



Efficiency Versus Enjoyment: Looking After the Human Condition in the Transition to the Bio-Based Economy

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Abstract

In this paper, we criticize the current focus of the bio-based economy (BBE) on efficiency and control and demonstrate the contradictions that this causes. We elucidate these tensions by comparing the BBE to alternative conceptions of economy that emphasise the relevance of both the human condition and unfathomable nature in the macro ecological transition project. From Emmanuel Levinas's philosophy, we take and extrapolate two major concepts—*il y a* and enjoyment—that help to re-evaluate the status of both nature and the human subject involved in environmental instability. From this analysis, we evaluate current economic practice in close relation to the deteriorating environment to contribute to a conception of an economy that is truly based on principles of the biosphere. We conclude that humankind and nature are notions that must be always considered in this encompassing and topical effort and explain how they have been fundamentally overlooked in current thought on the bio-based and circular economy.

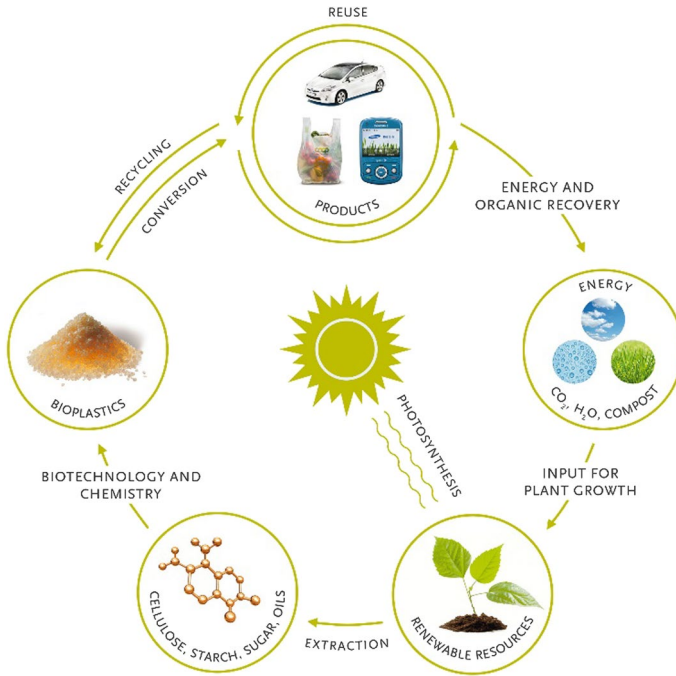
Keywords Bio-based economy · Circular economy · Levinas · Enjoyment · Consumption

Introduction

One of today's biggest projects to deal with the environmental crisis is the bio-based economy (BBE), a new economic system in which the European Commission has invested heavily. The BBE can be defined as an innovative economic system that "relies on renewable natural resources to produce food, energy, products and services [and] will reduce our dependence on fossil natural resources, prevent biodiversity loss and create new economic growth and jobs in line with the principles of sustainable development" (Bosman & Rotmans, 2017). The BBE ideal is to bring (human) economy more in line with biological and ecological processes,

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Graph: Life cycle model
European Bioplastics

Fig. 1 Normative model of European bio-based plastic cycle: example of an economic structure based on ecological lapses (European Bioplastics, 2016)

such as the circularity of natural ecosystems and energy cycles, as these appear to be renewable in the long term and accord with balanced ecosystems (Asveld, van Est & Stermerding, 2011; McDonough & Braungart, 2014). Definitions of the BBE vary, but there is a consistent focus on sustainable economic cycles, biomass production and implementation, improved waste processing, replacing non-renewable resources, and creating technological solutions. In short, the main ideal is to reshape economic systems into cyclical, regenerative ones, inspired by ecological processes (2012b; European Commission, 2011). Thus, the BBE aims to *base human economy upon biological processes*, as indicated in Fig. 1.

In an earlier contribution, (Veraart & Blok, 2020) we have already discussed the multiplicity of definitions surrounding the concept of the BBE in detail. In this analysis of the BBE's core-concepts, such as ecology and economy, it became clear that the BBE suffers from structural conceptual problems; it stands for green solutions but is narrowly framed as a business case in which a market logic guides decisions regarding recycling and alternative energy sources (Benner & Löfgren, 2007; Blok, 2016). Theoretically, almost everything can be reused and recycled, yet, from a market perspective, non-profitable recycling options are directly excluded. Consequently, the BBE's current framing threatens to adhere

to a market logic that hinders the emergence of a truly sustainable system of economics *based* on the biosphere's carrying capacity. The same holds for the role of humans in the BBE. The market logic of current BBE practices reduces humans to eco-efficient consumers. But is this reduction adequate and consistent with the ideals of transitioning to a renewable biobased economic system, or does it perpetuate specific, environmentally unfriendly tendencies of traditional economics, i.e. consumerism?

Our method will consist in juxtaposing a phenomenological perspective with the scientific view. This means that we recognise empirical truths in current policy discourse but, complementarily, aim to expose problematic presuppositions that, when explicated, can yield qualitatively different insights (Lemmens et al., 2017; Zwart, 2017). Our method can be summarised as an extrapolation of philosophical indications overlooked in regular discourse. In particular, Levinas's phenomenology offers two major concepts (*il y a* and *enjoyment*) that facilitate a fundamental reflection on the conditions for a successful BBE. We try to develop these Levinasian concepts in such a way that they recognise the carrying capacity of the planet and the limits of human life, i.e., not controlling and draining the planet in anticipation of growth, but acknowledging the limits of the natural Earth and valuing our time spent on it non-destructively.

Our research comprises two main parts. Firstly, we investigate the fundamental problems at play in the current concepts of the BBE. We then compare these problems with Levinas's notion of elementary nature [*il y a*] to see why they are perfectly understandable, yet harmful at the same time. Accordingly, we analyse a fundamental ambivalence inherent today in the BBE's main aim and map out the principal concepts of our investigation ("[The BBE: Control and Contradictions](#)" Section). The second part of our research begins by taking a closer look at the role of the human condition and elementary nature in Levinas's thought and BBE concepts. We address some obstacles to Levinas's concepts ("[The Problem with Levinas's Account of Metabolic Economy](#)" Section) and then aim to contribute to them by explaining in detail the importance of enjoyment ("[The Concept of Enjoyment: from Economy to Independence](#)" Section). Ultimately, we identify a fundamental interconnection between enjoyment and the *il y a* as the crux of our analysis ("[The Verge of Enjoyment as an Indication of Uncontrollability for Policy](#)" Section). Finally, we summarise and conclude our research.

The BBE: Control and Contradictions

In order to locate the primary problems in current BBE concepts, it is first necessary to determine exactly what kind of notion of nature is presupposed in it. Firstly, the BBE's main ideal—*basin the future economy on biological principles*—currently offers merely a metaphorical perspective, and BBE policies show no genuine incentive to alter problematic tendencies such as a dominant focus on growth and systematic exploitation. This inconsistency between the BBE ideal and its practical discussion has been highlighted consistently in the literature (e.g. Finegold et al., 2005; Osseweijer et al., 2010: 27f; Bugge et al., 2016). As a concrete example, it is

possible to recycle smartphones completely, but not *profitable*, causing such green options to be abandoned from the BBE model (Richardson, 2012: 284f; Jonker et al., 2017: 21; Veraart & Blok, 2020). This means that the BBE's concepts are framed entirely in terms of economic benefits (Veraart & Blok, 2020; Zwier & Blok, 2015). Consequently, any notion antithetical to this market logic (on the side of both nature itself and non-economic humanity) is excluded from the BBE's concepts, making it unlikely that the BBE will, in its current form, inspire an economic system that operates consistently and adequately *within* the carrying capacity of planet Earth.

Secondly, it can be seen how environmental problems are encountered from a market logic of efficiency and control. These semantics dominate the concepts used in BBE-policies throughout. Traditional notions such as growth and scarcity are deployed, for example, when sustainability and green resources are deemed *unique opportunities* for the ever-further expansion of humankind and its habitat. European Commission policy states: "The Europe 2020 Strategy calls for a bioeconomy as a key element for smart and green growth in Europe" (European Commission, 2012a); it is obvious that green growth does not mean growth of nature, growth of green. Rather, the term seems to adhere to the maintenance of established economic tendencies by adding the word green to long-since established economic plans and starting points (Kitchen & Marsden, 2011). Thus, everything is framed from the outset in purely economic terms; even climate disasters are implicitly understood as new market opportunities (e.g., for green fuel), or, conversely, environmental crises (e.g., oil shortages, destructive typhoons) are implicitly understood as market failures (cf. Blok, 2018; Dorfman, 1993; Jonker, 2012).

At this point, one must ask whether this thematisation of nature as merely a sphere stocked with manageable resources is justified. A resource is an end-product, prepared for consumption and to be discarded after usage. In a regenerative, cyclical system, there are no such clearly delineated resources; rather, every output always serves as input for the following cycle (Doeland, 2019; Ellen MacArthur Foundation, 2014, 2015; Raworth, 2017). Furthermore, the concept of nature could also indicate an unfathomable, principally unpredictable realm that can never be dominated. To discuss such a concept of nature, a perspective is necessary that does not operate only on the level of known, material objects. Therefore, we now turn to alternative concepts capable of offering a better understanding of underlying structures of the BBE: Levinas's account of economy and *elementary nature* [*il y a*].

In his analysis of economy in *Totality and infinity* (1969: 109–180), Levinas describes how nature is always to be overcome, transformed, and shaped to enable humanity's inherently economic existence in the form of labour. This entails consuming external nutrients such as oxygen, animals, and plants; practicing labour to overcome the harsh struggle for survival in wild nature; and living-in-a-house (*oikos*) in order to ground one's existence in a place of familiarity, to which one can withdraw in safety and from which one departs into the vast world. Here, there is a reciprocal connection, a metabolism, between the self and everything that is not oneself, i.e., the encompassing biosphere: for Levinas, being-a-person (an egoic, self-centred, and fulfilled individual) implies being dependent upon the endless realm of nature and, simultaneously, trying to *overcome* this nature via economy (*oikos*). Wild nature is hostile and unfit for pleasant human life, yet a functioning biosphere

is necessary to live and work (Levinas, 1969). Economy for Levinas is, thus, the other side of the ecological coin: a process in which the human condition metabolically preserves and expands egoic identity, being strictly tied to the overcoming or the transformation of elementary nature to create a world specifically furnished for humans (Joldersma, 2013; Nelson, 2011; Welsch, 1998; Diehm, 2000).¹

Seeing how an original relationship with ecosystems conditions our economic existence (we are always already biobased in both living-from and overcoming our environment) leads us to ask how this economic being functions and why it is environmentally disruptive. Levinas's understanding of economy as a metabolism helps us to understand discrepancies—such as an overly dominant focus on efficiency—from a concretely human, everyday perspective. Take the following quotation: “Nourishment, as a means of invigoration, is the transmutation of the other into the same, which is in the essence of enjoyment: an energy that is other, recognized as other, recognized, we will see, as sustaining the very act that is directed upon it, becomes, in enjoyment, my own energy, my strength, me” (Levinas, 1969: 111). The other or non-I here can be understood as the external biosphere; the same being the egoic, economic human. Thus, in Levinas's thought, it is economic *humans* who are primarily at stake. By safeguarding resources for nourishment—fish, for example—humans overcome nature's hostile struggle for survival: we oversee the fish, control the fish, eat the fish, enjoy them, fill and fuel our lives with fish. In this process, Levinas locates a fundamental *independence*: our enjoyment of nourishment is conditioned by the fact that we do not have to worry about nutritional resources, as they are controlled. Having transcended nature as an uncontrollable and hostile environment (through labour, habitation, and so on), we need no longer worry about fish's availability tomorrow. Yet it is *exactly this alleged independence*, this comfort within *oikos*, that causes us to forget about the fish—or uncontrollable nature—*itself*: the fish-as-food are fully integrated into our economic networks of production and consumption.

This means that, for Levinas, the tension between ecology (sustainability) and economy (growth, control, efficiency) is a condition of possibility for human existence; working, living, and consuming can only be achieved in an endless commerce with environing entities, or *the non-I*. This connection, however, implies conquering and overcoming wild nature as an unknown and foreign sphere of danger in order to *control* it. That we are metabolic, economic beings (i.e., beings that transform and possess their environment), however, does *not* mean that all of nature can be seized and controlled, because, beyond the metabolic *oikos*, Levinas indicates the realm of elementary, uncontrollable nature, which should always be acknowledged as an irreducible and absolutely external sphere in which events occur that exceed any kind of anthropocentric dominance and even threaten human economic existence.

¹ Of course, not all societies or peoples had or have ways of life that are destructive to the planet and other species. Levinas's notion of 'overcoming nature' indicates, rather, a natural ecological metabolism at play in the manner in which humans, as living organisms, coexist with their environment by modifying it – to varying degrees in varying times and cultures.

Elementary nature—*il y a*—exceeds the controllable biosphere as *oikos* and cannot be exhausted by economic humanity. We can begin to grasp the concept of *il y a*, but never see it in full, as the notion in itself designates an epistemological ceiling. For example, we are starting to discover the inter-relational complexity and the connected unpredictable outcomes of intertwined ecosystems.² For now, a lot of factual information remains hidden. Such secrecy hints in the direction of the enigmatic character of nature, but the *il y a*—the bare fact of natural existence—is categorically more unknowable still. The *il y a* makes it possible for any knowing to occur at all. Some dimension of the natural world will forever remain enigmatic to us and consequently uncontrollable. Yet, this happening of nature constitutes an inhabitable biosphere. Elementary nature could also destroy such a habitat. As both a constitutive and a threatening uncontrollable sphere, the *il y a* transcends the metabolism on which the scientific and policy perspectives are focused.

By comparing the scientific third-person perspective in BBE policy with the phenomenological first-person perspective, the difference between *oikos* and *il y a* can be further understood. Whereas the empirical perspective can provide correct, factual information, the phenomenological perspective aims to articulate the individually experienced unity between the perceptible world and the perceiving subject. To illustrate this difference, from the latter perspective it can make sense to describe the way in which walking along the ocean's shoreline 'clears one's head', is 'aesthetically pleasing' or can 'make the mind wander by losing itself in looking at the infinite, moving water'. From a scientific perspective it would at most make sense here to talk about serotonin as a mood stabiliser. The same information might be at stake but through articulating it qualitatively differently, is viewed from a distinctive angle.

That such a different perspective could be quite necessary can be seen when observing BBE semantics: "Seas and oceans provide a vital contribution to the Europe 2020 goal of smart sustainable and inclusive growth. But they also represent a largely unknown territory, changing rapidly through a combination of human and natural pressures (including climate change), which will have major implications for our health, our well-being, food and energy supply" (European Commission, 2012a). The elementary ocean can, as *terra incognita*—harbouring unpredictable consequences of incomprehensible magnitude—never be possessed or seized. Yet, it is here thematised unproblematically as a contribution to the economic system. Uncontrollable nature is formally acknowledged but immediately reduced to the prospect of potential resources or the endangerment of said resources' availability and, thus, understood only insofar as *human* interventions in it have effects for *human* health, human supplies, and so on.

By focusing solely on the metabolic *oikos* and misunderstanding the uncontrollability of elementary nature, the semantics in current policy lead to undesirable discrepancies. The title of a major European Commission policy document is 'Sustainable Growth' (European Commission, 2012a). It has been pointed out in

² Other examples could be the vastness of the entropic cosmos, future science paradigms, and contemporary enigma's in physics such as dark energy.

the literature that such a phrase is self-contradicting, a wooden iron (Brown, 2015; Daly, 2019). The amalgam *sustainable economic growth* is symptomatic of the BBE's endeavour to conflate economic logic with ecologic efficiency. The concrete case of oceans and seas reveals even further the ambivalent structure of the relation between economy and ecology in the BBE, conceived of as efficiency. Sea life belongs to planet Earth in the sense of habitable home, *oikos*. Fish can be managed and controlled ever further, but 95% of the ocean remains unexplored and thus, so far, unfit for total human stewardship (NOAA, 2017). Fish are, consequently, both *oikos*—controllable—and *il y a*—foreign, invisible creatures living their own lives in an ecosystem, epistemologically incommensurable with human experience. Overcoming and controlling wild nature enables us to live economic, comfortable lives in which we are not constantly struggling to survive but, simultaneously, disregards nature as a conditional, exhaustible realm of our biological constitution. It is *only from* this human, originally biobased, economic perspective that ambivalent strategies such as those encountered in BBE policy can be formulated: in order to sustain life in the ocean, we must ensure better control over fish populations. We, humans, must use our technology to exploit the sea in a repeatable manner, providing our dinnerplates with fish: *responsible exploitation* (Cf. Dicks, 2017; Gremmen, 2005; Muijsenberg et al, 2017).

By not taking elementary nature into account, the BBE is at risk of ultimately offering merely a *human*-based economy, an *efficiency*-based economy, or an *economy*-based economy; nature is discussed only *insofar as* it is controllable, i.e., domesticated by and for humans. For example, natural cycles contain plenty of catastrophes³ excluded from the circles that the BBE seeks to imitate: the cycles have been a priori humanised. Framed as such, the 'based' in bio-based could, at best, be understood as creating a base for humans somewhere in the biosphere, which is nothing new nor has anything to do with biobased practice.

This juxtaposition of consumption and sustainability is not an accidental or 'mistaken' perspective, but can already be recognised in the broadest formulation of environmental thought: saving Earth, in general. Our primary concern lies not with nature as such—we do not even know what that would be. The Earth is not the same as a human Other, we cannot stand face-to-face with a slowly dying planet. Human ethics (e.g., Levinas's Other in distress) appear right before our eyes, offering a direct ethical relation (Casey, 2003). A slowly dying planet, however, does not move us to immediate action (Blok, 2015). We do not feel directly responsible for the planet like we might with other people or creatures (Toadvine, 2012). Even now that our apparent dominance over the global ecosystem has resulted in a new, unprecedented struggle for survival (or for sustaining life in general), we persist in wanting to control nature. Save the Earth means: do not let the Earth be, but influence the biosphere so that we might inhabit it still. Save the Earth means: save future generations of *humans*.

³ Species going extinct, typhoons, toxic eruptions, murder, and so on (cf. Blok & Gremmen, 2016: 207f).

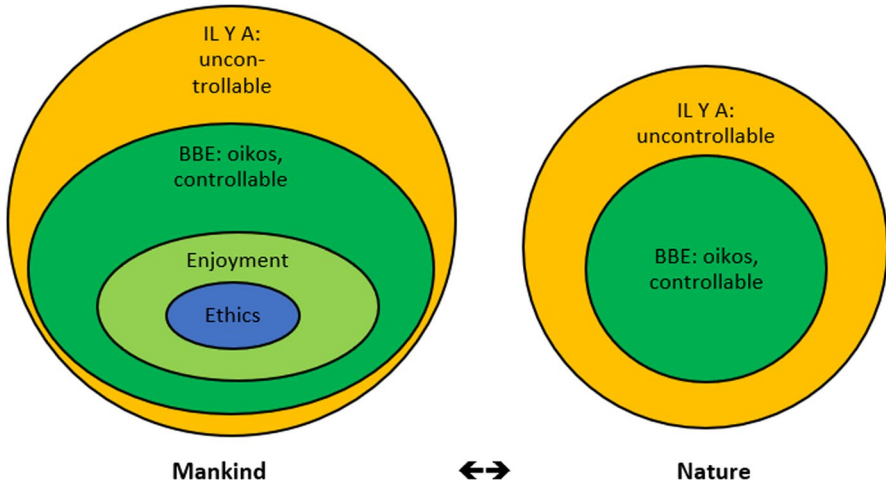


Fig. 2 Schematic overview of ontological concepts in and beyond the BBE (*anonymized source for review, 2020*)

The human way of economically inhabiting the biosphere is a necessary mode of existence, to be experienced throughout daily practices (eating meat, buying products containing plastic, driving cars, and so forth). We always already live in an economy and an ecology (*oikos*), but our economic lives seem to have taken absolute priority, turning our attention towards the biosphere as a resource for nourishment and away from elementary nature as *terra incognita*. We only ever regard the economic part of the biosphere—trees as mere producers of oxygen and wood—and either overlook or downplay the relevance of uncontrollable nature. In this discrepancy between our original, biobased condition (our dependence on the *il y a*) and our everyday, innocent or ignorant striving for growth, we encounter the same heterogeneity that is at stake in the project of establishing a bioeconomy; we emerge from nature, requiring oxygen and so on, then forget about it and disturb it—though without any explicitly harmful intent. From Levinas’s concepts it seems that human existence is conditionally within the contradiction between sustainability (bio) and growth (economy). Basing economy on ecology would then be a paradoxical task in general as we destroy what we want to grasp, losing dominance as we seek to establish it, disrupting the life-world by trying to adapt it to our needs. How do we resolve this tenacious ambivalence? Before proceeding with our conceptual analysis, let us summarise the relevant concepts for our investigation in a relative comparison by means of the image in Fig. 2.

The Human Condition: Consumption Versus Enjoyment

Having identified in the bioeconomy project a fundamental, contradictory situation symptomatic of topical problematics, we identify a similar problematic tendency in human existence related to the environment. This requires a critical evaluation of

the role of humanity and nature in Levinas's thought. ("The Problem with Levinas's Account of Metabolic Economy" Section). After this critical note, to address these problematics, we introduce the concept of enjoyment. We discuss a number of issues with this notion but aim to defend an account of the human condition as being indispensable in any bioeconomy project ("The Concept of Enjoyment: from Economy to Independence" Section). Finally, we show a fundamental interconnection between enjoyment and the *il y a* to indicate both how the problems discussed all concern the same ambivalence between ecology and economy and how Levinas's notions could form a consistent solution to those problems ("The Verge of Enjoyment as an Indication of Uncontrollability for Policy" Section).

The Problem with Levinas's Account of Metabolic Economy

Following Levinas, a necessary condition for human life consists in overcoming hostile (wild or elementary) nature to escape the struggle for survival. According to this logic, it is necessary for human existence to be involved in economic structures and practices. The tendency to overcome untameable nature and establish an anthropocentric realm (*oikos*) is, accordingly, seen as a precondition for individuals to become and to be a Self (an egoic identity, a complete individual) and ultimately to attain the transcendence Levinas identifies with ethics. However, from Levinas's conception of the economy as a metabolic relationship with the biosphere that inherently overlooks and overcomes its own, natural counterpart, it might be seen how the environmentally harmful tendency towards economic interest (growth, production, consumption, and so on) is, actually, quite understandable from the concrete perspective of a human individual. This would mean that Levinas sympathises—unknowingly—with some of these problematic presuppositions in current BBE policy.⁴ Therefore, we have to examine the specific structure of the human condition so urgently at stake; if it is a necessity for humanity to overcome and control the biosphere, i.e., if the human condition is inherently destructive, we must ask what exactly this human necessity entails and how it has come to disrupt the relation between humanity and planet Earth.

With Levinas, we can understand how it is fundamentally necessary for humans to overcome and exploit nature, i.e., to behave economically. He calls this metabolism a *living-from* the world or from the non-I: the I, or the Self, is fundamentally dependent upon ecological and economic prerequisites. Economic connections are inherent in every brick in our cities, every stitch in our clothing, every signpost in the woods. Economy, then, is not something imposed upon the world by humans; rather, just as people need oxygen, they are always already economic beings. We are both biobased and economy-based, originally and universally. In Levinas's thought, economic subsistence directly implies overcoming the biosphere (or the

⁴ In Levinas's time, there was not yet any talk of a difference between the Holocene and the Anthropocene epoch. A primary aim of this research is to make Levinas's concepts topical again, seeking out the added value of phenomenology alongside general scientific discourse on such concepts as the Anthropocene.

non-I) which, in our time, has become equivalent to ecological destruction. In enacting economy, e.g., working, one always does more than one intends, leaving certain traces and establishing connections beyond one's individual scope. As humans, we seize the day by seizing the planet, dominating and controlling our hostile environment. Thus, this analysis results in a topical ambivalence: to be human, we must overcome nature, which we can never do completely because of the *il y a*. To save nature—to save ourselves—we should act differently than we do, but this would never be entirely possible.

Levinas's account of economy as a metabolism helps to make visible an uneasy discrepancy. The contemporary separation between humankind and nature—encountered in global warming, technological development, and the systematic exploitation of the biosphere—is, in Levinas's view, not a contingent, cultural structure emerging in a specific epoch but, rather, a symptom of the human condition *as such*.⁵ Now, if our economic tendencies are, in fact, necessarily ecologically harmful, our systems would be doomed eventually to implode along with our *oikos* (unless sustainable behaviour magically became profitable). If we conditionally establish ourselves, humans, in the world by dominating, consuming, and using our environment, humans can and will exist only as *homines economici*, seeking efficiency beyond anything else and repeating metabolic cycles until all resources are finally depleted. It is, indeed, in this very way that the present tendency towards control, seen so clearly in the BBE project (as in many other contemporary semantics), does not recognise any environmental limitations but is merely aimed at continuous growth.

The problem confronting us at this point, however, concerns the subjective side of the *individual* existing within a degrading Earth. If economic dominance (i.e., ecological disruption) is indeed a principal, necessary aspect of human existence—and not just a contingent power structure, for example—we would never be able to alter it. And if, within this tendency to control, it is given from the outset that we cannot and will never see—let alone *control*—the ecological conditions for our survival (the *il y a*), we could never even hope for a perspective outside of our metabolic systems. Unless Levinas's philosophy offers some kind of concept that is capable of transcending our closed, egoic cycles, his thought would, in logical consequence, deem us lost without further ado—the human condition would be inherently suicidal and unsustainable, consuming its own conditions for existence.

Levinas's phenomenological notion of uncontrollable nature is, of itself, not entirely fit to provide an escape route away from our economic cycles of efficiency. This is because Levinas indicates that a principal aspect of the *il y a* consists in its *unknowability*. Indomitable nature is indomitable precisely because it is impossible to oversee, grasp, seize, or control. Phenomenologically, it is impossible to experience the ocean comprehensively in its entirety, to wrap one's mind around it; the horizon seems as an infinity, the edge of the world, even if we empirically know this

⁵ This separation would, necessarily, be a precondition for any possible economy and not just capitalism (e.g., Aristotle's Polis, in which the *vita activa* is a precondition for civilians to serve the state). This does not mean, however, that the struggle of man versus nature is a *sufficient* condition for a complete economic system (cf. Aristotle, 1905).

to be false. No manageable strategy can be deduced from the unknowable, elementary ocean out there. It does not care for us, just exists, but it does constitute and threaten us. However, a first insight appears by *via negativa*, as by embedding the notion of uncontrollable nature in his explanation of economy, Levinas shows that it is *not* impossible to conceive of the biosphere in a way that acknowledges strict limits to our control.

Regarded only from the current, ambivalent situation, humans are necessarily metabolic creatures that tend to conquer their environment and reduce it to utilitarian and efficient structures such as nourishment, housing, and work. BBE policy, by nowhere referring to any possibility outside of this eco-efficiency, is already framed entirely in this human logic of market efficiency and does not seem open to altering its language, even if it results in downright contradictions such as sustainable growth. The fact that there exists an essential overlap between these reductive BBE semantics and Levinas's account of metabolic efficiency reinforces our current problematic juxtaposition of economy and ecology and leads us towards the following question: is humankind's controlling, metabolic-economic nature total, or does the possibility of fundamentally not coalescing with these disruptive tendencies also exist? As we continue to investigate this issue, we encounter another Levinasian concept (enjoyment) that helps both to deepen our current understanding of the situation and to work towards a more progressive framework of concepts in the context of sustainability.

The Concept of Enjoyment: from Economy to Independence

Because contemporary BBE policy focuses solely on the preservation of humankind rather than on something like nature itself, we have said that it offers merely a human-based economy (HBE). Although current BBE concepts are framed entirely in economic—i.e., *human*—terms, any facet of humanity beyond its eco-efficiency is unseen, just like the principal insuperability of nature itself was disregarded. Rather, current conceptions tend to frame humanity in terms of labour and limitless efficiency, without offering alternatives or even the possibility of a human condition beyond this mere optimisation. Levinas's alternative discourse can add to this conception a relevant notion of anthropocentrism. For him, the human tendency to control and dominate efficiently (metabolic economy) makes sense only because it is always directed at *enjoyment*. Enjoyment, or independence, is the ultimate fulfilment of economic existence: all our metabolic endeavours aiming to preserve individual, egoic identity are always rooted in, and heading towards, the outcome of the enjoyment of life (Levinas, 1969). It is only because we are able and willing to transcend into this realm of enjoyed independence that we tend to overcome—and thereby disrupt—the natural world at all.

In enjoyment, disconnected from all earthly struggle, we obviously experience the contents of our lives as such: just the very sandwich, dance, walk, conversation, affair, journey, or drink in itself, only as such, but also just the very sadness, pain, wound, confusion, or obstacle in itself, as such. Enjoyment, or independence, indicates the very *quality* of our economic affairs, the sensibility of our skin. The very

act of eating is itself something qualitatively incomparable with obtaining, requiring, or safeguarding food as a resource. Enjoyment is concrete reality, experienced every day by everyone. *Before* the reality of economic practice lies our ecological origin, our being biobased in the sense of dependence upon a vast, endless ecosystem (*il y a*); *beyond* our economic affairs lies the fact that we *enjoy* their result (*jouissance*). As an example, one might think of music; competition, mass production, and new purchasable technologies constitute a vast realm of economic commerce, but the personal enjoyment of a certain song, piece, or part is—to some tiny, yet crucial, extent—incommensurable with the work put into, or price put on, it.⁶

Enjoyment conditions economic existence by offering a reason to *live-from* a world and a house, to calculate, work, optimise processes, and so on; but enjoyment *also* emerges from this metabolism as an ultimate result in the form of an instant in which we are completely withdrawn from calculation or functionality. In this pure sense of concretely experienced nourishment, fulfilment, and consumption, enjoyment embodies our *true independence* from the world for Levinas. Enjoyment is independence; the concept designates exactly that dimension in which we go about and live, without experiencing our concrete ties to the practical, material, economic world. Thus, enjoyment is more fundamental than emotions or even moods—it is the very precondition for such experience, the bare fact of being-a-person that is alive and able to sense and experience as such. That is what is independent in enjoyment: our experience of not-being-tied-down or, put positively, the emergence of a qualitative space in which we notice life and simply live it. Enjoyment indicates a certain distance, a departure from struggle, survival, and hardship, not at all necessarily as the limitless excess of a human-based market economy but, rather, in the form of appreciation *as such* within the human condition.

However, in order to do full justice to this distinction, something still remains to be said about the overlap between Levinassian enjoyment and plain consumerism. Levinas wrote this too long ago to see the ecological consequences of our behaviour himself, but in enjoying—or consuming—the very food in front of us, we are directly engaged in a concrete present and, consequently, not directly concerned about the ecological consequences that this food might have. We drive cars without purposefully wanting to pollute the planet, enjoying the ride as it is; we eat meat for the sake of enjoying an adequate meal, whilst being existentially detached from any concern for cows, water supplies, or plastic residues. Now, it was, indeed, precisely this being absorbed in everyday economic processes, this experienced (innocent or ignorant) *independence* (from ecological constitution) that we previously deemed highly problematic, as it causes us to forget about the indirect impact of our behaviour.

Levinas recognises this problem to some extent, because, even without an experience of climatic instability, he knew that there was a difference between experienced

⁶ For example, music can be consumed through algorithms and the volatile supply of a certain day, but an instrument can be practiced passionately for a lifetime and even expand over multiple generations. In this fashion, the signification of human life itself is something principally different from the constitution or maintenance of that life.

independence and plain material dependence upon the physical, ecological world. In the chapter, ‘Separation as life’, Levinas writes: “A being has detached itself from the world from which it still nourishes itself!” (Levinas, 1969: 116). This independence within the dependence is precisely enjoyment. Thus, enjoyment is *both* rooted within economy and separated from it: the independence experienced is not absolute but founded in an objective dependence upon oxygen, resources, and so on. Commerce, metabolism, and labour are necessary to be able to enjoy at all—enjoyment *emerges* from this (originally biobased) economy, but enjoyment, when it exists, is also something principally different from the effort to trade and survive—it emerges (away) *from* economy. The emerging-from-economy of enjoyment is, thus, twofold.

Indeed, the enjoyment of one’s own life is principally intertwined with the metabolism between the subject and external entities, but this does not mean that the meaningfulness of existence fully *coalesces* with the usefulness of economic affairs; enjoyment indicates the very real difference between the economic obtainment of commodities and the qualitative enjoyment of (things in) this life. Levinas here distinguishes between satisfaction as the elimination of all needs and enjoyment as the *fulfilment* of needs, constituting a realm of pure appreciation, beyond every rational structure of control. Living in the sense of enjoyment is more than being economic, something quite different from achieving objectives or managing commodities. Food, for example, is not only consumed *in order to* keep living, but also poses a goal in itself. The corporeal act of letting one’s teeth sink into bread is qualitatively incomparable with the purchase, production, or preparation of the bread as a meal.

The human condition is intertwined within all functionality, objectives, dependence, systematics, exploitation, and machinery. It is a dimension that transcends all such worries, inquiries, calculations, rationality, and measurements and enters a realm of absolute independence or happiness (not to be confused with *eudaimonia* in this sense, as this happiness can also entail misery). Although Levinas’s demarcation is strict, enjoyment also remains interrelated with problematic tendencies such as accumulating ever-more wealth, working to enable certain ‘enjoyable’ purchases, and unhealthy nourishment, because all of these economic endeavours can potentially lead to the independent state of enjoyment. Another way to observe this relation is to notice our tendency to control and optimise enjoyment, to have its inefficient instant readily available at all times, extract it out of thin air as it were (e.g., cigarettes, burning coal). Because the concept of enjoyment entails precisely something that cannot be stored or extracted, this gesture already poses a contradiction. Enjoyment cannot be instrumentalised in itself, yet seems to fuel a very human, ambivalent addiction to entertainment and pleasure.

Enjoyment itself is, surely, utterly inefficient—yet, simultaneously, it somehow remains tied to economic discourse. It could, for example, be said that the fact that we, as humans, are able to transcend hostile nature is both a blessing—enjoyment—and a curse—climate instability. Thus, enjoyment expresses the same twofold structure that we have repeatedly seen to be at stake in the current climate crisis: the paradox between growth and sustainability, the juxtaposition of control and

uncontrollability, the discrepancy between our direct, everyday sensibility and its harmful consequences—enjoyment is located *precisely on this verge*, exactly *amidst* the contradictory structures of our time.⁷

Thus, Levinas's economic thought overlaps with problematic BBE tendencies (i.e., control, efficiency, overcoming the biosphere) only to the extent that these tendencies are inseparable from a different energy or desire, more fundamental than the mere control of the biosphere—the human condition. This demarcation is so complex, because enjoyment is located precisely on the borderline between economy and ecology, on the one hand both conditioning and transcending economic practice, yet on the other hand being at risk of falling into problematic overconsumption, losing its unique properties by being systematically exploited. Being heterogeneous, enjoyment possesses exactly the ambivalent structure required to answer the topical juxtaposition of economic growth and ecological sustainability that we have consistently indicated.

The Verge of Enjoyment as an Indication of Uncontrollability for Policy

One insight that arises from our analysis of Levinas is most important: *enjoyment has everything to do with the il y a*. Levinas's notion of enjoyment indicates precisely that small element of transcendence that always emerges from economic commerce as independence. Enjoyment indicates the human condition, the very liveliness, openness, being underway, yearning, and striving of human beings, which cannot be eradicated so long as people live. Enjoyment means being disconnected from the struggle for survival and designates existing within the endless process of life itself and experiencing this participation as such. Enjoyment thus offers a genuine possibility to experience the human condition within the all-encompassing metabolism that is our current economic climate by disconnecting our attention from this machinery for a moment. Becoming aware of the quality of human life could shift our focus away from continuous economic practice and towards the endless, invisible, and uncontrollable realm of nature behind this everyday business, conditioning and enabling our very lives.

Let us one last time demonstrate the difference between the concepts used in phenomenology and policy discourse. In one of the major bioeconomy policies, “definitions, summaries and strategies” are put forward to frame the task and goals of a transition to a sustainable economic system (European Commission, 2012a). The methodical format of this policy is phrased entirely in terms of “benefits vs. risks”, “achievements vs. obstacles” and “proposed actions to support the development (...) fostering (...) and building of society involvement, the Research and Innovation base [and] Enhancing the Creation of Jobs and Ensuring Availability of Required Skills”

⁷ Enjoyment is not yet ethical, but it is a precondition to becoming ethical. It is a departure from ontology and into ethics, not fully ontological itself, but not completely ethical either. It is the heterogeneity of this verge. A lively debate about Levinas and the environmental crisis already exists (e.g. Toadvine, 2003). In the current interpretation of Levinas, we chose to focus solely on the ontological, rather than the ethical aspects of Levinas's philosophy, and used those concepts to discuss the BBE. Further debate about this specific approach is expected but falls beyond the scope of this article.

(European Commission, 2012a). Such a cost–benefit analysis still fully coalesces with the language of familiar economics that has nothing to do with the transition towards a biobased variant. The production and enhancement of ever-new things, technological solutions, and ‘helpful’ commodities is precisely symptomatic of the economic metabolism aimed at efficient alignment of supply and demand—the very metabolic tendency to control that created the environmental crisis. This means that the BBE, by seeing only the metabolism, can never answer the need for individuals to transform themselves into subjects respecting the ecological boundaries (*il y a*) of our *oikos*.

Bio means *life*. We have explained why the *il y a* must be taken seriously as a *condition* for life: there is (*il y a*), rather than there is not. Enjoyment poses the possibility of *experiencing* this very life: *I* exist, as opposed to not existing. Moreover, if I want to keep existing, I should behave sustainably. Behaving sustainably means acknowledging nature’s uncontrollable force, the invisible *il y a*. But how does one (not) control the uncontrollable? However, acknowledging that is not possible from a management policy perspective. The phenomenological experience of enjoyment, however, enables a *detour*, a route departing from the human condition as such and making visible what our lives truly mean. Enjoyment could enable a fundamental shift in attention. Once we see, feel, or live this transcendence—e.g., when suddenly touched by absolute beauty or profound injustice—we might acquire a genuine, aesthetic glimpse of the nourishing world behind our everyday activities, the ecological conditions enabling them, and the possible destruction of the biosphere. Such phenomenological awareness—located amidst the experience of the very quality of life and the elementary, infinitely distant nature enabling this life—could, ultimately, reunite our behaviour with its consequences.

The biosphere can be known, empirically, but never in full; always only bit by bit, piece by piece. Technological innovation can grow and learn, develop and bear fruit, but only as long as there is mankind, i.e., a viable ecosystem. Nature might, in this way, appear as an enemy, as being hostile towards us, as an angry God, judging us with a life-encompassing omnipotence. The notion of God is metaphysical, but the *il y a* is a very real, natural limit that must be kept in mind. Experiencing enjoyment, i.e., *life*, might be the quickest way to develop an awareness of the invisible realm of ecosystems so essential for human existence. For behind the free market dream of infinite, limitless growth with its stubborn tendency to control lies the human condition, partaking in the infinity of life. Enjoyment lies on the *verge* of the juxtaposition of a sustainable Earth and a world dominated by systematic economics and, consequently, points towards this Earth, this infinitely unpredictable ecosystem conditioning us (*il y a*)—something completely different from mere consumption.⁸

⁸ In an environmental context, enjoyment, *before* it is in a relationship with the Other, is the culmination of the human condition. This human condition is, to be more accurate, never truly completed, but always a process of (re)constitution. This means that elementary nature (*il y a*), ecology, is the very *start* of human existence, at least in the economic sense of metabolic self-preservation and commerce; and that enjoyment is, then, the *end* of this process. Thus, instead of stretching and remodelling Levinas’s ethics into environmental thought, it suffices to see here how an endless, unfathomable realm principally conditions our being and how we, humans, can experience this condition in everyday practices such as eating meat and driving cars.

If the BBE wants to be a project for keeping the planet inhabitable, it must be turned towards this ecological background. To avoid internal contradiction, the notion of any bioeconomy should, in policy, be founded on the human condition, which already is the ultimate aim of the project. Especially as we know that the BBE is secretly an HBE and ‘save the Earth’ always actually means ‘save the humans’, this must be explicitly acknowledged by an understanding of the human condition that is broader than mere eco-efficiency; humans are the *goal* of a bioeconomy, not the *means*. Instead of a strategy of growth, i.e., gathering ever-more resources to prepare for doomsday, bioeconomies should recognise that such growth can only exist in strict relation to an ominous-yet-constitutive biosphere that cannot be controlled. Rules and guidelines should be conceived to determine when control is appropriate and when we should simply let nature be, precisely in order to sustain human life in it. This—at the very least—implies letting vast, wild areas remain, weighing the accumulation of resources against structural survival; halting management strategies until a more complete understanding is obtained, even if this requires paradigm shifts or turning to alternative concepts; recognising clear limits to controllable *oikos*; and always weighing strategies of efficiency against their end purpose of qualitative, enjoyed existence. The descriptive aim of the current research suffices to show that an experience of our own (enjoyment) indicates a nature beyond any interference. To gauge its normative consequences, future investigation is necessary.

Conclusion: The Human Condition Within a Genuine BBE

In this article, we have indicated several contradictions in current BBE concepts, such as the paradoxical relation between growth and sustainability, or between saving the planet and saving ourselves. We explained how the tendency towards control and efficiency results in problematic discrepancies, now that we face environmental destruction, by demonstrating how the BBE’s notion of economy is exceeded on both sides: before any human activity lies conditional, unfathomable nature (*il y a*), and beyond all economic optimisation lies the human condition (enjoyment). The role of the human condition—the status of the subject immersed in a degrading ecosystem—must be addressed adequately if a genuine and consistent bioeconomy account is ever to be formulated. This means firstly that humans are qualitatively more than labourers for eco-efficiency; secondly, that this ‘more’—enjoyment—should become an explicit aim of bioeconomy policy; and, finally, that there is a difference between ignorant overconsumption and genuine enjoyment. Enjoyment is deeply intertwined with problematic tendencies of innocently or ignorantly overcoming and disrupting nature; this discrepancy cannot be resolved by making biobased processes ever-more efficient, because the *il y a* poses an absolute limit to this controllable *oikos*. In the same way as the BBE frames nature purely as controllable *oikos* and disregards *il y a*, it frames the human beings in it as eco-efficient actors and disregards their enjoyment. Future bioeconomies should reserve structural room for explicit appreciation of human beings as more than eco-efficient labourers and nature as an uncontrollable realm.

With Levinas, who explained how the human subject was torn between overcoming the biosphere and enjoying its economic metabolism, we found an original account of economics. The problem of overconsumption could, following Levinas, be identified as the human tendency to control and overcome the hostile environment by safeguarding resources, work, shelter, and so on. This tendency is, indeed, similar to the notion of enjoyment, yet also completely different. The attitude of control is highly understandable, both because Levinas could show how that it is only human to think, act, and live in this manner and because we can see clearly how economic systems of efficiency create resplendent lives of wealth and comfort for Earth's inhabitants. However, because current BBE policy sees *only* this metabolic realm (*oikos*), it fails to look beyond it for qualitative notions of life, such as enjoyment, so indispensable for the required ecological transformation of economic life. Regarding nature, current BBE concepts are overly focused on a humanised biosphere; regarding humanity, current BBE concepts are overly focused on economic, functional aspects. The BBE is, today, an HBE, while simultaneously *neglecting* any notion of humanity beyond the semantic field of production, consumption, and growth.

For the BBE, our research means, first and foremost, that policies should take a radical turn away from economic benefit and eco-efficiency, and towards the project of *life* (bio) on which it claims to base itself. Currently, BBE policies neglect both an account of insurmountable nature and a serious notion of the human condition. On the micro-level of the individual, immersed in a deteriorating environment, what is currently needed is a fundamental awareness of the fragile value of life—enjoyment indicates precisely the realm in which such a consciousness is possible. On the macro-level of global destruction, what is currently needed is a fundamental respect for the boundaries of complex ecosystems to radically adjust our semantics of control—the *il y a* indicates precisely the realm that should be considered here. Through an experience of our own, qualitative human condition, we might be able to answer more adequately to nature's disruptive, uncontrollable, and constitutive power.

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Declarations

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