

# The Nature of Degrowth: Theorising the Core of Nature for the Degrowth Movement

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## ABSTRACT

This article investigates human–nature relations in the light of the recent call for degrowth, a radical reduction of matter-energy throughput in the over-producing and over-consuming cultures. It outlines a culturally-sensitive response to a (conceived) paradox where humans embedded in nature experience alienation and estrangement from it. The article finds that if nature has a core, then grounds for understanding the experienced distance are laid out. To describe the core of nature, three temporal lenses are employed: the core of nature as ‘the past’, ‘the future’, and ‘the present’. It is proposed that while the degrowth movement should be inclusive of temporal perspectives, the lens of the present should be emphasised to balance out the prevailing romanticism and futurism in the theory and practice of degrowth.

Keywords: Alienation, Degrowth, Nature, Philosophy, Process, Temporality

## INTRODUCTION

Earthbound beings are in the midst of an ecospheric crisis<sup>1</sup>. The expansion of human cultures around the globe has signified an anomaly in the recorded history of the planet. A single species has become a global force. It – or perhaps I should say ‘we’ – transforms biotic and abiotic entities at an unprecedented pace, as well as creates amounts and kinds of waste never seen before. An example of the wastes are anthropogenic greenhouse emissions, such as carbon dioxide and methane, which reach new records every year (WMO 2018). These residues of development have created changes in the ecosphere (and continue to do so), including the climate, which again have led to a notably reduced Earth’s biodiversity, now jeopardising even the existence of the humankind (Swanson 1995, McKinney and Lockwood 1999, Ceballos et al. 2015). This is the ‘big picture’ – the major, scientifically broadly accepted causes and consequences of the ecospheric crisis.

It is also increasingly clear that the crisis calls for abandoning the pursuit of the resource-hungry, global economic growth (Meadows et al. 1972, IPCC 2013, Bonnedahl and Heikkurinen 2019). The need for such a radical shift in the human organisation is a key premise of the so-called degrowth movement (Latouche [2007] 2009, Victor 2008, Jackson 2009, Kallis et al. 2018, Heikkurinen 2019). In addition to the mechanistic understanding of the major causes, the current ecospheric crisis is considered to be a result of human failure to relate to ‘nature’ (White 1967, Naess 1987, Foster 2000). Previous

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<sup>1</sup> Ecosphere refers to the global sum of Earth’s ecosystems comprising of both biotic (‘living’) and abiotic (‘not living’) entities. The etymology of ‘eco-’ is from Greek *oikos* (οἶκος) referring to ‘family’ and ‘house’, while ‘sphere’ comes from the word *sphaira* (σφαῖρα) denoting ‘ball’. Apart from solar and cosmic radiation entering and exiting the planet, the ecosphere is treated as a relatively closed system in this study.

studies, however, have also questioned the relevance of using the term ‘nature’ due to its universalising character and suggested that the perceived alienation or estrangement is *cultural* (Bookchin 1962, Vogel 1999, Biro 2005). These competing explanations are also reflected in the current debate on the philosophical basis of the degrowth movement. On the one hand, the movement is influenced by deep ecology, which posits that humans are matter-energetically embedded in nature. On the other hand, the movement gains insights from social ecology, which tends to denaturalise the debate on the ecospheric crisis. This tension calls for closer scrutiny on the perception of human–nature relation in order to outline a response in the spirit of degrowth.

While environmental thought and politics have dealt with the question of nature for decades (if not for over a century), this field of enquiry is new to the degrowth movement. Any movement operating at the interface between ‘the social’ (including the economy) and ‘the environment’, however, must arguably – sooner or later – deal with the question of nature. What is ‘nature’, are humans alienating from it, and how can this concept be used in making arguments for and against the call for degrowth? The purpose of this article is to open this debate on ‘nature’ in relation to ‘degrowth’, and by doing so, invite degrowth activist-scholars to engage with environmental philosophers, and vice versa. The article focuses on the question how humans embedded in nature can experience alienation and estrangement from it, and what the implications of the findings for the degrowth movement are. Consequently, three key concepts, as well as their interlinkages, are being investigated in detail. These are ‘humans’, ‘nature’, and ‘degrowth’. By

degrowth, the article refers to the actual reduction of matter-energy throughput<sup>2</sup> from nature to the human sphere. As the rate of transformation is currently at an unsustainable level, the human-induced metabolic flow must decrease<sup>3</sup> (Steffen et al. 2015, O'Neill et al. 2018). The rest of the article is structured as follows. Section two provides working definitions for 'humans' and 'nature'. Humans, as well as their cultures, are characterised by the increasing use of exosomatic instruments. Nature again is described as the earthbound whole, where humans and their cultures are matter-energetically embedded, including (but not limited to) everything humans perceive. Informed by these definitions, in section three, the article analyses the claim that humans are becoming distant to nature. Could the degrowth movement have a culturally-sensitive understanding of the ecospheric crisis without letting-go of the concept of nature? How?

## HUMANS IN NATURE

In the light of the state-of-the-art climate science (e.g., IPCC 2013, Cook et al. 2016), the ecospheric crisis is largely anthropogenic. That is, humans are to blame for the disturbances in the local and global ecosystems (e.g. temperature rise and its byproducts: melting ice, rising sea levels, extreme weather conditions). It is important to note,

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<sup>2</sup> Definition of matter-energy throughput: 'In the earth ecosystem solar energy enters and exits, and it is this throughput of energy that powers the material biogeochemical cycles on which life depends. Within this earth ecosystem the economy exists as an open subsystem. This means that both matter and energy enter from the larger system, and that both matter and energy exit back to the larger system. All physical processes of life and production are maintained by this metabolic flow-through (throughput) of matter-energy from and back to the environment. The economy lives off the environment in the same way an animal does – by taking in useful (low-entropy) raw material and energy, and giving back waste (high-entropy) material and energy.' (Daly 1993: 811).

<sup>3</sup> This can be done by mainly employing renewable resources, while simultaneously using them at a slower rate than they renew and producing waste (e.g. greenhouse emissions) at a slower rate than nature absorbs it (Daly 1997).

however, that fault and responsibility cannot be distributed equally as also capabilities and power are unequally distributed across humanity (UN 1992, Vitali et al. 2011). In other words, certain cultures (their individuals and organisations) and have contributed more than others to climate change and biological annihilation (Chancel and Piketty 2015; Oxfam 2015, Ulvila and Wilén 2017). Nevertheless, in comparison to other earthbound species, humans appear as a group very exceptional. Regardless of how fair the species level of analysis is in terms of social justice, the havoc this single species has created does not compare to anything else in nature.

According to Georgescu-Roegen (1975), a central tenet that explains how humans become diverted from the rest of nature is their extensive use of the so-called exosomatic instruments, like clubs, which do not belong to their bodies by birth. The tools that humans are born with, legs and hands, he referred to as endosomatic instruments. This cultural turn from endosomatic to exosomatic instrument use was a decisive point in the evolution of the human species, and is something that is considered to separate humans from other species and earthbound entities. It also divides cultures within the human species<sup>4</sup>.

While there are also non-human animals that make use of exosomatic instruments, the degree is much lower and fewer when compared to human cultures. The contemporary, highly technological human organisation is of course an extreme manifestation of high degree of exosomatic instruments (Ellul 1964, Drengson 1995, Heikkurinen 2018). It has arguably become so dependent on complex technological systematisations that many of

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<sup>4</sup> For instance, the amount of exosomatic instruments vary greatly in indigenous and colonial cultures.

its individuals would not survive an abrupt collapse in energy and food supply. Domesticated cultures gradually lose the skills needed for meeting the basic human needs, which makes them more vulnerable to the absence of inputs from the global economy. This trend, however, is not limited to humans, but is somehow connected to humans. That is, also pets and other domesticated animals would have difficulties to survive and prosper in a collapse scenario, whereas cockroaches, frogs, and wolves certainly would not mind an internet shutdown (or other drastic events that would paralyse most humans), even if they spatially (in metric proximity) live rather close to humans. There certainly is great variance between human cultures (e.g., between a colonial and indigenous culture), while there is a mysterious link to only human cultures. Non-human animals cannot cause the same effect without humans, perhaps exactly because of their use of mainly endosomatic instruments.

It is noteworthy that without the exosomatic turn, the emergence of complex technological cultures, such as the current neoliberal capitalism penetrating the globe and beyond, would not have been possible. While some might consider high modernity an achievement of the humankind, the human expansion in nature has come with severe costs. The technocapitalist system (Suarez-Villa 2000, 2012) destroys species' habitats at a faster rate than any other human enterprise in the past (Hoekstra et al. 2005, Zalasiewicz et al. 2008, Barnosky et al. 2012). These changes in nature cannot be overlooked by merely relying on the development of ever-more advanced exosomatic instruments capable of correcting the damage (Georgescu-Roegen 1975, Drengson 1995, Heikkurinen 2018, see also Samerski 2018). Instead, the relevance of seeking to overcome nature by means of technology should be critically assessed. Whether or not the exosomatic turn

was *the* decisive point in the evolution on Earth, it has at least significantly altered the way humans relate to (the rest of) nature.

Hitherto, the article has defined ‘degrowth’ as matter-energy reduction and ‘humans’ as a species characterised by extensive exosomatic instrument use, or technology. The third key concept, namely ‘nature’, is again considered to stand for all earthbound phenomena. Following the traditions of ecology, as well as environmentally sensitive economics, sociology and philosophy, nature is defined as ‘the whole’ in which humans are embedded (see e.g., Boulding 1966, Murphy 1995, O’Neill et al. 2008). Nature is earthbound, connected first and foremost to the planet Earth<sup>5</sup>. In terms of an epistemological stance on nature, the article draws on Whitehead’s ([1919] 2005: 2) formulation. ‘Nature is that [all] which we observe in perception through the senses’, but not limited to human perception. As human cultures are embedded in nature, all that they perceive is nature. This, however, does not mean that nature is only what humans perceive. Yet, nature unfolds in perception.

Before conceptualising ‘nature’ any further, the article analyses the feasibility of a rather conventional premise regarding human–nature relations, namely human alienation or estrangement from nature, as well as addresses some ethical issues related to the concept of nature.

## HUMANS’ DISTANCE TO NATURE

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<sup>5</sup> ‘Cosmos’ is an analytical category for phenomena not bound to Earth.

In ecological thought, the contemporary human condition is often characterised as ‘alienation’ or ‘estrangement’ from nature (Tolman 1981, Dickens 1997, Hailwood 2015). But if humans are considered to be embedded in nature, this process is a product of nature itself, as noted already at the turn of the 18<sup>th</sup> and 19<sup>th</sup> century by Hölderlin (Stone 2011). And if the quality of ‘natural’ is connected with ‘good’ – as it often is – this leads to a ‘seemingly unhelpful implication that we human beings neither can nor should attempt to prevent this crisis’ (Stone 2011: 55). Everything earthbound is natural.

Leaving the analysis here, however, would challenge the very foundation of the degrowth movement, namely the call to reduce matter-energy throughput, as also the state of high entropy would be natural. It is also questionable whether the quality of ‘natural’ holds any normative power (e.g.). After all, as Hume ([1738–1740] 2003) remarked, ‘is’ does not imply ‘ought’, and Moore postulated ([1903] 2004) that it is fallacious to explain good reductively, in terms of its natural qualities. While the normative appeals to the natural may lack a logical structure and do not suffice for deriving an ethical argument (Bedke 2009, Väyrynen 2009), it is interesting to think where, if not *from nature*, then do the grounds for such claims arrive from. Based on this article’s definition of nature, ethics (as human doings) would also be earthbound, and hence always natural. For humans, there simply is no place outside nature.

The reasoning in studies critical towards normative naturalism, or naturalism in general, is based on a premise of humans (and their cultures) as ontologically separate from nature. In his work, Haila (2000) shows how ‘[s]uch metaphysical foundationalism can be

efficiently challenged by analysing concretely how human activity and natural processes merge together.’ The boundary indeed is very blurry, as revealed by Latour (1993) and Haraway (2016). But this neither implies that there are no differences between entities of human and nature (absolutist ontological enmeshing) or that nature and culture would no longer be meaningful analytical categories (absolutist epistemological enmeshing), nor does it indicate that everything in nature is equally ‘good’ (absolutist moral enmeshing). Being in nature does not have to be limited to an either-or set-up.

This in-betweenness is a foundational premise for the article’s analysis on human alienation or estrangement from nature while in nature. Whether or not humans are becoming more distant to nature, it can be at least said that the organisation of human activities (i.e., how humans relate to themselves, other earthbound beings, and to their environment) has considerably changed since very gradual the exosomatic turn (Georgescu-Roegen 1975). And if a more precise point in time is warranted, both the agricultural and industrial revolution can be considered to hallmark the ecospheric crisis, the Anthropocene (Gowdy and Krall 2013, Head 2016, Heikkurinen, 2017). But are humans, as a consequence of the above-mentioned developments (which signify greater environmental impact), today more alienated and/or estranged from nature?

This article adopts the term ‘distance’ to describe the degree of human alienation and estrangement from nature. The definition departs from the Marxist tradition, which considers alienation and estrangement as undesired changes in a set of relations (focusing on questions of labour and production) (cf. Tolman 1981, Vogel 1988, Salleh 1997). The conceptualisation of distance in this article includes these qualitative changes in human–

nature relations but also the amount of separation. That is, for Marx alienation was not a gap between humans and nature (as he considered humans to be part of nature), but first and foremost a violated relation. ‘Distance’ in this article, however, includes both of the qualitative and the quantitative aspects of alienation and estrangement. Albeit not using numbers, the study will attempt to quantify the distance in the sense of aiming to express also the quantity of it.

The proponents of degrowth (and the environmental social scientists at large), trace the distancing causes to capitalism (Foster 2011, Ruuska 2017), colonialisation (Thomson 2011), development (Escobar 2015, Demaria and Kothari 2017), patriarchy (Dengler and Seebacher 2019, Perkins 2019), productivism (Latouche [2007] 2009, Heikkurinen et al. 2019a), religion (White 1967), and technology (Heikkurinen 2018, Heikkurinen, 2019). In addition to these causes resulting in different kinds of distance to nature (quality), humans and their cultures are considered to be more or less distant to nature (quantity). In this article, the main culprits of the ecospheric crisis are considered diverse, and consequently, all of the above are recognised as feasible explanations for the on-going havoc and elucidating the emergence of the claimed separation of humans from nature.

While the call to reduce matter-energy throughput is broadly shared within the degrowth movement, there seems to be hesitation about the use of the concept of nature. In fact, very few studies in the field employ the term to construct an argument for degrowth. Within the degrowth movement, there is also influence from constructivist theorists who often renounce the idea of humans becoming distant to nature (cf. Soper 1995), and hence

also disregard the rather common laymen experience of alienation and estrangement. To consider the grounds for this position, the contested proposition on human alienation and estrangement must be analysed in detail.

[P1] Humans are becoming distant to nature.

In the spirit of degrowth, there are two obvious problems with this proposition. First of all, it can be considered to be anthropocentric as humans are treated as a single agent (Heikkurinen et al. 2019b). That is, an analysis of cultural variables is problematically missing (Haraway 2015, Moore 2016, Bauer 2016). The proposition reads as if all humans would be equally distant to nature. This undoubtedly is the case as there are cultural differences in human individuals, organisations and societies. However, while it is a fair critique that humankind is not *the* agent in the history of the Earth, it must be accepted that humankind can be investigated as *an* agent, *a* force of nature (Heikkurinen 2017). If the species level of analysis is rejected in absolute terms, then the findings of natural sciences where humans are analysed as a variable, must altogether be abandoned. This is a rather absurd demand.

However, the proposition does lack cultural-sensitivity<sup>6</sup>. And in addition to this, what can be called the ‘culturalist critique’ against the proposition, there is another, perhaps even

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<sup>6</sup> As a conceptual study, this article does not employ the full force of the culturalist critique. There is of course great variety within cultures. Some individuals and organisations have very different perception of nature. In the U.S. culture, for example, oil executives and pagan priestesses, for instance, can have very different relationships to nature, even though they are part of the same culture.

more serious reason to contest it. The following questions shed light on the so-called ‘naturalist critique’. How can humans become distant to nature if they are embedded in it? In more generic terms, how can something separate from something it is a part of? In other words, if humans are a product or part of nature, how could they ever be alienated or estranged from nature? Even though this ‘naturalist critique’ may be sensibly rational, is it reasonable? That is, how troublesome are the political implications of this critique? How to arrive at normative implications in and from nature without assuming that ‘natural’ implies ‘good’ or ‘is’ implies ‘ought’? And lastly, if all human doings are ‘of nature,’ how can there be anything unnatural or less in line with nature?

An easy way of out of this set of problems would be to abandon the concept of nature and any normative relevance of something being more or less ‘natural’. There are of course both proponents and antagonists of the concept within environmental philosophy and sociology. Degrowth theorising can also in this respect be divided into those who employ the term ‘nature’ and who refrain from it. A decision, however, should not be rushed and hastily accepted, as it may have serious repercussions for the movement. Without the term ‘nature’, would not the movement still need another term to describe the earthbound whole? In what context, if not in nature, ‘the spaceship Earth’, the increased matter-energy flow is a problem? If there is no term for the earthbound whole, how else can one derive claims about truth, beauty and virtue beyond mere subjective preference? Is the losing the word ‘nature’ even prone to lead to existential nihilism? After all, as Storey puts it (2011: 6), ‘nihilism is a problem about humanity’s relation to nature, [...] the erosion of a hierarchically ordered nature in which humans have a proper place.’ Leaving

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the concept of nature, or similar, behind also means excluding the possibility for an absolute or order; and then: how is the degrowth movement expected to go about in making normative arguments? Or: if the concept of nature is to remain in the degrowth discourse, how could the movement respond and overcome the respectable culturalist and naturalist critiques? Before the verdict, this article will explore the possibility of sticking with the concept of nature.

In addition to avoiding prejudice and discrimination towards the concept, it must be noted that 'nature' is used in the everyday language of many and is a rather inter-subjective, shared experience among many. To test this, one can out on the street and ask people to show some nature nearby, and several people will without hesitation point towards the closest parks, forests, waterfronts, mountains, animals, etc. It is peculiar, and perhaps paradoxical, that nature is conceptually so vague but in experience it is somewhat clear to humans what it means and where to find it. Thus, instead of overlooking peoples' experiences of nature, could not this paradox be taken as a sign of insufficiency in human language to grasp complex phenomena? Such a stance would not yet mean that attempts to grasp complex phenomena would be in vein. It certainly remains worthwhile to continue reaching for more accurate and relevant linguistic descriptions of these multifaceted human perceptions. Acknowledging the limitations is not about giving up of the task. The limitation perhaps revealed here is that human language may not be capable of catching up with human experience, that is, the experience might always remain richer and more intense.

## REVISING THE PROPOSITION

Despite the limitations and political risks involved, the article will now try to outline a response to the critique on the use of the concept of nature. Introducing a supplement to the conceptualisation of nature will hopefully succeed in this. In its simplest, the proposal of the article is that nature has *a core* in addition to its complex set of relations. If openness to reveal a core of nature is granted then it will be conceivable to claim that humans are becoming distant to nature while in nature. This denotes that a slight modification in the proposal [P1] is necessary. The article hence proposes that:

[P2] Humans are becoming distant to the core of nature.

The ‘a core’ supplement to the conceptualisation of nature can explain how humans can simultaneously be both embedded in nature yet experience increased distance to nature, or alienation and estrangement from nature. In other words, the distancing is not from nature but from the core of nature. It is the core that can become more distant to the human experience. But this conceptual innovation only solves the naturalist critique on the concept of nature. To address the other major problem, namely the culturalist critique, the article proceeds to amend the proposition further.

Owing to the important anthropological and sociological influences on the degrowth movement, the contextual matters are increasingly recognised as major tenet of theory (see e.g. the special issue on ‘Geographies of Degrowth’ [2019] in the journal *Environment and Planning E: Nature and Space*), and hence, it is not meaningful to

merely discuss humans (the anthropos) as an agent in the history of nature. Therefore, to mirror these advancements, the proposal should be rephrased as follows:

[P3a] Certain human cultures are becoming more distant to the core of nature than others.

And conversely:

[P3b] Certain human cultures are not becoming as distant to the core of nature as others are.

Moreover, in order to be sensitive also to the past (and only the future as in ‘becoming’) it could be proposed that:

[P4] Certain human cultures are not only becoming distant to the core of nature but also are more distant and have been more distant than others.

And again, this proposal could also be deduced conversely as well. But the big question to follow, namely what is this core of nature, is a trickier one. In a similar fashion with Heidegger’s understanding of being, the core of nature unfolds gradually and it is hence largely non-representational. After all, once a representation is given after a perception, the world has already changed. This means that every attempt to represent nature misses it partly, but not fully. Something more informative, however, must and can be said about nature.

## HUMAN-NATURE RELATION AS PROCESS

Let us set the scene by Whitehead's seminal remark on the concept of nature, exactly one hundred years ago in the Turner Lectures delivered in Trinity College:

The explanation of nature which I urge as an alternative ideal to this accidental view of nature, is that nothing in nature could be what it is except as an ingredient in nature as it is. The whole which is present for discrimination is posited in sense-awareness as necessary for the discriminated parts. An isolated event is not an event, because every event is a factor in a larger whole and is significant of that whole. There can be no time apart from space; and no space apart from time; and no space and no time apart from the passage of the events of nature. The isolation of an entity in thought, when we think of it as a bare 'it,' has no counterpart in any corresponding isolation in nature. Such isolation is merely part of the procedure of intellectual knowledge. (Whitehead [1919] 2005): 91).

Corresponding to Whitehead's ([1919] 2005) processual conceptualisation of nature, the core of nature can also be defined as a process. Whitehead (ibid: 36) notes: 'As in the case of everything directly exhibited in sense-awareness, there can be no explanation of this [processual] characteristic of nature.' All that can be done is to use language which may speculatively demonstrate it, and also to express the relation of this factor in nature to other factors.' And this is what the article will attempt to do next: to exhibit a processual

view on human–nature relations. This conceptual framing will be based on three different temporal lenses that were brought to the fore by the forth proposal. That is, the ‘becoming distant’ has a future orientation; the ‘are distant’ has an orientation to the present, and the ‘have been distant’ has an orientation in the past. Consequently, the article will conceptualise the core of nature from these three, classic temporal lenses: the past, future and present.

### *Core of nature as past*

The first lens provides a view on the core of nature as ‘the past’. It reflects perhaps the most conventional understanding of nature, which is often connected with terms like ‘organic’, ‘wild’ and ‘pristine’. The core of nature is hence considered to be the very un(human)touched nature. It is obvious that in the past, simply due to their numbers and the scale of organised economic activity, humans intervened less in the laws of nature and had a lesser impact on it. Thus, when viewed through this lens, the core of nature appears as something the Earth *had* before the gradually increasing human dominance. In other words, the core of nature is in the history of the planet.

American conservationists, such as Emerson (1836), Thoreau (1854), Muir (1911), largely represented nature in this light. Also, in the seminal book *The End of Nature*, McKibben (1989: 68) stated: ‘[...] we have ended the thing that has, at least in modern times, defined nature for us.’ Thus, when degrowth scholars and activists influenced by the conservationist thought refer to ‘nature’, they often mean the non-human nature or the rest of nature. It is the distinctiveness between humans and nature that the Earth is

losing, as everything has become increasingly ‘human’. Consequently, the core of nature is considered to be something that is gradually disappearing from the reach of human experience, as there is less and less organic, wild and pristine nature.

A conceptualisation of the core of nature according to this view, would undoubtedly receive harsh critique for representing romantic ideals. Both modernists and post-modernists reject the pre-modern longing for the time before industrialisation and global human impact. For many critics it is exactly the romantic ideal of nature, something valuable in the past that is at the heart of the ecological crisis (e.g., Morton 2007). The practical implications for the degrowth movement that follows from this lens would be ‘to roll back technological development’ and ‘return to nature’, which are arguably difficult, if not possible to achieve.

#### *Core of nature as future*

The second, an increasingly popular lens provides a view on the core of nature as ‘the future’. Nature is seen as something that humanity is heading towards. This lens reflects the progressive and optimist stance within the degrowth movement. One example of this kind of perspective is manifested by the *Next Nature Network* (2018: 1), an ‘international network for anyone interested to join the debate on our future – in which nature and technology are fusing’. In contrast to the first lens, the ‘core of nature as the past’ is not extremely critical towards science and technology. The proponents of (what is called) ‘next nature’ note that ‘we’re so surrounded by technology that it’s becoming our next nature. It may sound abstract, but it’s closer than you think; cars will drive themselves

and heart valves are 3D printed' (ibid: 1). Latour (1993) and Haraway (2016) could also be considered to represent this group of scholars and activists that seek to go forward to or toward nature by blurring the boundaries between humans and nature (Malm 2018). Moreover, this lens also manifests in accelerationist ideas (e.g., Bastani 2019), which are less about rethinking human relations with nature and more about transforming them in line with the state-of-the-art techno-science.

An explanation on the core of nature derived from this post-modernist rather than pre-modernist view would posit that the core is something to come. It is something that humans, and why not other beings as well, can approach. Owing to the contemporary techno-capitalist hegemony, this view is perhaps attractive to many instead of the call to return back to the land. Be that as it may, the main problem with considering that humanity is moving towards the core of nature is the lack of analysis regarding the matter-energetic limits (Georgescu-Roegen 1975, Heikkurinen 2018) and the mere anthropocentric care for non-humans (McShane 2007, Heikkurinen et al. 2016).

#### *Core of nature as present*

Adopting the first, pre-modernist lens or the post-modernist understandings of nature, the core of nature would be something in the past or something waiting for humans in the future. But as in the classic three-fold category of time, there is the lens of the present, in addition to the past and future. Hence, one more understanding of the core of nature is to be disclosed conceptually, namely *the core of nature as the present*. That is, there is not only the 'old nature' and 'next nature', but also 'this nature'. This understanding of the

core of nature goes beyond the pre-modernist and post-modernist views and could hence be called ‘meta-modern’. Conceptually speaking, the lens of the present lies in between the past and the future. It is the gift that humans have and share, this moment.

Whitehead ([1919] 2005: 38) uses the term ‘moment’ to mean ‘all nature at an instant’, which comes close to the idea of the core. ‘A moment [...] has not temporal extension, and is in this respect to be contrasted with a duration which has such extension’ (ibid: 38). In other words, ‘A moment is a limit to which we approach we confine attention to durations of minimum extension’ (ibid: 38). Thus, perhaps in terms of descriptive relevance about the core of nature, the lens of the present takes primacy, as the other two are temporal projections – one to the past and the other to the future.

To describe the third lens further, it can be noted that it is neither optimistic (i.e. hopeful and confident about the future) nor pessimistic (i.e. tending to see the worst aspect of things or believe that the worst will happen), as it is ‘about now’ rather than ‘tomorrow’ or the days to follow. It has its view steadily rooted on the current affairs. A paradoxical problem with this kind of ‘momentism’ or ‘presentism’, however, is its lack of projection in (or even rejection of) the past and future needed for managing everyday life and designing political change. Thus, in the spirit of inclusion and synthesis, the most complete understanding of the core of nature (out of these three) would include all three of these temporal lenses.

## DISCUSSION

All three viewpoints to the core of nature can be viewed as processes. What makes them unique and complementary is their temporal orientation and their implications for the degrowth movement seeking to understand human–nature relations. From the perspective of the *core of nature as past*, human–nature relationships are processes of humans becoming distant to the core of nature. It is a story of alienation and estrangement from the past nature. And when the culturalist critique is also integrated in this lens, the following can be proposed:

[P5] Certain human cultures are and have been nearer to the core of nature, as well as are becoming nearer to the core of nature than others.

In other words, according to this lens, some cultures are, as well as have been, more primitive than others, and hence closer to the core of nature. This lens would also implicitly suggest that the undesired process of certain human cultures becoming distant to the core of nature could be reverted by learning from the primitive, indigenous cultures that have not developed techno-scientifically at a similar pace than the rest of the world (see e.g. Thomson, 2011; Demmer and Hymmel, 2017). And even if as a very niche phenomenon, the becoming nearer to the core of nature is happening, e.g. in the back-to-the-land movement. From the point of view of matter-energy throughput, the lens has a strong case as in the past significantly less matter-energy travelled through human cultures.

According to the view of *core of nature as future* again, the human–nature relationship is about moving towards a new, more desired state. Through this lens, it seems that the process of approaching the core of nature could be supported by having openness to innovation and by amalgamating the boundaries between humans and non-human nature (see e.g., Likavčan and Scholz-Wäckerle 2018). After all, in future, nature will be increasingly cyborgian or hybrid-like (at least until the collapse, one could argue). The fifth proposition [P5] can hence also be supported from this lens: certain human cultures are and have been nearer to the core of nature, as well as becoming nearer to the core of nature than others. The benchmark, though, is the future rather than the past.

Another way of putting this would be to say that certain cultures are lagging in terms of approaching the core of nature. This ‘futur-istic’ proposition is a mirror image of the ‘past-istic’ proposition. The proposition [P5] hence can develop into very different kind of normative claims. The first could claim that humans need to slow down and connect with the kind of nature that the Earth had in the past, while the second could call for acceleration and connecting with the new opportunities emerging. On the one hand, these two lenses can be perceived as opponents, but on the other hand, they can also be considered complementary, or even mutually opposing so that they cancel each other out. This leaves the article to gain insights from the third lens’ proposition.

Viewing the *core of nature as present* indicates that the process of human–nature relations is not about moving backwards or forward but balancing between the two. It considers the human–nature relationship as an oscillation between the past and the future, a sort of a balancing act, where equilibrium is the core of nature. The lens does not convey the

ancient ideas of the Balance of Nature', as Botkin (1990) calls them, but is more aligned with dynamic ideas of equilibrium, where nature is always changing. Nature is a process, as Whitehead ([1919] 2005) figured, where humans, in the vocabulary of Heidegger ([1927] 1962), are thrown (*geworfen*). The process encourages humans to develop skills of coping, if they want to stay alive. While the human place in nature is defined by this constant balancing, at times, human cultures in nature are further from the core of nature, the equilibrium, than others. On the global scale, the Anthropocene would an example of this imbalance or asymmetry in the current human–nature relationship, where human cultures (some more than others) have become very powerful and created asymmetry harmful for the diversity of earthbound existence. Here it is also important to note that some human cultures can be more out of balance than others, and hence, further away from the dynamic equilibrium, a state of balance between continuing processes.

## CONCLUSION AND IMPLICATIONS

This article has investigated human–nature relations in the light of the recent call for degrowth and outlined a culturally-sensitive response to a (conceived) paradox where humans embedded in nature experience alienation and estrangement from it. The article concludes that human cultures in nature can be, as well as become, more distant to nature, if nature is assumed to have a core. In other words, if nature has a core, then grounds for understanding the experienced distance emerge. Certain human cultures certainly are and have been nearer to the core of nature, as well as are becoming nearer to the core of nature

than others. The yardstick for the distance can be viewed through the lenses of ‘the past’, ‘the future’, and ‘the present’.

The article proposes that while the degrowth movement should be inclusive of all temporal perspectives, the lens of the present should be emphasised to balance out the prevailing romanticism and futurism, in particular, in the theory and practice of degrowth. The core of nature is an equilibrium. This view on human–nature relations forms a philosophical foundation for the politics of degrowth that should not be about having less matter-energy throughput for the sake of less matter-energy throughput, but to slow down the rate of human-induced metabolism so that Earth could come closer to a point of balance, enabling the continuity of diverse existence. A normative implication of this study for the degrowth movement could be phrased as follows:

[P6] Emphasise the present.

In other words, the implications for the degrowth movement would be to neither accept the romantic nor the futuristic ideals of human–nature relations, but to have an emphasis on the present, the existing. Rather than *aiming to balance*, this implies *balancing*. And as the processes of nature are currently so disturbed by human cultural growth, the ever-increasing use of resources and amounts of waste beyond the absorptive capacity of the ecosphere, a way to move closer to the equilibrium would only happen through radically reducing the flow of matter-energy throughput, degrowth.

One may still ask: Why should I think nature has a core? One does not have to think of nature's core or experience the opening to be near to it. But if one does, then one can understand how the experience of distance (or distancing) is possible, while being embedded in nature.

The human being is a creature of distance! And only by way of the real primordial distance that the human in his transcendence establishes toward all beings does the true nearness to things begin to grow in him. And only the capacity to hear into the distance summons forth the awakening of the answer of those humans who should be near. (Heidegger [1928] 1984: 82).

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