

ON THE ETHICAL IMPLICATIONS OF WEAK AND STRONG SUSTAINABILITY SCENARIOS: TOWARDS A SUSTAINABLE SOCIETY WITH A NEW ETHICS [1]

SILVIYA SERAFIMOVA

Institute for the Study of Societies and Knowledge, BAS

silvija_serafimova@yahoo.com

Abstract

The aim of this paper is to analyze why so-called strong sustainability scenarios do not bring much clarity to non-contradictory grasping the complexity of intra and intergenerational justice in comparison with so-called weak sustainability scenarios. Concerning ethical evaluation, I will demonstrate that Alan Holland's conclusion that weak and strong sustainability do not differ in principle applies similarly to their ethical implications regarding intra- and intergenerational justice. In this context, I will also explore how justifying a new ethics of sustainability which encourages the application of ethical gradualism can give us some clues for understanding why negative attitudes towards the de-growth movement and steady-state theory are a result of associating them with anti-development.

Keywords: intra- and intergenerational justice, ethical gradualism, weak and strong sustainability, sustainable development, de-growth

1. Introduction

The current debates regarding how to build environmentally sustainable scenarios reveal a need for discussing an additional general problem, namely, how to understand sustainability so that it really works in the long run. The most common way to begin unpacking this question has been to distinguish between environmental, economic and social sustainability (Goodland and Daly, 1996, p. 1102). Whilst this can be relevant for definition purposes, the different dimensions of sustainability should not be discussed separately.

There are at least two reasons for this: firstly, the splitting of sustainability into distinct dimensions gives the impression that defining its role is based on underrating its own ethical implications or rather paying insufficient attention to them.[2] Secondly, it points the enquiries towards the need to provide the best solutions to live sustainably by meeting the requirements of the broadest group of living beings.

As one of the reasons for why the role of ethics for sustainability should be rethought, I would like to point out the ethical implications of defining development in respect with growth. Giving preference to development over growth, by saying that they refer as ‘expansion of potentials’ to ‘increase in size by assimilation’ (Goodland and Daly, 1996, p. 1004), means that researchers presumably ascribe a higher value to development as such

In this paper, I adopt a different classification of growth and development than the classification mentioned above. One of the reasons is that the definitions based on giving preference to development over growth overrate the role of sustainable development as providing sustainability by default.

Yet the Brundtland report states that sustainable development was defined in respect to meeting the needs of present generations without compromising the ability of future generations to meet their own needs (*WCED*, 1987). Furthermore, achieving sustainable development presumes that each generation bequeaths to its successor at least as much wealth per capita as it has itself inherited (*Ibid*). Even if it is possible to assume that wealth can be ascribed to other living beings on their behalf, it is human species that can evaluate it in both individual and collective terms. This conclusion revives the problem that sustainable development considers the role of intra and intergenerational justice to humans alone without clarifying how justice to the generations of other species can be achieved.

In the Brundtland report, the issue of justice was also defined in respect with mediating physical sustainability, since ‘Even the narrow notion of physical sustainability implies a concern for social equity between generations, a concern that must logically be extended to equity within each generation (*Ibid*)’. Such an interpretation, however, does not reveal how equity between and within generations can be non-contradictory defined provided that there are no normatively justified reasons behind deriving equity in the future from that of the present.

This lack of clarity brings to light many questions concerning whether or not we as humans can meet the needs of present generations without compromising the ability of both human and non-human generations to meet their vital needs in the future. Another concern is whether or not humans can make compromises with the needs of the present generations of other species if their needs are an obstacle to meeting fundamental human current and/or future needs.

Taking into account difficulties when analyzing the normative validity of justice, as the first step in my research I will examine why so-called strong sustainability scenarios (Brand, 2009) do not bring much clarity to non-contradictory grasping the complexity of intra and inter-generational justice in comparison with so-called weak sustainability scenarios (Neumayer, 2003). Concerning ethical evaluation, I will demonstrate that Holland's conclusion that weak and strong sustainability do not differ in principle (Holland, 1996) applies similarly to their ethical implications regarding intra and intergenerational justice.

As a second step of my research, I will explore how we can build new scenarios of a sustainable future based on new ethics that can shed light on some of the problems concerning intra and intergenerational justice, when applied to both human and non-human species. This new ethics would be defined as universalizable in the sense that it applies ethical gradualism to the broadest group of living beings.

Regarding the need to define a new ethos for a sustainable society, I will analyze whether some relevant alternatives can be found by showing why negative attitudes towards the de-growth movement and steady-state theory are a result of associating them with anti-development. Following this line of thought, I will demonstrate how the universalizability of the new ethics of sustainability is concerned with the need to justify a new ethos. Encouraging the latter, the ethics in question can ground the transformation of the present techno-capitalist society into sustainable society of a new type.

In this context, it is important to keep in mind that strives to achieve both intra and intergenerational justice in one sustainable society should take place against the background of the urgent need to make the Earth less hot and full.

The question as to why respecting intra and intergenerational justice is important for making the Earth less hot is concerned with the fact that it is particular groups of humans (mainly representatives of so-called over-consuming class) (Ulvila and Wilén, 2017) who are responsible for global warming. According to recent reports, natural factors such as the sun's output, the tilt and position of the Earth in its orbit 'have *not* been changing over the last hundred years or so in a way that would explain the observed temperature increases' (Lawson, 2017). In contrast, 'the greenhouse gasses *have* been changing' in a way that explains the aforementioned increases (Ibid).

The concerns about greenhouse gas emissions were yet outlined in the Brundtland report. According to its findings, the ‘‘greenhouse effect’ may by early next century have increased average global temperatures enough to shift agricultural production areas, raise sea levels to flood coastal cities, and disrupt natural economies’ (*WCED*, 1987). That is why finding a safe and sustainable energy pathway requires economic growth which to be ‘less energy intensive than growth in the past’ (*Ibid*).

Examining the Brundtlandreport’s suggestions brings us back to the issue of normative validity, albeit it is implied on a policy level as a matter of risk assessment (*Du and Pan*, 2009). The problem once again is that predicting even the worst scenarios with a degree of certainty does not make humans necessarily avoid these scenarios for the sake of preserving their own as well as future generations of other species. Regarding the reduction of the greenhouse gas emissions, I will try to demonstrate why the risk assessment still hides the risk some grand threats such as the consequences of carbon emissions to be considered as ‘affordably’ dangerous unless a new ethics of sustainability is adopted.

In turn, the risks of exponential growth of human population are also mentioned in the Brundtland report and it emphasizes that the problem mainly arises not from the number of people, but from how this number relates to available resources (*WCED*, 1987). Although the needs of eliminating mass poverty and providing better education for the sake of successfully dealing with the resources are clearly stated, the report briefly sketches how creating new values can be used for building global distributive justice. In this context, globally shared knowledge is defined as a premise for creating ‘greater willingness to share global resources equitably’ (*Ibid*). The main concern, however, is that having knowledge and even willingness is a necessary but not sufficient condition for achieving global justice, since the latter is a matter of self-obligation to delegate justice, especially when others’ vital needs contradict our own.

In the field of ecological economics, the issue of constant population is examined in respect to the so-called steady-state economy according to which, the idea of being constant is supposed to be a crossing point between the balance of people, goods and throughput.

The problem of over-population, however, cannot be defined as a homogeneous problem, not only when it is related to intra and intergenerational justice between different species, but also when it concerns the different aspects of justice to human beings in

particular. Over-population brings some important issues to light in the global North such as population ageing, the percent of women who remain voluntarily childless, the changing aspects of transnational citizenship etc. All these issues show that the problem of over-population cannot be unilaterally treated, since it goes hand in hand with the decreasing population in given regions, or even in one and the same region. In this chapter, the problem of over-population will also be examined in an interspecies context, as applied to both human and non-human species.

2. How Should We Approach Sustainability?

According to Holland, we have two approaches to sustainability, namely, the so-called weak and strong sustainability whose proponents advocate different policies regarding the non-declining level of different types of capital. Whilst the proponents of weak sustainability ‘advocate policies devoted to securing a non-declining level of total capital’, those of strong sustainability ‘are said to advocate policies devoted to securing a non-declining level of natural capital in particular’ (Holland, 1996, p. 7). However, Holland argues that the impression that ‘strong’ and ‘weak’ positions differ in principle is misleading since they both advocate ‘the maintaining of a non-declining level of welfare’ (Ibid). The difference is that the proponents of strong sustainability used to believe that maintaining a non-declining level of natural capital is a necessary condition for achieving a non-declining level of welfare, since natural capital cannot be substituted with the human capital (Ibid).

Holland argues that denying the doctrine of substitutability does not support the protection of all natural capital nor does it support the protection of natural capital alone. It ‘is natural, but only insofar as it is ‘critical’ – by which is meant, under neo-classical assumptions, ‘critical for securing future levels of human welfare’ (Ibid, p. 8). An important specification is that from the fact that one type of capital is ‘being substitutable’ does not necessarily follow that it is ‘essential’ nor the other way around (Ibid).

3. Ethical Implications of Weak and Strong Sustainability Scenarios

3.1. The Role of Intra and Intergenerational Justice in Weak and Strong Sustainability Scenarios

Against the background of the aforementioned investigations, I would argue that sustainability scenarios encourage different forms of utilitarianism varying from some more differentiated forms such as preference utilitarianism promoted by the proponents of strong

sustainability to less differentiated ones such as the utilitarianism which characterises weak sustainability. In this sense, what was outlined by Holland in terms of economic and ecological aspects of weak and strong sustainability, namely, that they are not substantially different, applies similarly to their ethical implications. Whilst the proponents of weak sustainability focus on the narrowed role of intragenerational justice by pretending to support a non-declining level (also in ethical terms) for having intergenerational justice, those relating to strong sustainability scenarios aim to build a bridge between intra and intergenerational justice.

Regarding weak sustainability scenarios, I argue that they encourage ‘selective’ intragenerational justice by saying that it ‘does not matter whether the current generation uses up nonrenewable resources or dumps CO₂ in the atmosphere as long as enough machineries, roads and ports are built in compensation’ (Neumayer, 2003, p. 1). Concerning the practical disadvantages of ‘selective’ intragenerational justice, I would point out the pitfalls of the risk assessment. Humans could continue to be careless about the fact that the Earth is getting hotter, as long as they treat the arising level of the greenhouse gas emissions as an ‘affordable threat’. Concerning the exponential growth of human population, it would mean that irresponsibility is disguised as a freedom of choice that could be ‘corrected’ at any time if relevant means are adopted.

In turn, according to the proponents of strong sustainability, ‘Today’s generation cannot ask future generations to breathe polluted air in exchange for a greater capacity to produce goods and services. That would restrict the freedom of future generations to choose clean air over more goods and services’ (UNDP, 2011, p. 17).

In this context, one of the most important issues is to clarify how the idea of non-declining level is interpreted. Let us look at the examples concerning weeds and pests. Due to the climate change many pests and weeds are now present in areas that have been too cold for them to live before (*The new normal*, 2016).

From the perspective of ‘selective’ intragenerational justice, the question of whether we should appeal for intergenerational justice for the pests which threaten human lives would not be raised at all. The more thought-provoking question concerns what the proponents of strong sustainability would propose as a solution to the aforementioned problem, as well as whether or not they would end up also with difficulties in specifying the non-declining level.

The risks of preserving a given number of beings, whilst examining the requirements of intra and intergenerational justice can be explained by extrapolating Holland's statement that the non-declining level of capital is due to clarifying the non-declining level rather than the minimum of a given capital, although even in this case, it is not clear why humans should be obliged to maintain the existing levels of natural capital (Holland, 1996). Extrapolating Holland's statement makes some concerns apparent such as whether or not we should talk about critical minimum of justice with respect to a maximum of both human and non-human beings.

Another problem involves revealing the implications of risk assessment which disregards natural capital without explicitly replacing it with a human made capital. As an example, one of 'the clearest and most economically significant' risks, as defined by the risky business research can be pointed out, namely that 'Damage to coastal property and infrastructure from rising sea levels and increased storm surge, climate-driven changes in agricultural production and energy demand, and the impact of higher temperatures on labor productivity and public health.' (*Risky business*, 2014, p.2). The example shows that the threat endangers coastal property rather than coastal line and marine life, as well as causing problems to agricultural production rather than land as such. In this context, the assumed changes would lead to a strong anthropocentrism,[3] in both economical and ethical sense.

Judging by the aforementioned investigations, I would argue that even if our starting point concerns the status of irreplaceable natural capital, it does not necessarily follow that we can fulfill the objectives of strong sustainability scenarios. In the best case, the example with the damages (if elaborated) would meet the requirements of so-called intermediate sustainability in Goodland and Daly's sense (Goodland and Daly, 1996, p. 1006).[4] This example also illustrates how not knowing 'exactly where the boundaries of these critical limits for each type of capital lie' (Ibid) can make 'reparation' scenario look closer to weak sustainability rather than strong sustainability scenarios.[5]

Extrapolating Goodland and Daly's example that according to strong sustainability, a sawmill (human made capital) is worthless with the complementing natural capital of a forest (Ibid), I would argue that risk assessment can ground the relevant risk management of a strong sustainability type when coastal property is recognized as being complemented with coastal line and marine life which should not be destructed by the greenhouse gas emissions.

4. Why New Ethics of Sustainability?

According to the report *Extreme Carbon Inequality* (2015), nowadays the world's richest 10% produce half of the global carbon emissions, whilst the poorest 3.5 billion are responsible for only a tenth (Extreme Carbon Inequality in Ulvila and Wilén, 2017, p. 126). This in turn raises the question of how we can achieve global environmental justice by reducing CO₂ emissions, taking into account that the responsibilities for such a reduction should be differentiated.

If an immediate de-growth for the members of the over-consuming classes (Ibid, pp. 126-127) is prescribed, last but not least, by fixing maximum income through implementing high progressive income tax rates or laws limiting the highest salaries (Ibid, p. 131), then the issue is how to increase the moral responsibilities of the over-consuming classes in developed countries so that they delegate the responsibility to the different classes in developing countries by making the latter responsible for their own future. In the language of discourse ethics, it would mean to question why it is the over-consuming classes who react as the only moral discussants deciding on the behalf of the struggling ones (Ibid, pp. 126-127), in both global North and South, who are treated as moral subjects?

Regarding the specifications of the moral responsibilities of the political actors, I would argue in favour of specifying the consequences of whether it makes sense to talk not only about environmental, economic and social sustainability (Goodland and Daly, 1996, p. 1002), but also about a new ethics of sustainability. Such an analysis would give some clues in finding out why the aforementioned dimensions of sustainability are 'clearest when kept separately' (Ibid) but for the purposes of definition alone.

Building a new ethics presumes finding some reasons for making ethical gradualism universally applicable to both human and non-human species so as to avoid encouraging a certain type of moral absolutism, as in the case with radical ethical anthropocentrism. From the perspective of radical ethical anthropocentrism, by universalizability is understood what can be in favour of humans who define it and then impose it on both human and non-human representatives.

In contrast, universally applying the principle of ethical gradualism would mean firstly, to keep choosing without neglecting the role of biological gradualism (i.e. to avoid arguing that one's biographical life is completely independent of one's biological life)

(Rachels, 1990, p. 208) and secondly, to keep diversely choosing without reaching the extremes of 'either-or' (e.g. whether we should choose to kill an endangered animal in order to save a child dying of starvation).

What could be defined as preventive functions of ethical gradualism would contribute to forbidding the killing of animals and thus to restrict killing to the purposes of survival as much as possible for all sides involved. From this premise, however, it does not follow that one animal would be killed because it is not endangered nor would it be done because it still has 'less value' than a child who would have not only a biological but also a biographical life. It would be done because the value of life *should not* be reducible to *either...or* dilemmas. In other words, acting on the principle of ethical gradualism would mean to accept neither starving children nor endangered species, since it brings the issues of empathy and solidarity to life in the process of social interaction.

4.1. Evaluating Growth and Development from the Perspective of Sustainability

Specifying the role of the challenges to social interaction raises another problem which concerns the overestimation of the role of development at the expense of that of growth. It is the negative symbolic capital ascribed to zero growth that is associated with zero development. Such an attitude is based on the presumption that a zero increase in size automatically leads to zero development upon misleadingly equating the impact of quality of life with the one of living standard. It is underrated that growth to development can refer as an increase in size to development of potential mainly from the perspective of economic sustainability.

In turn, elaborating a novel ethics of sustainability would provide the researchers with answers to some important questions, which remain open if they keep comparing growth and sustainability upon the principle of 'added value'. [6] Adopting this principle strengthens the misleading presumption that sustainable development has 'more value' than growth. On the other hand, if universalizable ethics is examined as a matter of 'adding value' alone, it potentially shows almost nothing of the responsibility of the ones who should inflict change to sustainability. [7] Thus the approach of adding value may raise the risks of building sustainability scenarios based on calculating environmental and/or economic costs and benefits alone. In the best case, it would mean building scenarios for sustainable societies still within the framework of sustainable development.

Elaborating upon the aforementioned statements would affect rethinking the crucial role of de-growth if refracted through the lens of universalizable ethics. It would show that having a flourishing de-growth society is not an oxymoron if it is interpreted as a new form of sustainable society.

4.2. The Role of ‘Ethos of Releasement’ as Ethos of De-growth

Certainly it is true that humans cannot bind together future generations to make an ethical choice for sustainable development (Neumayer, 2013, p. 18). However, the more important question is how can humans ‘bind’ them to make an ethical choice for sustainable de-growth (Alier, Pascual, Vivien and Zaccai, 2010) and if so, what would be the ethos of the latter?

As a crucial element of what an ethics of sustainability should look like, I would point out the need for defining ethos of de-growth, namely, to specify whether it is possible to examine it as an alternative ethos, or as an ‘ethos of releasement’ (Heikkurinen, 2016, p. 9) that can contribute to avoiding the destruction of the species’ habitat. Heikkurinen sees the ethos in question as being ‘strongly connected to a frame of thought that allows non-human objects to unfold not as a standing-reverse but on their own, and hence manifest their complex genesis’ (Ibid, p. 10). A crucial issue in this context is how to raise the awareness of the misleading intention to over-estimate the engineering capacity of humans (Ibid, p. 6); a capacity that praises the role of instrumental reason in evaluating human efficiency.[8]

Furthermore, the need of ‘releasement’ derived from the ambiguous strive of the technocapitalist society to convince the subjects of the ‘efficient ordering of things’ (Heikkurinen, 2016, p. 6), can be sought in ‘detotalizing’ human practice of the implications of technological and moral absolutism. On a macro-methodological level, the issue is whether the two types of absolutism result from supporting the embodiment of so-called epistemic and moral anthropocentrism (Ibid, p. 7). Would it be possible to solve these difficulties by decoupling the instrumental reason from our practice as moral agents?

Elaborating upon some alternative solutions to this question such as encouraging universalizable ethics based on ethical gradualism would contribute to making a self-commitment to realize a transition from ‘growth economies to de-growth societies in order to achieve sustainability’ (Ibid). This is similar to what Heikkurinen suggests for the analysis of the genealogy of technology. Tracing what are the ontological implications of technology and

‘how apt technology is to prompt de-growth (in ontic terms)’ (Ibid, p. 2), moral agents may encourage the application of a novel ethics of sustainability which can pave the path to a low cost welfare state.

5. Some Arguments in Favour of Sustainable De-growth

Regarding the future of economic growth in developed countries, ‘even given an aggressive approach to a transition away from carbon, any economic growth, even ‘green’ growth, in already rich countries reduces the carbon budget available for the developing world’ (Harris, 2013, p. 37). This in turn could be an unassailable conclusion provided ‘we assume that increases in GDP and reductions in intensity are independent of each other’ (Ibid, p. 38). However, such an assumption conceals the economic realities ‘involved in an economic transition to energy efficiency and renewables’ (Ibid).

It is obvious that transformations in economics are impossible unless given changes in both moral motivation and moral practices initiated by the political actors are made. Otherwise, discussions would remain on the level of reconciling with the fact that the ‘angelization of GDP’ [9] has its limits which cannot be overcome.

Analyzing why it is quality of life that matters, we should distinguish between ‘socially sustainable de-growth’ and ‘unsustainable de-growth’ which is based on ‘economic reasons that deteriorate social conditions’ (Schneider et al. in Asara, Otero, Demaria and Corbera, 2015, p. 377). The objective of de-growth is not to reduce GDP but to increase social justice and environmental sustainability (Asara et al., 2015, p. 377). Thus the focus should be shifted to the issue that economic growth is ‘not only environmentally unsustainable, but also unjust’ (Ibid) which in turn requires a democratic discussion of ‘*selective* downscaling of man-made capital’ (Ibid).

The discussion in question necessitates the role of solidarity to be examined within the framework of sustainable de-growth understood as ‘an equitable and democratic transition to a smaller economy, with less production and consumption’ (Alier et al., 2010, p. 1741). This definition reveals why, since sustainable de-growth has strong ethical implications, it should not be equated with the idea of zero development.

Alier et al. relevantly describe the need for de-growth as caused by the internal dialectics of sustainable development: to promote a ‘larger’ instead of a ‘better’ consumption, as well as to contradict private and public investment in man-made rather than natural capital

(Ibid). These 'strives' have been 'locked' in the 'neoliberal 'mantra' of the supremacy of the market, which encourages 'a promethean notion of chrematistic growth' (Ibid).

However, one needs to make a step forward if one wants to 'break' the lockage of such a social mentality, namely, to appeal not only for 'socially sustainable economic de-growth' (Ibid, p. 1746), but also for an ethically justifiable one. It would mean to question the origin of *hubris* strengthened by the practices of sustainable development. It could happen if humans stop interpreting the promethean notion of chrematistic growth within the framework of the myth of a final solution saying that every problem can be solved with the proper technological means.

Another aspect of the problem is that the idea of de-growth implicitly promotes the debate of needs in ecological economics, which again has ethical implications, since defining vital and non-vital needs in a given society also necessitates an ethical analysis of what is substantially valuable (in both economic and environmental terms). Changing the ethical aims of the consumerist society would contribute not only to a better understanding of the need for de-growth, but also to promoting a reflection on how it can be successfully addressed to different target groups. This can be a step forward to what Alier et al. call a need for providing a common platform for social movements of the South and the North (Ibid).

6. Conclusion

The restrictions of utopian and dystopian environmental scenarios can be overcome if researchers examine not only the origin and the consequences of economic and environmental sustainability, as defined by sustainable development, but also the need of a new ethics of sustainability.

This new ethics can demonstrate why sustainability is irreducible to the idea of sustainable development, since defining a correspondence between growth, development and sustainability is not an axiologically neutral process. Introducing such ethics would also contribute to building a form of life, which is environmentally universalizable, i.e. a form of life, which is sustainable worldwide and in the long run (Skirbekk, 1992, pp. 74-75). Striving for achieving the aforementioned form, researchers can avoid thinking about the ethics in question as provoking moral absolutism, since its universalizability concerns universally applying the principle of ethical gradualism. Furthermore, justifying the universalizable role

of ethical gradualism points to socially sustainable de-growth, which is not necessarily a matter of speculating with one fictitious scenario.

Providing a given standard of living for everybody, whilst recognizing a certain lifestyle as based on fulfilling some basic needs, would not happen if the over-consuming classes of developed countries do not oblige themselves to help the representatives of the different classes (especially the ones of the struggling class) of developing countries. It could happen by deliberately lowering their own standards of living to more closely resemble vital needs than excessive wants. In the language of ethics, it would mean to find ethically universalizable principles of advocacy representation (Skirbekk, 1994, p. 81). The latter would contribute the developing countries to be treated as potential moral discussants whose well-being is at stake when they react as collective moral subjects.

6.1. Revising the Role of Intra and Intergenerational Justice Towards a New Ethics of Sustainability

The strive for finding environmentally universalizable forms of life for both human and non-human species is one of the main reasons why new ethics of sustainability which encourages the universal application of ethical gradualism is required. Otherwise, remaining within the paradigm of asking questions such as ‘Whose environment?’, ‘Which nature?’ would lead to moral relativism with utilitarian projections. Utilitarianism is encouraged, albeit in different ways, by some of the proponents of both weak and strong sustainability scenarios. Similarly to Holland, who emphasizes that weak and strong sustainability are not substantially different, I argue that they do not substantially differ in promoting utilitarianism either.

The methodological similarities between weak and strong sustainability scenarios have apparent implications on the level of the difficulties concerning the connections between intra and intergenerational justice. Whilst the proponents of weak sustainability are focused on the narrowed role of the intragenerational justice, which leads to evaluating the normative validity of the intergenerational justice on the principle of a cost-benefit analysis, the proponents of strong sustainability promote a certain type of preference utilitarianism. They, however, have problems in clarifying how achieving intragenerational justice could be a necessary and sufficient condition for achieving intergenerational justice. The difficulty is a result of the fact that even if people are aware of the public good, there is no unquestionable criterion for making present generations care for the future ones.

Despite the fact that the proponents of strong sustainability provide more constructive solutions for encouraging the fulfilment of environmentally sustainable scenarios (making people more responsible for the long-term damages to both the environment and humankind), they do not go as far as they wish compared to the ones of weak sustainability. As one of the main reasons for this, I point out that the proponents of weak and strong sustainability both examine intra and intergenerational justice in respect to human generations alone. Certainly not all living beings have an understanding of justice, but from that it does not follow that they cannot be treated morally for the sake of their own well-being. A clue in this direction can be found in discourse ethics which presumes that animals can be treated as moral subjects, albeit they can never become moral agents or moral discussants (Skirbekk, 1994, pp. 80-81; pp. 102-103).

6.1.1. The role of ethics of sustainability for building a new type of sustainable society

Outlining the premises of the similar (in their origin) utilitarian restrictions to intra and intergenerational justice, as displayed in both weak and strong sustainability scenarios, is possible by going back to the issue that the scenarios in question are defined in economic terms. Their definitions are based on presupposing a narrowed correspondence between growth, development and sustainability. Even if it is relevant to refer growth to development as an increase in size to an increase in potential in economic terms, such an approach brings many contradictory consequences from an ethical perspective. One of the serious problems is that it provides a devaluation of growth at the expense of an over-evaluation of development. In turn, the over-evaluation results from the technocapitalist way of thinking which is underlined by the idea that the progress is a teleologically oriented process from ‘less’ developed to ‘more’ developed stages of being and acting.

In this context, as one of the main methodological disadvantages of defining growth, development and sustainability in economic terms alone, I point out the association of the negative attitudes towards zero growth with the ones towards zero development. However, it does not mean that we can ground universalizable ethics in the ethos of zero or negative growth either, but that we should look for some good reasons to avoid reducing the idea of sustainability to that of sustainable development. Researchers can rather ‘test’ whether there would be some methodological benefits of fulfilling environmentally sustainable scenarios if

they interpret the ethos of socially sustainable de-growth as something more than an oxymoron.

Regarding the features of the ethos of de-growth as '*ethos of releasement*' (Heikkurinen, 2016, p. 9), it can be concluded that similarly to the constraints of simply saying 'yes' and 'no' to technology (Ibid, p. 10), humans cannot simply decouple ethical prescriptions from moral practice choosing *either...or*, namely, *either* (radical) anthropocentrism *or* (radical) eco-centrism nor should they choose *either* sustainable development *or* anti-growth.

In this context, the strive for analyzing the ethos of socially sustainable de-growth does not mean to decouple ethics from economic and environmental sustainability, but to see how if some relevant reasons for imposing universalizable ethics are found, they can improve understanding the complexity of sustainability as such.

6.2.Implications for a Hot and Full Earth

6.2.1.Some suggestions for making the Earth less hot

As one of the illuminative examples of why ethics of sustainable development is no longer working, I point out the difficulties deriving from the weak sustainability scenarios according to which humans can tolerate to a certain extent the use of nonrenewable resources and the effects of the CO₂ emissions. The example shows that being careless about the Earth getting hotter is intrinsically concerned with being careless about the Earth getting fuller, since in both cases 'selective' intragenerational justice causes many complications on a practical level. It affects the problematic justification of intergenerational justice because even if humans build machineries, roads and ports, they cannot compensate the consequences of the natural disasters provoked by the arising level of the greenhouse gas emissions. This means that the chances of no longer having future generations would be quite high if humans continue to overrate the role of technologies in solving environmental problems.

Making Earth less hot also reveals why the role of risk assessment is challenging not only for weak sustainability scenarios. If environmental risk assessment is based on evaluating damages with respect to the cost i.e. whether it is 'affordable' for humans to pay some costs, then examining natural capital as irreplaceable with the human made one is only a necessary condition. Furthermore, continuing to relying on the restricted role of risk

assessment, researchers would end up in the best case scenario meeting the criteria of intermediate sustainability in Goodland and Daly's sense.

In this context, one universalizable ethics of sustainability encouraging the application of the principle of ethical gradualism, which would contribute to seeing developed and developing countries as moral discussants, requires 'moving towards a post-fossil economy' (Ulvila and Wilén, 2017, p. 135). Thus making the representatives of the over-consuming class of developed countries more concerned about greenhouse gas emissions,[10] where by being concerned is understood being concerned about present and future generations of both human and non-human species, presumes depoliticizing the techno-capitalist discourse from an ethical perspective as well. Otherwise, developed countries cannot be forced to reduce the CO₂ emissions because, even if the issue of being rich is skipped, such a reduction would make them look 'less developed' in their own eyes.

The concrete implications of the need of depoliticizing economic growth can be revealed by questioning why the term 'rich' is not necessarily equivalent to 'developed' but it is ironically justifiable as being sufficient for enjoying an increase in any size whatsoever: e.g. in terms of consumption, production, monetary gains etc. Irony lies in the fact that pretending to give preference to development over growth, techno-capitalism ends up praising increases in size which should be considered as a distinctive feature of development.

6.2.2. Making the Earth less full as an objective

Regarding weak sustainability scenarios, the observations about numbers can misleadingly lead to the conclusion that humans have more freedom, whilst praising 'selective' intragenerational justice. It would mean that the number of humans can grow to the extent that they can compensate it by using the relevant machinery.

On the other hand, analyzing the role of over-population in strong sustainability scenarios shows that there are still risks achieving minimum of justice as an objective to be tacitly replaced with that of reaching a maximum of numbers, as in some radical scenarios. [11] Certainly if we focus on preserving the non-declining level of living beings, then our efforts should be directed towards guaranteeing intragenerational justice for a maximum number of humans and non-humans 'here and now', which would be considered as a guarantee for having their future generations available. Adopting such an approach is a step further compared to those of weak sustainability scenarios, but it still leaves many questions

unanswered. For instance, if the critical minimum of intragenerational justice should be achieved by maximum representatives of both human and non-human species, is there a normatively grounded correspondence between the critical minimum of justice and the maximum of beings involved which can be projected to the future with a degree of certainty?

It is also important to clarify that it is not only humans who affect the generations of other species. There are also factors such as some internal changes in the environment which have an impact on the better or indeed worse adaptation of the species and their survival. Since these factors are not subject to moral evaluations but as a result of evolutionary changes, humans cannot take responsibility for them as moral agents.

It is the difficulties deriving from the aforementioned examinations that require adopting the principle of ethical gradualism, especially in conflict situations. The specification covers two main aspects regarding over-population, at least. The first aspect concerns guaranteeing the non-declining level of quality of life to both human and non-human beings, which can be considered as a criterion of what a critical minimum of justice should look like. Such a definition is reminiscent of those prescribed by preference utilitarianism merely at first sight. It is the application of the principle of ethical gradualism as a universalizable principle adopted by humans as moral discussants which allows the treatment of other living beings on their behalf for the sake of reaching other living beings' well-being.

Adopting such an approach would mean to replace the discussions about over- and under-population with the ones about vital needs and wants, as well as to reveal how they matter for both human and non-human species. This would help the extremes of thinking in the paradigms of either bio-fascism or radical anthropocentrism to be avoided. Even if ethical gradualism cannot solve all problems, it could at least decrease the cases when intra and intergenerational justice for humans are achieved by causing intra and intergenerational injustice to other species and the other way around. Thus some moderate forms of eco-centrism and anthropocentrism can be encouraged.

In turn, the democratic discussions on selective downscaling of human made capital (Asara et al., 2015, p. 377) should aim at reaching an enlightened consensus regarding what are vital needs of the participants in the welfare state. The selection in question is not a restriction but a graduation of choices which requires taking the full responsibility for the choices made. However, rethinking quality of life as a matter of well-being which concerns

the fulfilment of vital needs raises some important questions such as how can we make both ourselves and others give up the wants announced as vital needs? The number of beings involved continues to be worthy but in a different sense. It requires graduating vital needs in respect with the wants by the practices of moral learning and moral criticism for as many humans as possible.

In the welfare state, solidarity revives the interest in global environmental justice as something more than an abstract concept. Socially sustainable de-growth reveals how reaching sustainability is impossible without building a new ethics. This is due to the fact that changes in numbers are not obliging humans to act even if they understand the negative effects of the lack of change. The change arises from turning the obligation into a self-obligation for preserving the vital needs of others even if they counter our own wants and even needs. Otherwise, we would not be able to proceed much further in comparison to the speculations whether or not Malthus was right or wrong in pointing out the risks of the exponential growth of human population.

NOTES

1. I would like to express my gratitude to Dr. Heikkurinen for his thoughtful comments regarding this paper.
2. Such an example can be found in what Goodland defines as social sustainability. Social sustainability has characteristics such as honesty, shared values and even ‘moral capital’ (Goodland, 1995, p. 3) which have clear moral implications but are not examined in an ethical sense.
3. It also illustrates the clear anthropocentric implications of defining risk as a risk to human health alone (Du and Pan, 2009).
4. According to Goodland and Daly, intermediate sustainability requires ‘in addition to maintaining the total level of capital intact’, proper attention to be given to defining the critical levels of each type of capital (Goodland and Daly, 1996, p. 1006).
5. Strong sustainability requires ‘maintaining different kinds of capital intact separately’ which in turn means to treat natural and human made capital as ‘complements in most production functions’ (Ibid). Goodland and Daly argue that not knowing the boundaries of the critical limits for each capital can also affect ‘the sensible person to err on the side of caution in depleting resources...at too fast a rate’ (Ibid).

6. According to Goodland and Daly, 'growth' refers to added value, but sustainability requires that 'we disaggregate what part of the value-added increase is due to quantity change (throughput) and what part to qualitative improvement' (Goodland and Daly, 1996, p. 1004).
7. Goodland argues that countries which sustain themselves rather than liquidate their resources 'will be more peaceful than countries with unsustainable economies' (Goodland, 1995, p. 4). Analyzing this example in economic terms alone, we cannot find an answer to the question why economic sufficiency is merely a necessary condition for having a peaceful foreign politics.
8. A part of the problem with overrating the engineering capacity of humans is due to recognizing its omnipotence within 'the prevalent order of capitalism' (Heikkurinen, 2017, p. 451).
9. Quoting Daly, Harris points out that 'the angelization of GDP' has its limits (Harris, 2013, p. 38).
10. Saying this, however, I do not argue that the process of cultivating awareness should be narrowed to the over-consuming classes alone. What I would like to emphasize is that targeting the latter is the first step in starting the transformation to a socially sustainable de-growth society.
11. The paradox is a result of how some radical scenarios such as bio-fascist ones misinterpret the main premise of strong sustainability, namely that natural capital is irreplaceable with the human made one. The proponents of these scenarios rely on the aforementioned premise, whilst appealing for the destruction of the human made capital at the expense of the natural capital. Such scenarios can be referred to what Goodland and Daly call absurdly strong sustainability (Goodland and Daly, 1996, p. 1006).

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