consists of the inner-temporal relations before, after and simultaneously with. As pointed out by McTaggart, these relations are permanent, and so they cannot contribute to accounting for the reality of change, he claimed. To this we may add that without the A-series, neither is presentism, meaning that only the present exists, a viable option. Therefore, by excluding the A-series, one is committed to eternalism, tenselessly ascribing existence to things past, present and future.

This kind of eternalism yields a striking explanation of Einstein's words of consolation, as well accounted for by Michael Lockwood. If our reason for mourning the dead is their non-existence *simpliciter*, i.e. their 'non-being', he says, then Einstein may indeed be right in finding comfort in a world view according to which the distinction between past and future is of no deeper importance than the distinction between east and west:

> Regarded in this light, death is not the deletion of a person's existence. It is an event, merely, that marks the outer limit of that person's extension in one (timelike) spatio-

> temporal direction, just as the person's skin marks out the limit in other (spacelike) directions. The space–time view is, therefore, inconsistent with our regarding one of those limits, but not the others, as a cause for sadness. […] Einstein is urging us to regard those living in times past, like those living in foreign parts, as equally *out there* in space–time, enjoying the same flesh-and-blood existence as ourselves. It is simply that they and we inhabit different regions of the continuum. (Lockwood, Michael 2005, p. 53 f.)

Put otherwise, the case of a person dying – thus leaving a common Now, only to exist in the past – will be no more tragic than a person travelling abroad – thus leaving a common Here, only to exist elsewhere. No doubt this view seems to conflict with deeply entrenched notions of the difference between space and time. But it may be conceived of as corresponding to science. And, by talking about the extension and direction of a space–time continuum, Lockwood is not only making a metaphysical point about the tenseless existence of items of a pure B-series. He also appeals to the similarity of space and time in the four-dimensional *block universe* as a widely recognized interpretation of relativistic physics.

Within this universe, there is no definite physical distance between points in three-dimensional, extended space, with a separate, definite duration in time as a fourth dimension. The only unique, invariant 'interval' between parts of the physical world is a mixture of distance in time and space (much like the Pythagorean distance of a two-dimensional triangle is determined as an invariant product of variable coordinates). Accordingly, any three-dimensional description of the external world is as incomplete as a two-dimensional description of what we normally take to be three-dimensional things. The constituents of the physical universe are four-dimensional objects.

In particular, spatial objects do not stay the same while undergoing temporal change. Rather, just as the physical world is normally regarded as made up of numerically different parts of space, it is also seen as spread out among distinct, co-existing parts of time. A classic formulation of this view was given by Arthur Eddington (1920): 'Events do not happen; they are just there, and we come across them. […] Our knowledge of things *where* we are not, and of things *when* we are not, is essentially the same' (p. 51).

To a rationalist, the block universe does offer a way of coming to terms with death. We may be frightened by the short duration of a human life. But then a way to liberation from such worries can be accepting how it corresponds to the true nature of things; to how *sub specie aeterni* we are but small pieces of a vast universe. And Einstein seems to have found in the block universe a confirmation of a more or less Spinozist attitude to life. In such a universe, there is nothing special about the present Now, and so there is nothing special about a person's 'I'. We may experience the liberating effect of dropping the importance ascribed to ourselves as somehow existing at the centre of the universe.[i]

On the other hand, accepting the block universe as integral to relativistic physics hardly necessitates anything like the rationalism seemingly favoured by Einstein. Within science, there may indeed be nothing special about the present point or section of time. But the reason for this may have nothing to do with a space-like distance in time. Rather, as seen from a position of temporal idealism, in a state without conscious life, all temporal parts of the world equally collapse to a single point. And temporal idealism may reasonably be taken to follow from the block universe.

## 2

The block view of relativistic physics is generally held to be static, corresponding to a geometrization of the universe. For an intuitive grasp of this, consider space–time diagrams on the blackboard. Whereas in drawing the time axis, we perceive real change, the resulting line of chalk is a frozen part of space. As such, a block of ice is an apt metaphor for a universe in which time is merely one among the four dimensions of an object. It seems to be as static as three-dimensional space. Then if real time implies real, dynamic change, the absence of such time in the world of physics may immediately lead to some kind of temporal idealism.[ii] Let me just add a few words of elaboration on this topic.

First, accounting for a simple and basic kind of change, such as motion, seems impossible without some radical conceptual revision. A succession of pixels on the TV screen is normally understood as creating an illusion of motion. By contrast, real motion is taken to involve one and the same object's change of position and not to consist in a succession of different events at different times. But in the block universe, just like roads and other spatial objects, anything extending along the time axis is composed of numerically different parts.

The reality of physical or empirical motion thus seems to contradict the notion of four-dimensionalism. It may be better accounted for in a world of three-dimensional space with time as a clearly distinct dimension in which the whole is somehow present in the parts: Seeing a moving arrow at a present position, we see its actual occurrence as one of a sequence of occurrences, some of which are real no more and some of which are not yet real. Accordingly, we often speak the truth in saying about an object that it moves towards a definite position – even if the motion turns out to be interrupted.

Following Bertrand Russell, one may of course redefine the concept of motion to make it correspond to a more scientific worldview. People are used to thinking that a moving thing is 'in a state of motion', he says, but 'This is now known to be a mistake. When a body moves, all that can be said is that it is in one place at one time and in another at another'

(Russell, Bertrand 1956, p. 1582). It is hard to see the point of such linguistic or conceptual revision. Instead of reducing our normal concept of motion to something physically more basic, why not say that in contemporary physics, motion – and perhaps any change – is eliminated? In which case, the world of physics is a world without real time.[iii]

Second, as a B-series, block time is vulnerable to McTaggart's arguments to the effect that a time of real change cannot consist in such a series, whose order never changes.[iv] Like a calendar, it may very well be an ordering of changes whose reality is presupposed and not explained by the calendar. Correspondingly, since the relation of events to the unchanging order never changes, the phenomenon of change cannot consist in or be explained by this order. Furthermore, if without time there is no change, one is led to conclude that both time and change are nothing but illusions. In other words, like his spiritual ancestor Parmenides, McTaggart is a resolute eliminativist about time.

But the eliminativist conclusion only follows if the world as described in physics, without the A-series, makes up the whole of reality. And the obvious alternative to eliminativism is temporal idealism. The A-series is often held to depend on some kind of consciousness, as succinctly stated by Russell (1915): 'In a world in which there was no experience there would be no past, present, or future, but there might well be earlier and later' (p. 212). According to this view, change and time may be real, due to the ever-changing presence of past and future in man's living experience.

Similar considerations about the static nature of the block universe have led many prominent scientists to embrace some version of temporal idealism in the tradition from Kant to Husserl. Among them, presumably the best known is Kurt Gödel, according to whom Einstein was no foreigner to such views either.[v] Arthur Eddington was of a similar opinion,[vi] as was Hermann Weyl (2009):

> The objective world merely exists, it does not happen; as a whole it has no history. Only before the eye of the consciousness climbing up in the world line of my body, a section of this world 'comes to life' and moves past it as a spatial image engaged in temporal transformation. (p. 135)

Of course, none of this proves the truth of temporal idealism. But it may suffice for establishing it as a viable alternative to the B-series reductionism seemingly implied by Einstein's words about a universe in which the distance between things and persons can make one realize the minor importance of existing Now. So I hope they suffice for motivating my main question: *If* time is a human phenomenon, then what is it like to be dead?

## 3

Let us presume, then, that without living consciousness there would be no A-series, and that without the A-series there would be no time. In this case, Einstein may very well have been right that a state without consciousness, i.e. of death, is equivalent to a B-series or even to the block universe. But that would not make him right in taking death to mean existing or being alive at a region of time with a space-like distance to other regions of time. If time is a human phenomenon, in a block universe without life there is no time and consequently no temporal distance between the living and the dead. Now let us see what follows from this for a state of death.

We are used to imagining what happens in a world without us. A materialist perhaps envisages a world where everything goes on as usual, in accordance with natural laws. A

spiritualist perhaps pictures a soul that continues living after death. But none of this makes any sense if temporal idealism is true. Death will mean the collapse of the temporal horizon, so there will be no after, and *a fortiori* no after the collapse. Consequently, there will be no before death either. This is something that we, still alive, cannot really imagine. But the power of imagination is no reliable guide to understanding death as a state beyond time. Rather, we have to *think* how best to characterize such a state.

It will be a state of events co-existing along four dimensions but with no past and future and no before and after. There will therefore be no Now from which the state of death is in the distant future. Neither will there be any temporal distance between what counts as successive parts of our present lives. Taking the block universe to be a physical and not purely mathematical universe, this does not mean transforming concrete space–time particulars into a realm of timeless abstractions. But the parts of the fourth dimension may fairly be said to co-exist without *temporal* extension.

Consequently, referring to my death means referring to a state obtaining now, right now, at the moment of my writing this article. From your point of view, when you sit there reading it, my writing may be in the past. But one day your *nunc*-centric horizon will collapse too, and after the extinction of mankind, strictly speaking, there will be no Now. But the point referred to now by Now will have no temporal distance to any later state of the universe.

This means the contents known from the temporal form of life must be seen as coalescing in one single moment, in a way perhaps reminiscent of the *nunc stans* of Saint Augustine and medieval scholasticism. But there is also the difference that whereas in Christian metaphysics the unchanging, timeless moment of eternity means the union with God after death, my conclusion is about the collapse of temporal distance now, at the present moment of my, or your, life. And so we have a first answer to the initial question. If time is a human phenomenon, then death is no state after life but the collapse of any succession both

after and within one's life. *Death will be identical to life before death, only in another, lifeless form; as contained in a point right now.*

Theoretically, I do not see how to escape a conclusion like this, given temporal idealism. But a further question immediately arises about how much sense is to be made of it. In particular, what elevates a formulation like 'life in a lifeless form' above a contradiction in terms?

In order to avoid that, some distinction between form and content is needed, and for this purpose one may consider the distinction between past and present. Any act of a living human being takes place in a present surrounded by a closed past and an open future, and for acts in the past this is not so. Still, a present act sliding into the past does not make it a numerically different happening, which means it undergoes a change of temporal form but not of empirical content. With the A-series collapsing at the moment of death, this content will not even have the form of past-ness. And as identical across temporal modes, it may perhaps be regarded as 'life in a lifeless form'.

In such a state of death, will there be consciousness at all? Talking about a realm beyond time, we here certainly reach the limits of theoretical exploration. But is there any reason for thinking that only the physical features of life would be retained? May not also the mental content of active striving, sensation, conviction, expectation or regret somehow stay the same albeit in a different form; similar, perhaps, to a distant, detached presence of an experience in memory? This will be no memory 'of the past', however, but more like an ensemble of qualities beyond the distinction between subjective states and matters of physical fact known from the temporal form of human intentionality. But even such rudimentary consciousness may suffice for motivating the further question about what it is like to be dead.

Let me sketch two possible ways of arriving at an answer: first, about the empirical reality of instantaneous experience near death; second, about the concept of beauty as a further characteristic of the corresponding state.

Near-death experience is a well-known phenomenon reported by people returning from the brink of death. There also seems to be a recurrence of themes and motifs involved, e.g. feeling surrounded by darkness, seeing a figure of light, experiencing a state of harmony and happiness, observing oneself from the outside, or having one's entire life flashing before one's eyes. The latter kind of review typically consists of memorial contents succeeding one another very swiftly. They may even appear instantaneously, in one glimpse, with no temporal order but still with exceptional clarity, possibly containing everything that ever happened in a person's life.[vii]

Such reports are often taken as evidence of an immaterial soul leaving the body of a person in the process of dying – a much too hasty conclusion perhaps. What they do demonstrate is the empirical reality of what we normally perceive as extended into past and future comprised in one single Now. This certainly does not prove that the same holds true once a human body has decomposed. But assuming the theoretical validity of arguments for all that happens in a life to be gathered in a point, it at least shows the possibility of a corresponding experience.

Furthermore, the experienced content is not like an amorphous mass or a melody compressed to a dissonant chord. Even as contained in a point, the qualitative and quantitative differentiation of temporally extended consciousness is retained. Exactly what this means is hard to understand, but the words ascribed to Mozart about the instantaneous 'hearing' of one whole symphony naturally come to mind. And perhaps the closest one gets to grasping what it is like to be in a non-temporal state of death may be through the quality of beauty. Indeed, the affinity between death and beauty is an old theme of romanticism, and by way of concluding I

should like to present it as an alternative to the rationalism involved in Einstein's reflections on the meaning of death.

If in a state of death there is no presence of attitudes like striving, conviction or regret, then we will be one with the experienced qualities of our lives, leaving behind both practical and theoretical thoughts and aspirations as sources of typical human conflict. And with consciousness no more striving for Truth or the Good, we may envisage a harmony reminiscent of Kant's notion of beauty as the object of disinterested experience. But for any further characterization of such a state, poetry may be more adequate than the language of philosophy – as in T. S. Eliot's 'Little Gidding', about a unity of time and space at the end of life, which coincides with the beginning:

And the end of all our exploring
Will be to arrive where we started […]
When the tongues of flames are in-folded
Into the crowned knot of fire
And the fire and the rose are one.[viii]

## 4

So far, my main conclusion about death as the timeless presence of what happens in life depends on what may be called an A-series version of temporal idealism: Without conscious life there will be no A-series, and without the A-series there will be no time. As formulated by Russell, the first condition hardly counts as a very controversial position. As indicated in section II, I also find McTaggart's arguments in support of the second condition quite

convincing. Now I want to strengthen and defend the conclusion by making it independent of one's commitment to temporal A-series idealism. A B-series reductionist not convinced of the possible lack of *temporal* distance, should at least accept the lack of extended temporal *distance*, I claim.

A B-series theorist might hold that even without the A-series, as a feature of the world of space–time particulars, the fourth dimension has some kind of concrete extension, normally called *duration*. And perhaps it does not matter much whether this duration is called temporal. But as a B-series phenomenon, the very extension of the fourth dimension seems to disappear from the world, resulting in some kind of A-series idealism about duration.

No doubt time seems to have an extension of its own, as a main feature, making it so hard to grasp. On the one hand, we do not easily get rid of the idea that 'somewhere' the past must exist. On the other hand, whoever makes the experience of the Now disappear like snowflakes in the hand faces the problem of accounting for where that experience is supposed to be. Apart from motivating the presentism-eternalism controversy, these conflicting views also make the notion of temporal extension a problematic one. No one, I believe, saw this as clearly as Saint Augustine.

Reflecting on the incessant disappearance of the Now, any extended time contains phases of past and future, he says, otherwise it is just a point without extension: 'Nam si extenditur, diuiditur in praeteritum et futurum: praesens autem nullum habet spatium.'[ix] In spite of its intuitive appeal, this view is far from generally accepted, however. In particular, several important philosophers of the last century have argued that any real Now is extended and that Augustine makes the illegitimate move of dividing the Now *ad infinitum*, as a condition of reaching a point without extension.[x] But such criticism I take to be wide of the mark, as he is simply pointing out the A-series nature of duration: Without the horizon of past and future, we cannot perceive or intuit sections of time as extending beyond a point.

Still, we do measure temporal duration, he further says. But as something vanishing and intangible, he takes this to be a quasi-extension, distinguishing it from spatial *extentio* by calling it *distentio*.[xi] It is found only in and through the A-series properties past and future, which in turn he relates to human consciousness; to our memories and expectations. Accepting his main line of thought, one is not bound to agree with Augustine's limitation of past and future to mental states of memory and expectation. For Kant, the human time horizon even comprises all empirically external things and causes and effects of the universe.[xii] Still, the content of this horizon will only have a quasi-extension. This may be intuited through spatial motion, yet it bears no resemblance to spatial extension.

Or does it? One may or may not talk about the A-series as extended in time. Whatever one's opinion is on that, Augustine makes us see that exclusively within the B-series there is no extension. That is not to deny the distance of relativistic physics as a mixture of spatial and temporal extension. But somehow the non-spatial B-series part of the corresponding 'interval' is confined to numbers and other abstract quantities lacking the quality of concrete extension. Such extension we only know from three-dimensional space, as containing blackboards and walls, tables and books, mountains and plains. We also know it as an important theme of discussion among philosophical classics like Descartes, Leibniz, Kant and, not least, Isaac Newton:

> There is no idea of nothing, nor has nothing any properties, but we have an exceptionally clear idea of extension by abstracting the dispositions and properties of a body so that there remains only the uniform and unlimited stretching out of space in length, breadth and depth.[xiii]

By way of contrast, no extension can be apprehended in the B-series. Or consider again the difference between frozen and real movement. While drawing a line on the blackboard, we perform a temporal action whose result is a visible, spatially extended line of chalk. But any attempt at perceiving, imagining or intuiting items of the B-series as temporally extended either makes them appear as spatial or as embedded in the A-series. So it seems that without the A-series of living consciousness, the B-series has no temporal extension or duration beyond abstract, conceptual thinking. Consequently, even a B-series theorist like Albert Einstein should accept the conclusion that the state of death is present in the present Now.

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[i] Cf. Goldman, Robert N. 1997, p. 79 ff.
[ii] Cf. Weinert, Friedel 2004, p. 128 ff.
[iii] As far as I can tell, physicists more often talk like eliminativists than do contemporary philosophers of time, Robert Geroch being a case in point: 'There is no dynamics within space–time itself: nothing ever moves therein; nothing happens; nothing changes. […] Imagine a film has been taken of what occurs in the world, that this film has been cut into its individual frames, and that these have been stacked on top of each other. The result is similar to space–time' (Geroch, Robert 1978, p. 20 f.).
[iv] Cf. McTaggart, John 1908, p. 458 f.
[v] Cf. Gödel as cited by Hao Wang: 'Time is no specific character of being. In relativity theory the temporal relation is like far and near in space. I do not believe in the objectivity of time' (Wang, Hao 1995, p. 229). About Einstein's view, according to Gödel, see Goldman, Robert N. 1997, p. 100.
[vi] 'According to the principle of relativity in its most extended sense, the space and time of physics are merely a mental scaffolding in which for our own convenience we locate the observable phenomena of Nature' (Eddington, Arthur 1916, p. 328).
[vii] Cf. Moody, Raymond A. 2016, p. 55 f.
[viii] Eliot, T. S. 1963, p. 222 f.
[ix] Augustine, *Confessiones* Bok 11, XV 20, 12-13, in Flasch 1993, p. 254. Here, 'spatium' obviously covers both spatial and temporal extension.
[x] Notably Husserl, Heidegger, Wittgenstein: Flasch 1993, pp. 43-70.
[xi] Augustine *op. cit.* XXVI 33, 20. (Flasch, Kurt 1993, p. 268)
[xii] Cf. my Wyller, Truls 2001. For Kant's view on causal laws as extended in a temporal point: Rödl, Sebastian 2005, p. 173 ff.
[xiii] "De Gravitatione", in Newton, Isaac 2004, p. 22.