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Nothing Else Matters

Towards an Ontological Concept of the Materiality of the Earth in the Age of Global Warming

Vincent Blok

Wageningen University

info@vincentblok.nl

Abstract

If the world in which we are intentionally involved is threatened by climate change, this raises the question about our place on Earth. In this article, we argue that the ecological crisis we face today draws our attention to the Earth as ontic-ontological condition of our being-in-the-world. Because the Earth is often reflected upon in relation to human existence, living systems or material entities in the philosophical tradition, we argue for an ontological concept of the materiality of the Earth as un-correlated being in this article. We develop five principles of the materiality of the Earth: the conativity, non-identity, responsiveness, performativity and eventuality of the Earth. We will argue that it is this notion of Earth that matters to us in the age of global warming.

Keywords

earth – world – global warming – conativity – affordance

1 Introduction

Human existence is open and responsive to the world around it; the world does not only orientate the human in the ontic sense of the word, ranging from the bookstore across the street that attracts my attention to the compass that guides my long walk home, and from the girl cycling past that attracts my attention to the micro-organisms like bacteria that threaten my flourishing on earth. The world does primarily orientate us in the ontological sense of the

word: human existence is always already intentionally involved in a meaningful world. Now, if this world in which we are always already intentionally involved is threatened by climate change, this raises the question about our place on Earth.

In order to become meaningful as a problem for us, we don't need any reference to our capacity for self-understanding and our ability to question our place on Earth, as philosophers like Heidegger seem to suggest (Heidegger 1998: 196–205; cf. Schalow 2006: 105). The singularity of the ecological crisis we face today is that it draws our attention to the earth as ontic-ontological condition of our being-in-the-world. The emergence of planet Earth in the Earth history is prerequisite not only for the emergence of human being on Earth at an ontic level, but more importantly, also for their responsiveness to the world around us, i.e. for their being-in-the-world at an ontological level. In the Earth's history, the Earth was long before humans emerged on the planet and in this respect, our being-in-the-world emerges, unfolds and expands out of the Earth in the era of humanity and threatens to go back into the Earth again at the end of this era in which humanity is threatened by global warming. It is the experience of the Earth as ontic-ontological condition of the possibility of our being-in-the-world in the era of global warming that confronts us with the question about our place on Earth. In times of ecological crisis, nothing else matters so to speak.¹

What matters to us in this question can be seen as the extra-ordinary; everything which normally raises our concern concerns the ordinary, i.e. the world in which we are always already intentionally involved, i.e. the Earth as human non-human co-construction, in which the human and the earth are correlated to each other. The earth is not only extra-ordinary in the sense that the earth-system existed before the era of humanity's being-in-the-world and is therefore un-correlated being (Meillassoux 2013), but also in the sense that the earth system itself is inherently unstable and is characterized by transformation, change and volatility. Environmental scientists like Nigel Clark, for instance, express this contemporary insight: "Whatever 'we' do, ice cores and other proxies of past climate profess to us, our planet is capable of taking us by surprise. With or without the destabilizing surcharge of human activities, the conditions most of us take for granted could be taken away, quite suddenly, and with very little warning" (Clark 2011: xi). The earth history informs us about

1 To be "means to perdure and persist. But this says more than just 'last and abide'. 'It is in being' means 'it persists in its presence', and in its persistence concerns and moves us" (Heidegger 1982: 95).

a fundamental asymmetry of the human relation with planet earth or, as Ray Brassier argues:

We are surrounded by processes going on quite independently of any relationship we may happen to have with them: thus plate tectonics, thermonuclear fusion, and galactic expansion (not to mention undiscovered oil reserves or unknown insect species) are as much autonomous, human-independent realities as the accretion of the earth.”

BRASSIER 2007: 59–60

The extra-ordinary of planet earth is that it on the one hand can be seen as unstable condition for the emergence for our human responsiveness to the world around us (being-in-the-world as symmetric relation) while the earth withdraws itself from any such correlation (being-on-earth as asymmetric relation). This doesn't only imply that the earth as the extra-ordinary is indifferent to the question whether we humans have a relation with it or not, but also that it could have been that the earth never let our being-in-the-world emerge.

This withdrawal of the earth from any correlation with our being-in-the-world already shows that while nothing else matters for us, this materiality of the earth is difficult to think. Relationalist philosophers like Bruno Latour, even if they acknowledge the earth history long before humans emerged on the planet, think the earth only in relation to human existence, i.e. as the ordinary in which we are intentionally involved. In this strategy, the earth as the extra-ordinary remains forgotten in its anthropocentric orientation. This is a first reason why the materiality of the Earth is difficult to think. Others, like Myra Hird, argue that bacteria and microbes articulate our human being-in-the-world (Hird 2009: 116–132). Seen from Hird's perspective, the earth as the extra-ordinary is the unstable ground out of which our being-in-the world emerges. This focus on bacteria and micro-organisms as point of departure limits itself to the organic, to life without being able to take the inorganic materiality of planet earth—the earth as rock, stone and mineral, into account. This is a second reason why the materiality of the Earth is difficult to think. Third, since philosophers of nature and life like Nigel Clark are primarily inspired by scientific findings, and science limits itself to the ontic level of beings, philosophical reflection on the earth also tend to understand the ontological—the earth as the extra-ordinary out of which our being-in-the-world emerges—in ontic terms, i.e. in terms of a complex of “world-building activities by trillions of tiny life forms” (Clark 2011: 45). This results in an ontic representation of the human relation with the earth, in which our being-in-the world is reduced to

the ontic level of a “concrete, localized, and contingent region in the midst of an overwhelming inhuman expanse” (Clark 2011: 48–49).

This is not an omission of authors like Latour and Hird. As I have shown elsewhere, the Earth as uncorrelated being is never thought of in the metaphysical tradition, ranging from Aristotle’s first attempt in his *Physics* to Heidegger’s in the 20th century to contrast world and earth. While Aristotle thinks matter out of form, Heidegger characterizes earth only negatively out of his concept of world. Philosophers never thought the Earth as the extra-ordinary (cf. Grant, 2006). What matters to us in this article is a positive *ontological* concept of the *materiality* of the earth as *un-correlated* being.

In this article, we develop such a concept of the materiality of the Earth. We develop five principles of the materiality of the Earth: the conativity, non-identity, responsiveness, performativity and eventuality of the Earth. In section 2, we start with a reflection on the conativity of the materiality of the Earth in order to develop the first three principles. In section 3 and 4, we consult James Gibson’s affordance theory to reflect on the relation between Earth and World, and articulate the performativity (3) and the eventuality (4) of the Earth. In section 5 we summarize the argument and draw our conclusions.

2 The Conativity of the Materiality of the Earth²

The starting point for our considerations is found in an early philosophical insight that is nowadays increasingly accepted in science: the idea that not only humans, but all things have agency (Latour 1993). One of the origins of this idea can be found in the work of Spinoza.³ According to Spinoza, “each thing, as far as it can by its own power, strives [*conatur*] to persevere in its own being” (Spinoza 1992, part 3, proposition 6). For Spinoza, this conativity is not an *ontic* will or impulse of living systems toward self-preservation, but an *ontological* principle of all beings: “The conatus to preserve itself is the very *essence* of a thing” (Spinoza 1992: part 3, proposition 7 (emphasis added)); conativity is a cosmogenic or world-building capacity of the Earth itself to articulate and establish the being or *identity* of beings. We explicitly refer to a world-building capacity of the Earth, because for Spinoza, this conativity is

² This section is a further development of the conceptualization of Earth I developed elsewhere in the context of biomimetic technology development (cf. Blok 2016a).

³ In fact, Spinoza derived his concept of conativity from ancient philosophers like Lucretius and Cicero (Groome 1998: 29). Nonetheless, we call Spinoza one of the origins because he was the first philosopher to develop a full concept of conativity as a principle of nature.

not limited to *living systems*. Every body is conative according to Spinoza, even a stone. On the one hand, we can argue that conativity is not only a principle of living nature, but primarily a principle of the materiality of the Earth.⁴ On the other hand, we can argue that this concept of the conativity of material entities extends the domain of the “living” from the traditional animate to the “in-animate,” i.e. “living matter” as key element in Earth’s generation and self-regulation as a dynamic system (Vernadsky 1998; Lovelock 2006; Clark 2011).

To what extent can we consider conativity to be *essential* for the materiality of the Earth, i.e. to what extent does conativity articulate the *identity* of material entities? In Spinoza’s view, only one common substance—*Deus sive Natura*—constitutes the universe. All separated material entities that we encounter in the world are *modes* or *modifications* of this one substance. As such a mode, each material entity is resistant to everything that can take its existence away, and this resistance is precisely the conativity or striving to preserve oneself as such a mode of the common substance (Spinoza, part 3, proposition 6). Conativity is essential then because it *differentiates* the identity of material entities from the common but undifferentiated substance—it articulates and establishes the self or identity of the tree and the stone for instance *as* modes of this common substance (*self-perseverance*)—and prevents at the same time their relapse in this common substance (*self-perseverance*).

If we frame Spinoza’s idea of a common substance in more profane terms and highlight the “naturalistic” framework that he introduces, we can say that all material entities we encounter in the world—the stone, the tree, human beings—are modes or modifications of the materiality of the Earth. As such a modification of the materiality of the Earth, each material entity strives to preserve itself (*self-perseverance*). This can already be conceived at an ontic level, namely the metabolic relation to the Earth as resource that constitutes the tree and human beings in their striving to preserve themselves. If, however, this striving is *essential* for each material entity, conativity cannot be understood at an ontic level as a struggle for the existence of these entities, but at an ontological level as the impulse⁵ in the undifferentiated materiality of the Earth to differentiate and establish material entities like stones and trees as modes of this undifferentiated materiality of the Earth.⁶

4 The distinction between *living* nature and *dead* matter is already questioned as a typical *modern* distinction (Jonas 1966). In this article, we conceive conativity as a principle of Earth’s materiality, thus including nature.

5 *Conatio* is a translation of the Greek *horme*, impulse or onset.

6 Levinas conceptualized *conatus* at an ontological level as “ontological right to existence,” i.e. as struggle for existence (cited in Toadvine 2012: 179). It is not necessary, however, to conceptualize this struggle in a negative sense. Hans Jonas, for instance, took this struggle as a

The essentiality of conativity for material entities shows, in other words, that conativity is not a will or power of material entities to preserve themselves—an *auto-poiesis* as philosophers like Maturana and Varela would have it (Maturana & Varela, 1980)—but primarily a principle of the appearance of the materiality of the Earth *as* stone, tree, up to the entities that constitute the eco-systems of planet earth and the built environment in which we live, including ourselves. The conativity of the Earth is literally an endeavoring, an effort, and the essentiality of conativity consists in its endeavor to articulate and establish the differentiated identity of material entities *as* modes of the undifferentiated materiality of the Earth. On the one hand, the conativity of the Earth is needed to differentiate and establish these material entities from the undifferentiated materiality of the Earth in which they are embedded (*self-perseverance*). On the other hand, conativity is needed to maintain and persevere these differentiations and prevent their relapse into the undifferentiated materiality of the Earth again (*self-perseverance*).

The importance of these two aspects of conativity is also confirmed by recent insights into Earth and life sciences; Earth's history is characterized by an inherent instability in which life forms but also inanimate conditions of life like climate changes emerge, adapt to the changing environment and disappear again: "The vision that has been emerging, through a succession of discoveries, controversies and convergences, is one in which instability and upheaval, rhythmical movement and dramatic changes of state are ordinary aspects of the earth's own history" (Clark 2011: xii). The inherent instability of the Earth indicates the undifferentiated materiality of the Earth, out of which differentiated matter or relatively stable bodies like stones and trees, up to the eco-systems of planet Earth and the built environment emerge (*self-perseverance*) and maintain (*self-perseverance*) themselves before they recede again in the undifferentiated materiality of the Earth.⁷

A first round of reflection reveals the principle of conativity as principle of the materiality of the Earth, which is not an ontic will or impulse of material entities but an ontological endeavor to differentiate the identity of material entities up to the eco-systems of planet Earth as differentiations, and as such, deviations from this undifferentiated materiality. Conativity as *self-perseverance*

positive indication, namely, as a struggle to maintain oneself. This struggle is characteristic of all entities according to Jonas. The fact that nothing in the world is indifferent toward its own existence is the starting point of ethics according to Jonas, because it makes us responsible for the maintenance of this existence (Jonas 1984). The further elaboration of Levinas's and Jonas's view on the struggle for existence is beyond the scope of this article.

7 In this conceptualization of the conativity of the Earth, we deviate from Spinoza's original intuitions, which were precisely monist in nature.

and self-*perseverance* of the Earth is the first characteristic of the Earth that we can discern.

Consequently “I,” as a material entity, am not primarily conative, because “I” am the performative constituent or e-mission of the conativity of the Earth. This means that conativity as a principle of the materiality of the Earth consists in the endeavor to differentiate and preserve the identity of material entities like stones and trees, me and you, from undifferentiated matter as modes of this materiality. As such an origin of the identity of material entities, the undifferentiated materiality of the Earth itself has to be understood as non-identity. The material entities are transgressing the non-identity of the undifferentiated materiality of the Earth and remain at the same time embedded in this conative or “vibrant” materiality of the Earth (cf. Bennett 2010), like a ripple in the water or a gulf that emanates from the ocean and remains embedded in it at the same time. The dynamic character of Earth’s conativity can be conceived as *metabole* in the broadest sense of the word. Otherwise than as is the case in the metaphysical tradition, the movement of the Earth should not be understood out of that which is generated by *metabole*, i.e. the material entities that are performatively constituted by the conativity of the materiality of the Earth. Conceptualized this way, the movement as character of the Earth is reduced to what is moved in favour of its presence as a being, while the Earth is not such a being but the being of the Earth *is* in the way of such movement. We can compare this endeavor to differentiate the identity of material entities with Kauffman’s ideas about the *origins of order*, i.e. the spontaneous emergence of order out of chaos by the self-organization of complex systems (Kauffman 1993). The Earth’s history, with its evolution of a wide range of landscapes and species shows the limitlessness of undifferentiated materiality of the Earth—substantiated in the elements such as air and water—as a domain of events out of which such differentiations emerge and into which they in the end recede again.

A second round of reflection on the materiality of the Earth reveals a second characteristic of the Earth. The Earth itself is non-identity that constitutes a domain of events—or chaos in Kauffman’s terms—that articulates and emits the identity of material entities—or order in Kauffman’s terms—without the possibility of being identified itself. The materiality of the Earth is not only characterized by non-identity, but is also always heterogeneous to, and always re-cends actual material entities as differentiations from this undifferentiated materiality of the Earth.

With this, and contrary to philosophers like Timothy Morton, who argue that there are only discrete entities and no matter as such—an argument that inspired his “ecology without matter” (Morton 2013: 150; cf. 44)—we rehabilitate

a dual notion of the Earth, namely as undifferentiated materiality that constitutes a domain of events out of which the identity of material entities emerge as differentiations of this undifferentiated materiality of the Earth.⁸ The undifferentiated materiality of the Earth concerns non-identity, whereas differentiated material entities concern the identity of material entities up to the eco-systems of planet Earth and the built environment in which we live. This dualist notion of the Earth implies a fundamental *asymmetry* between the (undifferentiated) materiality of Earth and the (differentiated) material entities of the Earth. This asymmetry is not only an epistemic asymmetry as limitation of what is known—the Earth as *terra incognita*—but also an ontological asymmetry. The Earth as non-identity is the *origin* of the identity of the stone, the tree, me and you. The Earth as un-correlated origin of the differentiated material entities that build the eco-systems of planet Earth up to the enviroing world in which we live, is the second characteristic of the materiality of the Earth (we will come back on this asymmetry of the Earth in section 4).

If, however, we conceive conativity as a principle of the materiality of the Earth at an ontological level, rather than as a principle of material entities at an ontic level, the question is why the undifferentiated materiality of the Earth differentiates material entities like stones, trees and human beings. According to Spinoza, the materiality of the Earth is not only conative but also *associative*; this means not only that the conativity of the materiality of the Earth articulates and establishes material entities as differentiated modes of undifferentiated materiality that can *affect* other such differentiated entities in the environment, but also that these differentiated entities are at the same time always already *affected* by other entities, which are in their turn also performatively constituted by the conativity of the materiality of the Earth. From a Spinozan perspective, each mode of the materiality of the Earth has to be seen as a composition of simple modes that affect and are affected by one another, i.e. that they are primarily *responsive* to one another and form the relatively stable bodies that we encounter in the environment, ranging from simple bodies like stones and bacteria to complex bodies like human beings and to

8 Morton rejects such a duality because “there is no bottom level that is not a substantial formed object” (Morton 2013: 44). According to Morton, material entities “contain” (Morton 2013: 41) or “manifest” (Morton 2013: 48) the materiality of the Earth. One of the problems with Morton’s position is that although he acknowledges the non-presence and uncanniness of material entities, his notions like containment, representation and manifestation cannot do justice to the non-identity of the materiality of the Earth which *withdraws* from material entities in a fundamental way, i.e. cannot be “contained” or “manifested” or in other words, cannot become “present” in the re-presentation by material entities. A further discussion of Morton’s position is beyond the scope of this article.

complex networks and alliances of bodies like the Earth's ecosystems. Or as Jane Bennett puts it:

Because each mode suffers the actions on it by other modes, actions that disrupt the relation of movement and rest characterizing each mode, every mode, if it is to persist, must seek new encounters to creatively compensate for the alterations or affections it suffers. What it means to be a 'mode', then, is to form alliances and enter assemblages: it is to mod(e)ify and be modified by others.

BENNETT 2010: 22

If we conceptualize this responsiveness of material entities at an ontological level, i.e. at the level of the articulation and establishment of the identity of material entities, we can conclude that the identity of material entities is not only performatively constituted by the conativity of the materiality of the Earth (first principle of the conativity of the Earth), because this identity of material entities is at the same time constituted by their responsiveness to other material entities that are performative constituted by the conativity of the Earth. In the differentiation of material entities by the conativity *of* the materiality of the Earth, these entities are at the same time constituted by their mutual responsiveness *to* the conativity of (other) matter and build the complex eco-systems of planet Earth and the world in which these entities are interconnected and interdependent. Because of this *responsive* conativity of the Earth, the identity of material entities is interconnected and interdependent with other material entities and build the eco-systems of planet earth, up to the world in which we are always already intentionally involved. In this respect, the identity of material entities is not only the product of the conativity of the Earth but at the same time of their responsiveness to other material entities that build the eco-systems of planet Earth and the World around us. A third round of reflection on the materiality of the Earth reveals the responsiveness of material entities as third characteristic of the Earth.

The problem with this conceptualization of three characteristics of the responsive conativity of the Earth is, however, that it remains abstract and is disconnected from our daily experience of the natural environment. Contrary to philosophers like Deleuze and Bennett, who tried to articulate conativity in terms of assemblages and actants, we choose an ecological perspective to understand the responsive conativity of the Earth in this article. In the next section, we propose to conceptualize the responsive conativity of the materiality of the Earth in terms of their responsiveness to affordances in the environment.

3 The Responsive Conativity of Earth and World

According to James Gibson, one of the most influential psychologists in the field of visual perception in the twentieth century, we do not perceive stimulus information from the outside world, which we process consciously or unconsciously, but rather *affordances* in the environment. The word *affordance* indicates the meaning of a thing or organism in the environment, which is detected or picked up by the perceiver and allows him to perform a specific kind of action; air affords breathing and water affords drinking for example, a chair affords sitting and a hammer affords hammering. According to Gibson, “the affordance of anything is a specific combination of the properties of its substance and its surfaces taken with reference to an animal” (Gibson 1977: 67). If a substance is rigid, horizontal, and extended for instance, then it affords support; it is the ground or floor on which we are walking.

Not only the physical environment, but also animals harbor affordances, according to Gibson. Their sexual, predatory, nurturing, fighting, cooperating, and communicating interactions for instance harbor a complex set of affordances: A beautiful butterfly affords her predator to hunt for her and dispatch her, for instance. Although the butterfly affords hunting, this does not mean that the meaning of the butterfly for the predator is a characteristic of the butterfly. The affordance arises *with reference to an animal*: a rigid and horizontal surface affords support for the butterfly for instance, but not for fish. In the same way, air affords flying for butterflies but not for a cat as their predator. This relativity of the affordance does not mean that the meaning of the butterfly depends on the valuation of this object by the subject. In the case of inanimate objects, affordances stem from the environment, and in the case of animate objects, affordances arise in the reciprocity of animals and other animals. Gibson provides the example of a mother and her child and a prey and her predator: What the child affords the mother is reciprocal to what the mother affords the child; and what the prey affords the predator—hunting—is reciprocal to what the predator affords the prey—hiding.

As we have argued elsewhere, we have to conceive affordances at an ontological level. This means that the predator for instance does not first see the prey and then takes action. On the contrary, prey and predator are constituted by their mutual affordances; in the mutual affordance of prey and predator, the prey affords hunting and the predator affords hiding, and in their actual behavior in response to the mutual affordance, their identity *as* prey and *as* predator is performatively constituted; in their mutual affordance, the prey becomes the one who is hiding for the predator and is looking for shelter in holes and caves, and the predator becomes the one who is hunting for the prey. With this,

it becomes clear how the affordance has to be understood. The affordance is the (non-subjective) *meaning* of the prey for the predator and vice versa. This sense or meaning arises in the reciprocity between prey and predator; both prey and predator live already in a meaningful world in which they are what they are, i.e. they *perform* hiding and seeking behaviour. The ontological status of the affordance is that it articulates a meaningful world for an organism and allows him to perform his specific behaviour *as* prey, *as* predator, and so forth.

Although we cannot explore the full meaning of the affordance ontology in the context of this article, this brief introduction enables us to open an ecological perspective on the responsive conativity of the Earth we introduced in the previous section. There, we saw not only that the Earth's conativity articulates the identity of material entities that can affect other entities, but also that their identity is at the same time affected by other material entities that are conatively constituted. In other words, they are co-constituted by their affectiveness, i.e. by their being affective to and being affected by other material entities. The affordance ontology enables us now to conceptualize this abstract notion of the affectiveness of the Earth from an ecological perspective.

The Earth is affective, i.e. the conativity of the Earth performatively constitutes the identity of material entities as *affording* and being *afforded* by other material entities in the environment to which they are responsive. The Earth performatively constitutes the stone, the tree, but also the child and the mother in our example, and they are at the same time co-constituted by their being responsive to affordances in the environment; the child affords the mother to provide love and care and is at the same time affected by affordances in the environment, for instance the affordance to perform drinking behaviour in response to the affordance of the mother. As such, the responsive conativity of the Earth constitutes the identity of material entities as interdependent and interconnected with other material entities in the eco-systems of planet Earth up to the world in which we are always already intentionally involved. By understanding the responsive conativity of the Earth this way, we are able to reconnect abstract concepts like the conativity and the affectivity of matter with our daily experience of Earth's ecosystems.

This double origin of the identity of material entities also has consequences for our understanding of the identity or self of material entities. If "I" am not primarily conative but am the performative constituent of the responsive conativity of the Earth (not-I) and as such interconnected and interdependent with the other entities in the world in which I am always already intentionally involved, "I" am constituted by the conativity of (undifferentiated) materiality of the Earth on the one hand, and by "my" responsiveness to the affordances of other material entities in the enviroing world on the other. Like a plant is

rooted in the soil that nurtures and permeates it, and cannot *be* without such a nourishing soil, so do the identities of material entities inhabit the Earth that performatively constitute any “I” or self. Any “I” or self is rooted in and dependent on this Earth not only in the ontic sense of the word—i.e. the Earth as prerequisite for the emergence of human being on earth—but also in the ontological sense that Earth is the origin of the performative constitution of any “I” or self of material entities. But “I” am not a “mere surface effect of some deeper force,” as Harman would argue (Harman 2011: 6), precisely because the individuation process of any “I” or self consists at the same time in “my” responsiveness to the affordances of other material entities in the enviroing world. The identity of material entities does not only inhabit the Earth in the ontic-ontological sense of the word, but is also co-constituted by its responsiveness to the affordances of other material entities in the enviroing world.

This ecological perspective on the responsive conativity of the Earth enables us to further articulate the dual notion of the Earth we introduced in section 2. There, we conceptualized the conativity of the Earth as differentiation of the identity of material entities, which remains embedded in the undifferentiated materiality (non-identity) of the Earth. We can conceptualize the dual notion of the Earth as undifferentiated materiality and the Earth as differentiated material entities that are interconnected in the enviroing world as a distinction between Earth and World. “World” is not only the collection of all material entities on the Earth, but concerns the meaningful environment out of which the identity of material entities has to be understood and to which each entity is always already responsive in its actual behaviour; in the actual behaviour in response to the mutual affordance of mother and child, but also the spider and its web or the bird and its nest, the world of the mother and the child, i.e. their being-in-the-world is constituted.⁹ This “World” is here not limited to our *human* being-in-the-world as philosophers like Heidegger thought, because all material entities are responsive to the affordances in the enviroing world. This “World” co-constitutes the identity of material entities as interconnected in the enviroing world and can be opposed to “Earth” as non-identity or undifferentiated materiality.

In the responsive conativity of the Earth, “I” am lifted out of and differentiated from the undifferentiated materiality of the Earth, on the one hand, while at the same time, “I” am lifted in the world in which “I” am always already interconnected and interdependent with the other material entities, and to

9 From the perspective of the conativity of the Earth, this implies that matter offers affordances not only to an animal, for instance the affordance of the web to the spider, but also the other way around (for the limits of this mutuality, see Blok 2014).

which “I” am always already responsive in my actual behaviour. With this, the affordance ontology reveals also a fourth character of the Earth. The mutual affordance of prey and predator affords actual behaviour that constitutes their identity *as* prey and *as* predator, and this actual behaviour can be understood as the embodiment of the conativity of the Earth to differentiate material entities like prey and predator that are at the same time responsive to affordances in the enviroing world. This means that the actual differentiation of material entities emerges in the performance of actual behaviour of material entities—*as* prey or *as* predator—in which their identity is performatively constituted. In this respect, the identity of material entities is *included* in the responsive conativity of the Earth by embodying this responsive conativity in its actual behaviour in response to affordances in the environment. In this responsive behaviour, the conativity of the Earth is embodied as “my” responsive conativity on an ontological level, whether or not I am conative, willing or affective at an ontic level or not.

A fourth round of reflection on the materiality of the Earth reveals that the performance of actual behaviour embodies the conativity of the Earth; this involves a shift in our conceptualization of the Earth as *being* to a notion of Earth as *performing* behaviour. This performance of actual behaviour embodies not only the conativity of the Earth (first characteristic of the Earth) but also the responsiveness of material entities to the affordances of other material entities in the enviroing world (third characteristic of the Earth). To the extent that the “I” or self of material entities is constituted by the conativity of the Earth and by its responsiveness to the affordances of material entities in the enviroing world, the identity of material entities can be seen as the *trait d'union* between Earth and World.

The idea of material entities as *trait d'union* between Earth and World substantiates the idea that things are more than their relation. Material entities like the stone and the tree, me and you, do not only derive their meaning from the World in which they are interconnected and interdependent with other material entities, but inherit at the same time the Earth in their embodiment of the conativity of the Earth by their actual behaviour. This Earth is not part of the World, but is also not the ontic Earth history prior to the emergence of human existence on earth (Meillassoux 2013), or the ontic Earth inhabiting bacterial communities that constitute and compose multi-cellular organisms like human beings via symbiogenesis, as Hird would have it (Hird 2009). It concerns the unfathomable depth of the Earth as ontic-ontological condition for the possibility of the emergence of the World in which it in the end recedes again. In other words, “World” is not the projection of language, as philosophers like Heidegger thought, but new Worlds are performatively constituted

by the responsive conativity of the Earth, in which they recede again in the end. To the extent that “World” is a projection or e-mission of Earth, the responsive conativity of the Earth can be understood as a cosmogenic or world-building capacity. The limitless heterogeneity or non-identity of the Earth is the origin of the cosmogenic and world-building capacity of Earth.

The acknowledgement of the World as a projection or emission of the undifferentiated materiality of the Earth does not mean that this World is irrelevant for philosophical reflection, as philosophers like Timothy Morton seem to argue. For Morton, especially in our situation of ecological crisis due to global warming, *the end of the world* is at stake (Morton 2013: 2). Of course, we can easily admit that global warming has changed the face of the Earth, and we can also admit that the World of the seventeenth century is gone with the industrial revolution and that it does not make sense to romantically long for the old days in the era which is often called the Anthropocene. But is it not too radical to argue for the end of the world as if there is only a collection of material entities (Morton 2013: 99)? Based on our ecological perspective on the responsive conativity of the Earth, we have to reject the idea that World is just an aesthetic effect of material entities (Morton 2013: 104). On the contrary, material entities are co-constituted by their responsiveness to the affordances of other material entities in the enviroing world. In fact, we can acknowledge the immanence of thinking to the physical—actual behaviour of the mother and the child or the prey and the predator embody the responsive conativity of the Earth—without having to give up this notion of World in which they are co-constituted as well. This co-constitution of the identity of material entities by Earth and world does not only hold for the Heideggerian everyday world in which beings are at hand for human existence, but also for the technical world we currently live in.

4 The Eventuality of the Earth

The critical question now is: Does our ecological perspective on the responsive conativity of the Earth provide an *ontological* concept of the *materiality* of the Earth as *uncorrelated* being, as was called for in the introduction? The differentiation of the identity of material entities from the undifferentiated materiality of the Earth consists in the performative constitution of the *identity* of material entities as differentiations from undifferentiated matter, and this identity of material entities is at the same time co-constituted by their responsiveness to affordances in the enviroing world. Thus, the responsive conativity of the

Earth concerns an ontological account of the materiality of the Earth. We have seen that the Earth has a twofold character, namely the performative differentiation of the identity of material entities that are at the same time responsive to affordances of the other material entities in the enviroing world, and Earth as non-identity but world-building capacity. If the responsive conativity of the Earth performatively constitutes me as interconnected with other material entities to which I am always already responsive in my actual behaviour, this differentiated materiality of the Earth that builds the world has to be understood as correlated being. The world, just like the prey and the predator, are correlated in their mutual affordance, "I" am always already correlated to a meaningful world in which I am intentionally involved. And to the extent that we only encounter entities in the world around us, the non-identity of the Earth concerns un-correlated being, i.e. the Earth as not correlated to our intentional involvement.

The affordance ontology enables us now to open an ecological perspective on the heterogeneity of the Earth as un-correlated being. Gibson points to the "independent existence of an unlimited environment" beyond our actual responsiveness to affordances in the environment (Gibson 1977: 69). This means that Earth is always *extended* beyond our responsiveness to the actual affordances in the enviroing world; the limitlessness and complexity of the Earth consists in the fact that the Earth is never exhausted by its affordances, is always richer and more complex than any actual affordance in the environment, and res-cends all actual and possible affordances in the enviroing world. This concept of the superabundance of the Earth beyond World helps us to open an ecological perspective on the heterogeneity or non-identity of the Earth as un-correlated being (second characteristic of the conativity of the Earth). Seen from an ecological perspective, the conativity of the Earth consists in the world-building capacity to performatively constitute material entities that are interdependent and interconnected in the world, which remains embedded in the undifferentiated materiality of the Earth (non-identity) as unstable ground (un-ground) that is always heterogeneous to and always res-cends World.

A consequence of this concept of Earth is that we have access only to the World of interconnected material entities that are performatively constituted by the conativity of the Earth, and not to the Earth itself (non-identity). At the same time, the embodiment of the conativity of the Earth in the individuation process of any "I" or self makes clear that although we don't have access to the Earth (non-identity) at an epistemic level, it is this Earth that any I or self embodies in the individuation process in which the "I" or self is constituted at an ontological level.

This doesn't imply a continuity or symmetry between Earth and "I" or self as its performative constituent. Our relation to Earth is asymmetric in the ontic-ontological sense of the word; on the one hand, the asymmetry is found in the unfathomable res-cendence of the Earth beyond our embodiment of the conative materiality in our actual behaviour. On the other hand, the asymmetry is found in the fact that "I" am primarily responsive to the affordances of material entities in the environing world in which I am intentionally involved, but not to Earth as non-identity itself. There is a reciprocity between the prey and the predator, but there is no reciprocity between the prey and the predator on the one hand and the Earth as uncorrelated being on the other; the Earth as non-identity performatively constitutes material entities like prey and predator that are at the same time co-constituted by their responsiveness *to each other*, without affording any responsiveness itself. With this, the affordance ontology not only teaches us that there is no privileged position of humans, but more important, that the idea that the Earth itself doesn't afford any responsiveness and doesn't *need* any (human or non-human) responsiveness in order to *be*.¹⁰ Human existence, just like any other material entity, is in need of the Earth at an ontic-ontological level in order to be-in-the-world, but not the other way around.

With this indication of the ontic-ontological asymmetry between Earth and the material entities that are interconnected and interdependent in the environing world, we can also return to the question raised in section 2. There, we asked why the undifferentiated materiality of the Earth differentiates material entities like stones and trees, me and you. Heraclitus already argued that nature has the tendency to conceal itself, and Aristotle's ὑλη is conceived as στέρεσις or *absencing* that belongs to the self-emergence of the φύσις. This tendency of the Earth to withdraw itself is *not* indicated in the phenomenological insight that entities in the world always have a dark side, which is inaccessible for us—be it the hardness or self-closedness of the stone or the backside of a perceived object or the quantum theoretical insight that objects withdraw from each other. These examples of withdrawal concern *beings* in the world and not Earth at an ontological level. If we have to indicate the Earth as non-identity, we better point at elements such as wind, water and fire which show themselves but are no "object" yet cannot be measured, embraced or possessed

10 In this respect, the relation between being and thinking is different than it is conceptualized by philosophers like Heidegger. For Heidegger, the call of being is primary and our human responsiveness to this call secondary, but at the same time, he argues that being only *is* in the proper sense of the word in Dasein's responsiveness; being *needs* human Dasein.

by us in their unfathomable expanse. These elements, that we can experience when we look over the water of the sea or the sky above us, indicates the undifferentiated materiality of the Earth, out of which the identity of material entities emerge and into which they recede again. If the Earth has the tendency to withdraw itself, we can understand now why Earth differentiates entities that build a world: the ultimate conativity of the undifferentiated materiality of the Earth consists in the differentiation of material entities that build World *in order to* preserve itself *as* undifferentiated materiality. Contrary to Ian Grant, who objects to the idea that “brute matter” should give rise to life (Grant 2007: 360; cf. Clark 2011: 24), we argue that undifferentiated matter *should* differentiate natural entities, although not for us humans, but rather for its own perseverance as undifferentiated materiality. The Earth differentiates multiple interdependent and interconnected material entities that are responsive *to each other* and build a World, in order to preserve in its own existence as the undifferentiated materiality of the Earth.¹¹

This dynamic of the world-building capacity of the Earth in order to preserve itself as undifferentiated materiality also opens the perspective on the eventuality of the Earth. As the environmental crisis shows, our World is under threat. It emerged in the Earth's history and threatens to recede in it again in case we cannot stop the exponential growth of CO₂ emissions that are intrinsically connected with our way of living, which may give rise to another post-human world again in the future. In fact, the eventuality of the Earth consists in the unforeseeable trajectory in which, for instance, geo-engineering may turn out to stabilize the steady state of the world or turn out to be a process of extinction of human living on Earth. The eventuality of the Earth is indicated in the inherent instability and volatility of the materiality of the Earth, that can be expected to destruct current and generate new constellations or Worlds. A fifth round of reflection on the materiality of the Earth reveals a fifth characteristic of the Earth, namely its eventuality.

This eventuality of Earth also prevents a static concept of World. Gibson argues: “The environment affords many different kinds of food and many different ways of getting food.... These offerings have all been taken advantage of, which is to say that the niches have been occupied. But, for all we know, there may be many offerings of the environment that have not been taken advantage of, that is, niches not yet occupied” (Gibson 1977: 69). Besides the current world in which material entities *fit* in their mutual responsiveness, we have to acknowledge that the undifferentiated materiality of the Earth may differentiate

11 See Blok 2014 for the relation between matter (identity) and matter (non-identity).

other material entities, and as a consequence, that the affordances to which material entities are responsive can change.

With this principle possibility of another material entity and another affordance, we encounter first of all the *contingency* of the current world; the meaning of material entities may seem to be self-evident but provide another affordance in another time and place, in a different situation. It is for instance possible that we are responsive to affordances which are not or are no longer there, or that we hold on to specific affordances while others have already occurred; this contingency is the condition of the possibility of a *misfit* between material entities and the envioning world.

The principle possibility of *another* affordance means, secondly, that the Earth always *res-cends* the actual responsiveness of material entities to the envioning world. The “unlimited richness and complexity” of “the affording of life” means that the Earth is never absolutely limitable according to an ecological perspective on our being-in-the-world (Gibson 1977: 69); the infinity and complexity of the Earth consist in the fact that the Earth is never exhausted by its affordances, is always “richer” and “more complex” than any actual affordance that build the world, *res-cends* all actual and possible affordances of nature.

5 Conclusion

In this article, we started with the question about our place on Earth in the era of global warming. Our being-in-the-world emerges, unfolds and expands out of the Earth in the era of humanity and threatens to go back into the Earth again at the end of this era in which humanity is threatened by global warming. The Earth concerns uncorrelated being while it is often only reflected upon in its relation to human existence. Further, the Earth concerns both organic and inorganic materiality, while it is often only reflected upon as organic or living materiality. Finally, the Earth is ontic-ontological condition of the possibility of our being-in-the-World, while it is often only reflected upon at the ontic level of material entities. In this, the ontology of the materiality of the Earth as uncorrelated being remains forgotten.

Because of these limitations of many reflections on the Earth in the philosophical tradition, while nothing else matters in the era of global warming, we developed a positive concept of the materiality of the Earth as un-correlated being in this article. We developed six principles of the materiality of the Earth, which are summarized in the table below:

TABLE 1 Overview of the definition of six principles of a positive concept of the materiality of the Earth as un-correlated being, including its implications for our understanding of the Earth.

Principles of the materiality of the earth	Definition	Implications
1. Conativity	The conativity of the materiality of the Earth articulates the <i>identity</i> of material entities as differentiations from the undifferentiated materiality of the Earth (<i>self-perseverance</i>) and prevents their relapse in undifferentiated materiality (<i>self-perseverance</i>).	<ul style="list-style-type: none"> – Material entities like stones, trees, animals and human are not conative, but they are the performative constituent or e-mission of the conativity of the materiality of the Earth. – Material entities transgress the undifferentiated materiality of the Earth (<i>self-perseverance</i> and <i>self-perseverance</i>) and remain embedded in this undifferentiated materiality of the Earth at the same time.
2. Non-identity	The Earth is a non-identity or domain of events out of which the identity of material entities emerges and in which they in the end recede again	<ul style="list-style-type: none"> – The Earth as un-correlated being is heterogeneous to and res-cends the identity of actual material entities. – Dualist notion of the Earth as undifferentiated materiality and as differentiated materiality.

TABLE 1 Overview of the definition of six principles (*cont.*)

Principles of the materiality of the earth	Definition	Implications
3. Responsiveness	The identity of material entities is co-constituted by their responsiveness to the affordance other material entities that are performatively constituted by the conativity of the materiality of the Earth, and build the World in which material entities are interconnected and interdependent.	<ul style="list-style-type: none"> <li data-bbox="709 345 1023 578">– Epistemic and ontological asymmetry between the undifferentiated materiality of the Earth and the differentiated materiality of the material entities on Earth. <li data-bbox="709 592 1023 760">– Earth differentiates material entities <i>in order to</i> preserve itself as undifferentiated materiality and uncorrelated being <li data-bbox="709 804 1023 1151">– Dual origin of the identity of material entities, namely performatively constituted by the conativity of the undifferentiated materiality of the Earth <i>and</i> by their responsiveness to the affordance of other such differentiated material entities in the environment. <li data-bbox="709 1166 1023 1222">– The Earth itself doesn't afford any responsiveness. <li data-bbox="709 1236 1023 1434">– the identity of material entities is interconnected and interdependent and build the World in which material entities are at home.

TABLE 1 Overview of the definition of six principles (*cont.*)

Principles of the materiality of the earth	Definition	Implications
4. Performative behaviour	The conativity of the Earth is embodied in the performance of actual behaviour, in which the identity of material entities as differentiations from the undifferentiated materiality of the Earth is performatively constituted.	<ul style="list-style-type: none"> – Actual behaviour of material entities embody the conativity of the materiality of the Earth and consists in responsive behaviour in response to affordances of other material entities in the environment. – The Earth is not primarily being but performing behaviour. – The conativity of the Earth is curbed by a mutual affordance of material entities that build the eco-systems of planet Earth and the World in which we are at home.
5. Eventuality	The inherent instability and volatility of the Earth is destructive of current and generative of future Worlds	<ul style="list-style-type: none"> – the possibility of other or new material entities or another affordance is condition of the possibility of a misfit between material entities and the enviroing World, and condition of the possibility of change and newness in the World.

The six principles articulate a concept of the Earth that matters to us in the age of global warming. It doesn't matter to us in the sense that we want to "sustain" this Earth in the era of global warming, since we have learned that the Earth doesn't need any human or non-human responsiveness in order to *be* as we have seen. Nor does it matter to us in the sense that we want to "sustain" the current World we live in; the earth history shows that Worlds emerge and recede again in the Earth, and the eventuality of this process shows the futility and megalomania behind the idea that we humans play a significant role in this process. And yet, the ecological crisis we face to today draws our attention to the Earth as ontic-ontological condition of our being-in-the-World, breaks through the symmetry of our-being-in-the-World and opens the perspective on the asymmetry of our being-on-Earth. With this, we experience that it is primarily the eventuality of the Earth that determines the fate of our World, not us. But to the extent that we primarily embody the conativity of the Earth in our actual behaviour in response to the affordances in the enviroing World, it is this recalcitrant Earth that primarily matters to us, whether we like it or not.

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