

Time-Atom Theory: Nachgelassene Fragmente, Early 1873

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26 [11]

I have nothing but sensation (*Empfindung*) and representation (*Vorstellung*).¹

Therefore I cannot think these as having arisen from the contents of representation.

All those cosmogonies etc. are deduced from the data received by the senses.

We cannot think anything that is not sensation and representation.

Therefore no pure existence of time, space, world, if without that which senses and represents.

I cannot represent non-being (*Nichtsein*).

That which is (*Das Seiende*), is sensation and representation.

¹ Note by KAP: The word *Vorstellung* has an important philosophical lineage going back to Kant, Hegel, and, perhaps most important of all for the development of Nietzsche's thinking, Schopenhauer. It needs to be thought in the context of the problematic that Nietzsche is preoccupied with, both in his early reception of Kant, and in his 'mature' work, namely: what are the *limits* of and to human knowledge, and what of the status of our scientific notions, given that our conception of the world is mediated by sensation and representation/imagination? *Vorstellung* is bound up, then, with the mental or intellectual state of the *subject*. The verb *vorstellen* is used in the sense of introducing or presenting something (such as a person) and of representing something (as in a work of art). *Sich vorstellen* means to re-present something to oneself, to *imagine*, to conceive, to picture. As Schopenhauer puts it at the very beginning of *The World as Will and Representation*: 'That the world is my representation is a truth valid for every living and knowing being, although man alone can bring it into reflective abstract consciousness...he does not know a sun and an earth, but only an eye that sees a sun, a hand that feels an earth...'.

That which is not (*Das Nichtseiende*) would be something, that would be neither sensation nor representation.

The representing (*Das Vorstellende*) cannot “not represent” itself, represent itself away (*wegvorstellen*).

The representing can neither think itself as having become nor as passing away.

Impossible also the development of matter up to the representing.

For that contrast between matter and representation does not exist.

Matter itself is only given as sensation. Any conclusion beyond that is not permitted.

Sensation and representation are the reason that we believe in causes impulses bodies.

We can trace these back to movement and numbers.

26[12]

Movement in Time

A B

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Space-point A effects space-point B and vice versa.

This requires a time, for every effect has to cover a distance.

Successive time-points would merge together.

With its effect, A no longer impacts on the B of the first moment. What does this mean: B still exists, and A exists, too, when they meet?

That would mean above {all} that A remains unchanged at this and that time-point. But then A is not an effective force, for this cannot remain the same; for that would mean, it had not been effective.

If we take that which has an effect in *time*, then that which is effective in the smallest moment in time is distinct.

This means: time proves the *absolute non-persistence* of a force.

All laws of space are therefore thought as *timeless*, that means they must be simultaneous and immediate.

The whole world at a stroke. But then there is no *movement*.

Movement labours under the contradiction that it is constructed according to the laws of space and makes those very laws impossible through the assumption of a time: i.e. it is and it is not at the same time.

Here we can help by assuming that either space or time = 0.

If I assume space to be infinitely small, all distances between the atoms become infinitely small, i.e. all punctual atoms coincide in one point.

But as time is infinitely divisible, the whole world is possible as purely a temporal phenomenon, because I can occupy every time-point with the one space-point, thus being able to place it an infinite number of times. Therefore one should see the essence of a body as *distinct time-points*, i.e. the one point placed at certain distances. Between each time interval there is still room for infinite time-points; therefore one could imagine a whole corporeal world, all furnished from one point, but in such a way that we bodies dissolve into interrupted timelines.

Now only	:	:
	:	:
	.	.
	.	.

a reproductive being is necessary, which holds earlier moments of time beside the present. In this our bodies are imagined (*imaginirt*).

Then there is no coexistence except in representation.

All coexistence would be deduced and represented (*vorgestellt*). The laws of space would be wholly constructed and would not guarantee the existence of space.

The number and type of the succession of that one repeatedly placed point then constitutes the body.

The reality of the world would then consist of a persisting point. Multiplicity would arise through the existence of representing beings, which thought this point repeatedly in the smallest moments of time: beings that do not assume the point to be identical at different time-points and now accept these points as simultaneous.

Translation of all laws of movement into time proportions.

The essence of sensation would consist in gradually sensing and measuring such time figures ever more finely; representation constructs them as a coexistence and explains the progress of the world according to this coexistence: purely the transference into another language, into that of becoming.

The order of the world would consist in the regularity of the time figures: yet one would then certainly have to think of time as working with a

constant force, according to laws which we can only interpret from the coexistence. Actio in distans temporis punctum.

In itself we have no way of putting a time-law in place.

We would then have a punctual force which would have a relation to every later time moment of its existence, i.e. the forces of it would consist of those figures and relations. In every smallest moment the force would have to be different: but the sequence would be in any proportions, and the existing world would consist of the *coming into visibility of these force proportions*, i.e. translation into the spatial.

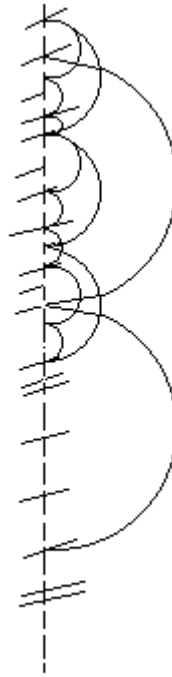
In atomic physics, one assumes atomic forces to be unchangeable *in time*, thus οντᾶ in the Parmenidean sense. But these cannot be effective.

Instead, only absolutely changeable forces can be effective, of the sort that are not the same for one moment.

All forces are only a *function of time*.

- 1) An effect of a sequence of time-moments is *impossible*: for two such time-moments would coincide. Thus every effect is actio in distans, i.e. through jumping.
- 2) How an effect of this kind in distans is possible we do not know at all.
- 3) Fast, slow etc. in the whole type of this effect. I.e. the forces, as functions of time, express themselves in the relations of near or distant time-points, namely fast or slow. The force lies in the degree of acceleration. The highest acceleration would lie in the effect of one time moment on the next, i.e. it would then be = infinitely great. The greater the slowness, the greater the intervals of time, the greater the distans.
Therefore the relation of distant time-points is slowness: all slowness is, of course, relative.

Timeline.
 Real: a space-point.
 Relations of its different
 time-positions.
 Where do the relations exist.
 No movement in time is
steady.



We measure
 time against
 something
remaining
spatial and
 therefore
 presuppose that
 there is a
steady time
 between time-
 point A and
 time-point B.
 But time is no
 continuum at
 all, there are
 only
totally different
time-points, no
line. Actio in
distan

We can only speak of time-points, no longer of time.

The time-point has an effect on another time-point, thus *dynamic*
 characteristics to be assumed.

Time-atom theory.

It is possible,

- 1) to reduce the existing world to punctual atomistic space,
- 2) to reduce this again to atomistic time,
- 3) the atomistic time ultimately coincides with a theory of sensation. The dynamic time-point is identical with the sensation-point. For there is no simultaneity of sensation.

Translated by Carol Diethe
 (with modifications by Keith Ansell Pearson)
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