

Latency and Intensity in Bloch and Whitehead:

The Paradox of Zeno or why there is no continuity of becoming

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In the concept paper of the conference on “Latency and the Possible – Latencies of the Possible” the editors described the aim of the gathering, which preceded the present volume, as exploration of the ontological status of the possible by focusing on the relationship between the possible and the concept of latency. Following up on the recent discussions within the context of New Materialisms they propose to think of the possible as a force and of latency as accounting for the ontology of the possible. From the multiple topics raised in the concept paper, I want to focus in what follows on the question whether and in which sense we can say, “the possible inhabits the real as a latent force”. This question points to the more universal question of the temporal structure of change and the problem of novelty.

I will first present Ernst Bloch’s idea of potential latency, which is related to the notion of objective tendency (Bloch 1975: 124). In fact the German Philosopher understood the possible as latent force even before the New Materialisms stated the ontological status of the possible. While Bloch underscores convincingly that change is associated with novelty (the *Novum*), he seems to narrow the question by connecting creation to a subjective revolutionary factor, which he can only think of as a human factor and as the intervention of free will (ibid: 129). But what, if we think of change and the occurrence of novelty as an event, which is not limited to human history, but is part of the history of all beings? This question will lead us to Whitehead’s interpretation of Zeno’s arrow paradox, with which the Pre-Socratic philosopher Zeno aimed to demonstrate the impossibility of motion. Like Bloch, Whitehead too links change and the occurrence of novelty to subjectivity. And like Bloch, Whitehead connects intensity with subjectivity. Yet contrary to Bloch he does not limit subjectivity to humans but links subjectivity to every mode of becoming. Furthermore, Whitehead states in his interpretation of the arrow paradox that creation is linked to becoming and that, while there is something that becomes, becoming is not extensive itself. To put it in other words: Whitehead states that while there is a becoming of continuity, there is no continuity of becoming (Whitehead 1978: 35).

Whitehead’s statement that there is no continuity of becoming is preceded by the critique of “the prevalent misconception that ‘becoming’ involves the notion of a unique seriality for its advance into novelty” (ibid). According to Whitehead this prevalent misconception is the classic notion of time which philosophy took over from common sense.

Thus, the question we have to discuss is, whether the idea of the possible “that inhabits the real as a latent force” belongs to a notion of time which links creative advance with the notion of a unique seriality. In that case it would be – if we follow Whitehead – part of the above-mentioned prevalent misconception. Based on the new notion of space-time as an extensive continuum, Whitehead instead created the concept of real potentiality by interpreting realization as realization of a potentiality rather than of a reality in the course of becoming. The issues that Whitehead’s understanding of real potentiality raises, are all the more relevant, as his work and especially his concept of real potentiality have become a central reference point for media theorists who seek to rethink the experiential challenge posed by contemporary intelligent media technologies like big data, microcomputational sensors, predictive analytic systems and so forth. Brian Massumi, Erin Manning, Luciana Parisi, Andrew Goffey, Matthew Fuller and Steven Shaviro were only among the first to discover Whitehead’s value for theorizing the transformation of human experience driven by new media and ubiquitous computing. Most recently the US-American media philosopher Mark Hansen presented his much discussed study entitled *Feed Forward. On the Future of Twenty-First-Century Media* (2015), in which he referred centrally to Whitehead’s process philosophy in order to interpret the shift catalyzed by twenty-first-century -media from agent-centered perception to environmental sensibility (Hansen 2015: 5). However, Hansen not only refers to Whitehead’s philosophy, his aim is also, as he puts it, “to submit Whitehead’s philosophy to *philosophical* critique” (ibid: 17). What challenges the human experience in our time is, as he underscores, “the address and materiality of contemporary media”, that is a “world linked together by multi-scalar computational networks and increasingly populated with intelligent sensing technologies” (ibid: 23). Now while Hansen refers to Whitehead’s radical environmental perspective and reconceptualization of subjectivity on the one hand in order to explain how twenty-first century media impact human experience by being an active part of what Hansen calls “wordly sensibility”, he accuses Whitehead on the other hand of being too speculative and of not taking the media “in their concreteness” into account (ibid). Subsequently, Hansen transforms certain key aspect of Whitehead’s thinking in order to face the above-mentioned “empirical challenge” of human experience by the materiality of contemporary media. Interestingly enough, Hansen’s first transformation refers to the concept of real potentiality. In contrast to Whitehead, who, as we will see, defines “potentiality” with reference to continuity and “actuality” with reference to atomicity, Hansen states: “1. Potentiality is ontologically more fundamental than actuality” and “2. Potentiality is rooted in the superjectal power of the settled world” (ibid: 28). This sounds like Bloch’s potential latency. And in fact, Hansen’s transformation of certain Whiteheadian key concepts culminates in post-phenomenological phenomenizing of the superject and reestablishing of real potentiality as subjective power. Furthermore it aims at developing a “human-implicating materialism” (ibid: 21). We will see whether Hansen’s philosophical critique of Whitehead’s philosophy is in fact, as he states, a liberation of prehensions and superjects from the realm of speculative philosophy, or whether on the contrary he reintroduces the classic notion of time and space and reiterates by doing so unintentionally the classical sub-

stance metaphysics. The question of how serious we take the claim of Whitehead's speculative philosophy is not, as Hansen accuses the Whitehead commentators Didier Debaise and Isabelle Stengers of, to take philosophy "as an end in itself" (ibid: 96). As it is related to the question of how we might interpret the transformation of human experience by the twenty-first century media in consideration of Whitehead's critique of the classic notion of time, it rather leads rather to the center of a metaphysico-critical philosophy of media.

1. Bloch: potential latency and objective tendency

Ernst Bloch introduced the concept of potential latency (Bloch 1975:124) in order to establish the "not yet" (Noch Nicht) as revolutionary future yet to come. Potential latency is the complementary concept and counter term to what Bloch calls "objective tendency" (ibid: 121). Objectivity refers here to the interpretation of Historical Materialism as a process, which is driven by the development of the productive forces and the dynamic of class struggle. In contrast to Historical Materialism, tendency and latency refer to the openness of the historical process and the 'real possibility' to make a difference. Bloch underlines that real historical events presuppose for their realization a subjective factor of will (ibid: 128). But we have to be aware of the fact that this subjective factor of will is embedded in a strongly teleological concept of history.

Thus potential latency points to the openness of the future on the one hand and relates to the final aim of the material historical process on the other hand, which is, according to Bloch, the hidden real ground of the historical process: the classless society. This paradoxical temporal structure reappears in the well-known idea of concrete utopia with which Bloch held on to the necessity of social utopias in order to avoid a simple economic and mechanic understanding of Marxist historical Materialism.

Bloch distinguishes between cause and condition in order to argue that history is not mechanically determined but contains a "wide sea of more, open possibilities" (ibid: 129). While the relation of cause and effect brings about predictable results and law-governed repetitions, only the concepts of condition, partial condition (partielle Bedingtheit) and anticipation create the base for the occurrence of the Novum and an open, unpredictable future. From here, Bloch differentiates between two different projections of the future. The first, which refers to the relation of cause and effect, is planning the future. The second, which aims at turning that which is repeating and refers to potential latency and condition instead of cause, is anticipating the future. Anticipation is what Utopia precedes (ibid: 126).

The introduction of the term potential latency is closely interconnected with the interpretation of the material historical process by reference to the concept of condition instead of cause, for only the concept of condition provides the ground for the occurrence of the Novum. Bloch

speaks of an intensification of conditions, which produces a conditioned state of limbo (einen bedingten Schwebezustand). This spatio-temporal limbo balances the opposition between objective historical condition and subjective factor, and guarantees in this way the changeability of the world. As becomes clear here, latency, tendency and limbo are in all their vagueness terms, which serve to define the temporal structure of change as open and at the same time legitimate, as break *and* continuity, as becoming *and* revolution.

Bloch's distinction between planning the future and anticipating the future reminds of Hansen's juxtaposition of the "closed models of predictive analytics" and "an open ontology of potentiality" (Hansen 2015: 259). In fact both of them interpret the concept of potentiality as a force, which is part of our spatiotemporal word. Thus contrary to Whitehead they interpret real potentiality not as realization of a potentiality but rather as realization of a reality in the course of becoming. Hansen even goes as far as to locate twenty-first century media in the realm of real potentiality and to state that "they are the true agents of process in our contemporary world" (ibid: 233). This allows him to think of media as contributing to an open ontology of potentiality.

Bloch underlines explicitly that his use of the term latency is unusual (Bloch 1975: 147). Thus it neither relates to a delayed reaction nor to something which is hidden and has just to be unpacked. Instead latency is, as Bloch puts it, "the mode in which the not yet existing aim asserts itself in the tendency" (ibid: 148). As becomes clear, latency links the historical moment to the final aim of history. Thereby, potential latency serves to integrate the historical moment into the whole of the historical process.

Now, how does this concept of the actualization of revolutionary future by anticipation relate to Whitehead's critical intervention according to which the idea that becoming involves the notion of a unique seriality for its advance into novelty is a prevalent misconception?

As I have shown, novelty arises in Bloch's concept of the temporal structure of change from the projection of the *possible being*, respectively the *being possible* into the material historical process. Bloch's concept of the temporal structure of change is dialectical. It follows the understanding of intensification as a step in the change from quantity into quality, which, according to Bloch, in case of the material historical process is mediated by the factor of subjectivity. The factor of subjectivity involves the final aim as the qualitative factor of the historical process. Thereby the factor of subjectivity involves the desirability (Wünschbarkeit) of the future and of historical progress. As a result the factor of subjectivity turns to the extent that it involves appetite, the possible latency into the force to anticipate the desired future.

Thus through the introduction of the notion of potential latency the factor of subjectivity becomes part of the material historical process. That means, it mediates the advance into novelty and becomes at the same time itself part of the extensive continuum. As a result the notion of potential latency contradicts Whitehead's statement according to which there is no continuity of becoming.

In summary, we can state that Bloch's interpretation of the statement "the possible inhabits the real as a latent force" holds on to the classical notion of time according to which becoming involves the notion of a unique seriality for its advance into novelty. Latency and tendency and through them becoming itself are perceived as part of the extensive continuum. The advance and retreat of the move, which characterizes the anticipation of the future in the conceptual pair of latency and tendency occurs alongside of one given and absolute time (Bloch 1978: 133). As we will see, this holds true for Hansen's open ontology of potentiality and his rather reductive transformation of some Whiteheadian key concepts, too, which culminate in the statement: "By repudiating the canonical Whiteheadian account, we clear the ground for the development of a more radical account that situates potentiality wholly *within our world* and accords it a primacy as the source for actuality." (Hansen 2015: 239, original emphasis)

2. Whitehead: the true difficulty is how the arrow survives the laps of time

Whitehead unfolds the philosophical meaning of his statement according to which there is no continuity of becoming by interpreting and discussing the example of Zeno's paradox of the arrow in flight (Whitehead 1978: 35, 68-69, 207; Whitehead 1953: 125). Thus I will first present Zeno's arrow paradox and Whitehead's interpretation of the paradox. This will help me to explore the reason why Whitehead calls the classic notion of time according to which time and space are separate and absolute a "prevalent misrecognition" and why he underlines that the act of becoming is not extensive. Whiteheads break with the classic notion of time will lead us finally to his concept of multiple space-time systems and the interpretation of what he calls "real potentiality" (Whitehead 1978: 72,77).

So, if "creative advance" is not to be understood in the sense of "uniquely serial advance" how then are the temporal structure of change and the occurrence of novelty to be interpreted (ibid: 35, 73, 78-79)? As recounted by Aristotle, Zeno's paradox of the arrow in flight goes as follows: "If everything when it occupies an equal space is at rest, and if that which is in locomotion is always occupying such a space at any moment, the flying arrow is therefore motionless." (Physics VI: 9, 239b5)

Zeno states that for motion to occur, an object must change the position, which it occupies. The paradox starts by dividing time into moments that is to say by the spatialization of time. Thus time is presupposed to be absolute and to be furthermore a divisible extensive continuum. We will see that this implicit presupposition is the starting point of Whitehead's interpretation.¹ As Didier Debaise has convincingly shown, contrary to Henry Bergson who sees the spatialization of the movement of the arrow as an inherent necessity of the human intellect,

¹ In fact he writes elsewhere, Zeno should have urged his argument "against the current notion of time in itself and not against motion, which involves relations between time and space" (Whitehead 1953: 127).

Whitehead perceives of the speculative philosophy as a philosophy of mediation: “His rationalist confidence forms”, as Debaise puts it, “a striking contrast with Bergson’s thought” (Debaise 2009: 81). Instead of aiming itself at inserting inside an experience by sympathy or intuition, the speculative philosophy “seeks to interpret” (ibid: 84).

Now how does Whitehead proceed? First of all he notices: “The argument, so far as it is valid, elicits a contradiction from the two premises: 1. That in a becoming something (*res vera*) becomes, and 2. that every act of becoming is divisible into earlier and later sections which are themselves acts of becoming”. (Whitehead 1978: 68)

We have to note, that Whitehead does not point at the problem of motion, but focuses his attention on the act of becoming. In fact, he underscores explicitly that the introduction of motion brings in irrelevant details. Instead, the “true difficulty is”, as he puts it, “to understand how the arrow survives the lapse of time” (ibid).

Contrary to the traditional philosophical discussions of the paradox, which are based on the assumption that the arrow exists apart from the flight and the environment, Whitehead does not isolate the arrow from the environment and from the change that it undergoes during the lapse of time from the outset. Thus, he does not presuppose the existence of the arrow separated from the flight. Instead of focusing on the problem of *motion*, he focuses on the problem of *endurance*. In fact, the question of how the arrow survives the lapse of time may be translated to the question of how the becoming of an enduring object is to be explained. Yet the problem of the becoming of an enduring object is intrinsically connected with the difference between the becoming of continuity and the continuity of becoming. For if we assume, that in a becoming something (*res vera*) becomes and if we consider at the same time that continuity is perceived as a divisible, extensive continuum, we can assume that there is a becoming of continuity. Yet we cannot assume that there is a continuity of becoming. For if there was a continuity of becoming then continuity could no be divisible. Or, to put it in another way: because continuity is the product of a process it cannot be at the same time the process itself (Stengers 2011: 196).

While accepting the first premise of the arrow paradox, Whitehead demonstrates in a second step that the contradiction is hidden in the second premise according to which “every act of becoming is divisible into earlier and later sections which are themselves acts of becoming” (Whitehead 1978: 68). Thus he argues:

Consider, for example, an act of becoming during one second. The act is divisible into two acts, one during the earlier half of the second, the other during the later half of the second. Thus that which becomes during the whole second presupposes that which becomes during the first half-second. Analogously that which becomes during the first half-second presupposes that which becomes during the first quarter second, and so on indefinitely. Thus if we consider the process of becoming up to the beginning of the second in question, and ask, what then becomes, no answer can be given. (ibid)

By leading the argument *ad absurdum*, Whitehead comes to the conclusion that “every act of becoming must have an immediate successor, if we admit that something becomes. But we cannot, in the absence of some additional premise, infer that every act of becoming must have had an immediate predecessor” (ibid: 69). Thus we are confronted with the question of the origin or the *causa* of a something, which is becoming. It is obvious that it is exactly at this point, where the problem of the occurrence of novelty arises as well. To sum up, Whitehead states: “The conclusion is that in every act of becoming there is the becoming of something with temporal extension; but the act itself is not extensive, in the sense that it is divisible into earlier and later acts of becoming which corresponds to the extensive divisibility of what has become.” (ibid)

In order to follow Whitehead's argument, we have to take into account, that, by qualifying the idea that “‘becoming’ involves the notion of a unique seriality for its advance into novelty” as “prevalent misconception”, Whitehead breaks not only with the classical notion of time but also with Newton's idea of an absolute space as that which contains moving objects. The notion of substance as “vacuous material existence with passive endurance, with primary individual attributes, and with accidental adventures” vanishes, as Whitehead states, not only from the philosophy of organism and cosmology, but also from the field of ultimate scientific conceptions (ibid: 309). Thus instead of assuming the arrow as a sensible object with a passive endurance, moving in an absolute space and an absolute time, Whitehead presents the arrow as a society of actual entities, which forms an enduring object. Actual entities, also called actual occasions are “the final real things of which the world is made up” (ibid: 18). In connection with the problem of the classic notion of time, Whitehead also describes the actual entity as an “atomized quantum of extension” (ibid: 73).

Now it is important to note that the creation of the concept of an actual entity as ultimate substance and as atomized quantum of extension is closely connected with Whitehead's definition of the relation between philosophy and science. Whitehead, who was a mathematician before he became a philosopher, realized that the classical notions of time, space and substance no longer corresponded to the meaning of the concepts in contemporary physics in relativity theory and quantum theory. Thus relativity theory associated, as Whitehead puts it, “space and time with an intimacy not hitherto contemplated” (Whitehead 1953: 118). In consequence he concludes: “what we must now ask of philosophy is to give us an interpretation of the statues in nature of space and time, so that the possibility of alternative meanings is preserved.” (ibid)

The concept of actual entity or actual occasion responds exactly to this problem: In his 1925 Lowell Lectures *Science and the modern world* Whitehead presented the idea of “the most concrete finite entity” as an event. He described this event as “the grasping into unity a pattern of aspects” (ibid: 119). In relation to the space-time continuum in relativity theory, Whitehead interprets the emerging of an enduring object as the endurance of a pattern in which time differentiates itself from space. Thus every emerging substance forms its own space-time contin-

uum. So we can summarize that the creation of the concept of “actual entity”, which is based on the space-time continuum of relativity theory is Whitehead’s answer to the diagnosed “prevalent misrecognition” of the classic notion of time.

An actual entity can be understood, as Whitehead sums up, as a “process in the course of which many operations with incomplete subjective unity terminate in a completed unity of operation, termed the ‘satisfaction’” (Whitehead 1978: 219). Once completed, an actual entity is indivisible, atomic and will, as Whitehead states thoroughly clearly, never change (ibid: 79). In this sense, the actual occasion is *causa sui*. It is substance in the sense of Spinoza. This is the reason why Whitehead rejected the second premise of the arrow paradox according to which every act of becoming is divisible into earlier and later sections, which are themselves acts of becoming. In as much as actual entities are *causa sui* they are the creator of themselves without predecessor. In fact, Whitehead states thoroughly clearly: first, that an actual entity never changes (ibid) and second, that actuality is “incurably atomic” (ibid: 61).

But how then are change and the occurrence of novelty possible? We have again to get back to Whitehead’s presentation of the Zeno paradox to give an answer to this question. For it is exactly the tension between continuity and atomicity, which underlies the paradox. And this remains, according to Whitehead, unsolved and unrecognized when we try to give a solely functional solution to the problem of temporalization, which is raised by the paradox.

What does a solely functional solution look like? A functional solution follows the physical definition, according to which temporalization is the unfolding in the course of time of real elements as a function of real elements. It was established with the invention of the differential calculus (Stengers 2011: 199). This is, as Isabell Stengers puts it persuasively, exactly the idea of a “temporal flux which is indefinitely divisible with down to the fiction of an instant without thickness” (ibid). Whitehead holds against this idea of a temporal flux on to the atomic structure of time. Yet there is, as Stenger convincingly argues, another reason for Whitehead to deny a functional solution to the paradox of the arrow in flight. It will lead us finally to Whitehead’s notion of “real potentiality”. Stengers writes:

The strength, and also the limit, of the notion of function consist in the fact that it features a behavior *qua* unification, the articulation of distinct functional variables, but without making unification a ‘real’ problem. More precisely, the problem only arises for the physicist, who must rise back up from observable behavior to the function or must integrate the functional equations to deduce the observable behavior. The state of affairs to which the function corresponds, for its part, is defined not in terms of problems but in terms of solutions. The function, one might say, transforms the behavior it describes into a continuous succession of instantaneous solutions to the problem it enunciates once and for all. As long as this function enables us to make the pattern as given, that is, without functionalization, it matters little whether it brings into play relations that are external (the earth’s presence

is responsible for ...) or internal: no possible meaning can be given to temporalization, to the positive contrast between potentiality and actuality. (ibid: 195)

The idea is that you cannot formulate ontological questions with a functional method. And this is a point Stengers makes. Furthermore a functional solution can't give any possibility to the temporalization and the positive contrast between potentiality and actuality. Yet, if we cannot differentiate between potentiality and actuality, we can also not give any possibility for novelty and for creation. In fact, Whitehead blames Newton for having confused what is "real potentiality" and what is actual fact (Whitehead 1978: 73). We see, that in contrast to Mark Hansen's critique, according to which Whitehead wouldn't take the empirical challenge into account, Whitehead had a very accurate and specific idea of the "empirical" in relation to 20th century experimental physics. Furthermore, Whitehead developed his concept of temporalization in direct relation to the philosophical questions, which were raised by 20th century quantum physics and relativity theory. The latter associates space and time with an intimacy hitherto not contemplated and the former declares the principle of continuity as physically invalid.

Now let us remember that we said earlier that there is no continuity of becoming because continuity is the product of a process and can as such not be at the same time the process itself (Stengers 2011: 196). Thus, in order to give a meaning to temporalization, we have to distinguish between the process and the product of the process. Whitehead's distinction between real potentiality and actual fact points directly to the process of temporalization, which is at the same time realization. Realization is nothing else than the becoming of time in the field of extension. Realization is temporalization in the sense that it atomizes the general extensive continuum. Or, to put it in Whitehead's own words:

The extensive continuum is that general relational element in experience whereby the actual entities experienced and that unit experience itself, are united in the solidarity of one common world. The actual entities atomize it, and thereby make real what was antecedently merely potential. The atomization of the extensive continuum is also its temporalization; that is to say, it is the process of the becoming of actuality into what in itself is merely potential. The systematic scheme, in its completeness embracing the actual past and the potential future, is prehended in the positive experience of each actual entity. (Whitehead 1978: 72)

The extensive continuum as general relational element is potential and becomes real by the process of atomization initiated by the actual entities. But what does the concept of actual or real potentiality mean in this context? Real or actual potentiality is the contemporary world as perceived through presentational immediacy. According to Whitehead, in the perception societies of actual entities are objectified for the percipient under the perspective of their characters of extensive continuity. Thus we can say that real potentiality relates to perception, while actual fact relates to the physical reality. In this sense, Whitehead identifies the contemporary world as perceived by the senses with the data for contemporary actuality. As a result that data

is not to be confused with actual facts – what Whitehead blames Newton for – they are in contrast real or actual potentiality. They are continuous while the actual facts are divided and atomic:

The contemporary world as perceived by the senses is the datum for contemporary actuality, and is therefore continuous – divisible but not divided. The contemporary world is in fact divided and atomic, being a multiplicity of definite actual entities. These contemporary actual entities are divided from each other, and are not themselves divisible into other contemporary actual entities. (ibid: 62)

Whereas general potentiality is the bundle of possibilities, real potentiality is “conditioned by the data provided by the actual world” (ibid). Again we must not confuse data with actual facts. The datum is, as Whitehead makes clear, “the actual world itself in its character of a possibility for the process of being felt” (ibid). Thus we can say: feeling in the sense of perceiving is becoming. Accordingly, Whitehead adds: “This exemplifies the metaphysical principle that every ‘being’ is a potential for a ‘becoming’”. (ibid)

As becomes clear, aesthetics plays a central role in Whitehead's concept of becoming and in the process of temporalization. In fact, the tension between continuity and atomicity has to be understood as complementary. Whitehead goes as far as to think of intensity as a thoroughly aesthetic category. As such, intensity is subjective intensity. Subjective intensity is neither divisible nor part of the extensive continuum. And yet it is part of the common world. The category of subjective intensity is linked to the “subjective aim” which is “intensity of feeling in the immediate subject and the relevant future” (ibid: 27). Subjective intensity is responsible for real unification and the occurrence of novelty. In this sense Whitehead writes:

A prehension, however acquires subjective form, and this subjective form is only rendered fully determinate by integration with conceptual prehensions belonging to the mental pole of the *res vera*. The concrescence is dominated by a subjective aim, which essentially concerns the creature as a final superject. This subjective aim is the subject itself determining its own self-creation as one creature. Thus the subjective aim does not share in this divisibility.” (ibid: 69, original emphasis)

But what does it mean that an actual entity never changes, and that it is the outcome of whatever can be ascribed to it in the way of quality or relationship? It leads to a philosophy of a “pluralistic universe in which ‘change’ means the diversities among the actual entities which belong to some one society of a definitive type” (ibid: 79).

Unlike Bloch, who started from the assumption that the possible inhabits the real and who therefore created the concept of potential latency, Whitehead conceives of the data provided by the actual world as real potentiality. Thus he has no need to introduce the possible into the datum by means of the concept of latency. And he does not have to relate to the human free will as a reference for subjectivity and for the creation of the new. Real potentiality is neither

a force nor a part of the actual world. The actual entity which atomizes the extensive continuum und thereby makes real what before was merely potential “stands”, to put it with Murray Code, “as the vital link between the past and the future: It is the means by which the order of what has come into being is transmitted to the future world” (Code 1985: 72).

It has also become clear that Mark Hansen’s supposed philosophical critic of Whitehead’s philosophy rather reduces the radicalness of Whitehead’s critique of the classic substance metaphysics with its idea of an absolute space and an absolute time. Hansen ignores that Whitehead developed his systematic scheme in order to create philosophical concepts of substance, space, time, subject, intensity and so forth, which correspond to the meaning of the concepts in contemporary physics. Thus the statement that there is no continuity of becoming relates to the historical fact that quantum physics caused the downfall of the principle of continuity introduced by Leibniz. Before this background, contemporary world as perceived by the senses is divisible but not divided. It becomes actual only by temporalization, which is, as the example of Zeno’s paradox shows, at the same time spatialization. Contrary to real potentiality, actual facts or actuality are divided and atomic. Thus, the crucial difference between potentiality and actuality relates to the difference between continuity and atomicity. While facts are always atomic, the contemporary world as perceived by the senses is the datum for contemporary actuality. Now it becomes clear that it doesn’t make any sense to maintain that the media of the 21st century are located in the vibrational continuum. The vibrational continuum is not a space, it is part of a systematic scheme in which the two sides of the contemporary world are thought together: the world as perceived by the senses (the continuum) and the world in fact – divided and atomic. The substantializing of real potentiality to a force of its own is what Whitehead would call due to a fallacy of misplaced concreteness.

But what does this mean for a philosophy of twenty-first-century media? First of all we have to be sure that our understanding of the physics and the physical concepts, which underlie the technology of the contemporary media is accurate. This concerns for example the concept of the data. With Whitehead we could think about the consequences of aesthetics playing such an important role in the becoming of continuity and we could think about how to integrate twenty-first-century media in the process of the becoming of a common world united in solidarity. I totally agree with Mark Hansen, when he states, that the potentiality for recompense by twenty-first-century media “will be actualized only if we struggle against the myriad contemporary entities and institutions that seek to capitalize on the technical revelation of sensibility in ways that bypass our agency entirely. We must fight to appropriate the fruits of our expanded sensory contact with wordly sensibility for non-instrumental purposes – to make our lives better” (Hansen 2015: 269). But in order to fight against the capitalization of our lives we do not need to ontologize the real potentiality.

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