Routledge
Taylor & Francis Group

Economic Research-Ekonomska Istraživanja

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rero20

The value of sacrifice in (post-)growth scenarios

Valentin Cojanu

To cite this article: Valentin Cojanu (2022) The value of sacrifice in (post-)growth scenarios, Economic Research-Ekonomska Istraživanja, 35:1, 4322-4339, DOI: 10.1080/1331677X.2021.2013272

To link to this article: https://doi.org/10.1080/1331677X.2021.2013272

Published online: 10 Dec 2021.

ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA
2022, VOL. 35, NO. 1, 4322–4339
https://doi.org/10.1080/1331677X.2021.2013272

The value of sacrifice in (post-)growth scenarios

Valentin Cojanu

Bucharest University of Economic Studies, Bucuresti, Romania

ABSTRACT

This is a conceptual paper, which contributes to the debate on the measure of intergenerational sacrifice and advances a post-growth theoretical framework that becomes intelligible within a wider space of deliberation, at once economic, social, and moral. We explore the three-pronged argument in two parts. First, we examine the implications of the socio-economic mechanism of the transition of the production mode from extractive to generative, which is envisaged to replace the market automatic response by allocative efficiency. A second part tackles the moral reason underlying decision-making. Drawing on the lessons of the post-growth debate, we propose and defend a working definition of the moral reason of intergenerational justice that should also underpin our rationalizing about other issues of similar importance regarding the obligations we owe to future people, such as passing on languages or containing epidemics.

ARTICLE HISTORY
Received 26 February 2021
Accepted 27 November 2021

KEYWORDS
Nature; ecology; morality; society; non-identity problem

JEL CLASSIFICATIONS
B41; B59; Q51

1. Introduction

The once dominant concerns about depletion of finite resources and population growth have been supplemented of late with controversies related to the measure of sacrifice that we have to accept to ensure the equivalence of living standards between the present and the future. The sense of urgency is overwhelming insomuch as the academic world (e.g. Galbraith, 1996; Kallis, 2011; Nelson, 2013; see also Eriksson & Reischl, 2019) prioritize a bit unusually for their vocation straightforward action over lucid reflection. Apparently, humankind is unable or unwilling to transgress the scale of human experience (Zylinska, 2014, p. 44; Hamilton et al., 2015) in search of a livelihood pattern that would put neither nature's nor humanity's existence in question. The alarmed tones feed on relentless streams of findings forespeaking climatic cataclysms with impact on earth's biota. Probably the most disturbing of all is the advent of the Anthropocene (Crutzen & Steffen, 2003; IPCC, 2021; Steffen et al., 2011): human intervention has already put in motion changes presaging environmental doom, with or without further action.

CONTACT Valentin Cojanu cojanu@ase.ro

People react to doomsday scenarios in a way that reflects their cultural heritage. Past lends itself to no recognized models. Various ethical dispositions succeeded one another from foragers' time of raw utilitarianism and animistic beliefs until present times of educated altruism and anthropocentric awareness. Diamond's (2005) panoramic view of past societies' collapse[1] attempts to set a reference in this debate. He suggests four explanatory patterns, within which "the society's responses to its environmental problems … always proves significant" as a contributing factor (2005, p. 11). Two patterns are characteristic of unconscious acts leading to "ecocide": "unintended consequences" of a society's "best efforts" to anticipate or to perceive (or detect) ecological problems (2005, p. 6, 10); the other two are, on the contrary, reflective of purposeful decisions: failure to solve and to succeed in arriving at successful decision-making to overcome foreseeable collapse (2005, pp. 420–421).

We start out on the assumption that present scholarship offers an accurate and predictable view of the threat humanity withstands in consequence of environmental damage. The degree and timing of harm associated with environmental predictions, anticipations, and scenarios (see Düwell et al., 2018; Spash, 2002) suggest we may err on a false positive in embracing our presupposition, but it is the questions raised by the last two patterns in Diamond's framework that match at best our present concerns about the value of sacrifice in intergenerational equity. *Failure to solve* points to shortcomings in agreeing on corrections, which are deemed both necessary and sufficient, to reverse the civilization's fate. *Failure to succeed* is indicative of a "clash of values" (Diamond, 2005, p. 420) that impedes our scientific and policy-oriented efforts to make (further) progress even if we may be willing to embrace converging lines of action.

The two queries will organize the remaining of the paper in the form of a conceptual development about the scientific and moral grounds of "economic" growth. In the next three sections, we review the present attempts at *solving* the equity dilemma between present and future generations starting from the economism perspective, which is the economics' dominant view about the centrality of *growth* in any blueprint of action. One two-pronged question looms large in this debate: Should the concept of growth be reconceived on environmental grounds? And, if rescaling of production and consumption is indeed a feasible option in post-growth scenarios, how could it engender an acceptable measure of sacrifice, that is acceptable to both present and future generations? The answers point to a compounding agenda of Nature – Market – Society (NMS) relations that ask for an integrative resolution possibly adding a cultural – ethical – accent to current disciplinary and technological breakthroughs. A separate section draws on that lesson and suggests a view to prefigure the appropriate moral norm underlying decisions with environmental impact between us and people in alternative futures. We frame *successful action* in terms of the culture of growth and fairness that could become intelligible from both a rational and moral viewpoint.

2. The growth paradigm: from economics to ideology

A sense of irony is inescapable in the context of current targets to abate the Anthropos' environmental degradation towards emissions levels set on the verge of

the first industrial revolution. It was by then when the very growth mindset which guides presently policy recommendations began taking shape and eventually led to that outcome in the first place. In this section and the next one, our argument runs from the origin of the growth paradigm as a scientific yardstick for progress to its subsequent development into an ideology that has captured decision-making towards future generations.

Acknowledgment of the harmful impact of human interaction with nature had been voiced before the economy began to coevolve around fossil hydrocarbons and their associated technologies at the turn of the 18th c. (Fressoz, 2015). By that time, however, the progressist theme of liberalism began taking shape and eventually epitomized, not only in the confines of Western culture, but also much beyond it (Goody, 2006), the geoculture of the "new world-view of modernity" (Wallerstein, 2011, p. 5). John Stuart Mill, the authoritative voice of the then nascent economics, gave voice to one of this civilizational mindset's emblematic expressions: "[T]here is no reason to doubt … that most of the other nations of the world, including some not yet founded, will successively enter upon the same career … the unlimited growth of man's power over nature." (Mill, 1848, p. 696)

The prospect of continued growth became an exemplar of "the modern conception of the 'economy'" by the 1930s (Schmelzer, 2016, p. 75). When, in the 1940s, it intersected the statistical technique of valuing a country's Gross Domestic Product (GDP), economics' influence on people's belief in their ability to manage *the future path* only strengthened. The growth of *GDP value*, i.e. economic growth, was to define so profoundly the economic theory as to acquire a sort of mystical belief (Norgaard, 2019; Van den Berg, 2014) within the profession, despite its frequent depiction as a misleading yardstick of human progress, then, as now (Fforde, 2013, p. 47; Goody, 2006, p. 25; Haapanen & Tapio, 2016).

Norton (1989) outlines two major versions of the environmental discourse – *exploitationism* and *conservationism* – that were incorporated in the economics' growth mindset. In the *exploitationist* view, the intrinsic value of growth resides in "the need to create durable goods and capital which would be useful to future generations in the pursuit of prosperity" (Norton, 1989). According to this logic, the wealth effect or what Mill referred to as "an advancement of … material prosperity" (Mill, 1848, p. 696) will make future generations better off than the current generation as result of economic growth. This reasoning is valid if we choose to ignore some of its fallacious assumptions. One stands out among them: the value of GDP, or of all the final goods and services produced in a country, for the benefit of human wellbeing.

The error of this judgment is apparently as much grandiose as the effort required to counter it. Two recipients of the Sveriges Riksbank Prize in economic sciences, Amartya Sen and Joseph Stiglitz, were called upon to dislodge the growth paradigm (Stiglitz et al., 2009), whereas other scholars were striving to reach the same end to no avail (see Daly, 2019; Gadrey, 2004; Lennox & Hollender, 2020; Spash, 2002). Their criticism rests on two antipodal arguments. On the one hand, the GDP valuation counts transactions that do not contribute to wellbeing. This "uneconomic growth", based on the gratification we allow ourselves when dealing for instance with military acts, policing, and repairing (e.g. pollution clean-up), or unconstrained use of

natural resources, illusory adds to our present wealth. On the other hand, GDP valuation that omits irreplaceable work, socially necessary, like unpaid household production (e.g. childcare and housekeeping), volunteer work, or environmental damage necessarily extracts from future benefits.

At the same time, the parallel venue of the *conservationist* approach added a nuanced view of growth qualified by "the scientific use of natural resources … to maximize productive sustainable outputs over time" (Norton, 1989). Within this stream of thought, vicious dispositions towards, for example, depletion of Earth's resources base or uncontrolled interventions disrupting the eco-systems may be apparently mitigated by *creating* markets. The textbook prescription for *missing markets* acknowledges the shortcoming of the GDP metric that overlooks critical, yet non-marketable factors of *good life* like clean air, nonpolluted water, or safe climatic conditions, and accordingly justifies *a visible hand*. The scientific management of resources comes down to policy interventions to set up competitive markets that are able to guide resource allocation using prices for the coordination of market actors who supposedly are capable to instil into the market the alleged virtue of, say curbing emissions, or abating any environmental harm for that matter, to a socially tolerable level. In the end, a combination of the two perspectives, *exploitationism* and *conservationism*, set the stage for the received knowledge of the value of sacrifice which we explore next.

3. The value of sacrifice in the economism perspective

Economism is a genre of reductionism (Sayer, 2010) that turns complex representations of a society's economic strata into one-dimensional views revolving around the centrality of market order and its self-regulatory mechanism. Disciples of economism, who happen to dominate the profession (Fforde, 2013, p. 10; Komlosy, 2018), show a high degree of confidence in transforming the world by the sheer force of *ideas* insofar they relate to their paradigm, usually ensconced in *quantitative reasoning*. A measurable amount of sacrifice to fend off future harm is such an idea. For example, we may incur costs amounting to (a) between 1.5% and 4% of global GDP to meet the Paris agreement target of no more than 2 °C temperature increase above preindustrial levels (see Harris & Roach, 2017), or (b) around 1% of global GDP each year, whereas if we don't act, we are predicted to lose at least 5% of global GDP each year (Stern, 2006, p. vi).

Intertemporal discounting serves to yield a measure of welfare equivalence between present and future generations. In fact, as economists inform the Intergovernmental Panel on Climate Change (IPCC), it is the 'only method' in economics to cover 'satisfactorily' ethical considerations, because distributive justice 'can be understood as a value: specifically the value of equality' commensurable by 'consumption changes in the future by equivalent changes in consumption today' (Kolstad et al., 2014). The equivalence results from a complex estimate of the discount rate ρ (rho), known also as the Social Discount Rate (SDR), derived from parameters δ (delta) – the pure rate at which society discounts the utility of future generations, g (gamma) – the growth

rate of per capita consumption, and η (eta) – the declining marginal utility of income, so that $\rho = \delta + \eta g$.

Born out of a combination of educated guess, historical statistics on growth, and anticipations of behavioural finance (Baer & Spash, 2008; Kolstad et al., 2014; Meade, 1973, p. 60), SDR is a typical finding of *economism* that aims to answer *how much* rather than *what* value is (Graeber, 2001, p. 46). Their followers, of various methodological dispositions though they may be (see Gowdy et al., 2013), argue that intertemporal discounting approximates well people's concerns about future generations due to the internal coherence and rigour of the underpinning analytical techniques. Their point is typified by a numerical estimate, which suggests, as in Kolstad et al. (2014) for example, that at $\rho = 15.20\%$ for China, the equivalent today of the benefits of future generations represents 1.4% after 30 years and 0.07% after 100 years. What this appraisal says is that the more distant in time and the higher present growth rates the less incentives we find to change or defer current decisions. According to the same logic, a country recording negative growth rates would not allow for wealth to accumulate and hence should agree on steep measures of sacrifice for the benefit of future generations.

Criticism of the economism perspective has become eventually a victim of its own (academic) success, producing interminable if erudite pleas without converging though onto a common ground. For some (e.g. Foster, 1994; Moore, 2014; Spash & Gattringer, 2016), strong valuation of sacrifice – i.e. commensurability – is deficient because it inevitably neglects values of less measurable yet as much important for intergenerational equity, such as burden-sharing among countries, food sovereignty, or responsibility for historical emissions. A separate yet related thread of controversy is that intergenerational equity finds only partial responses in the environmental debate. As Gosseries (2008) observes, other matters of global concern, such as funding of pension schemes or passing on a language, demand equal claims that ultimately require 'a complete revision of our general theories on justice.' Other scholars (Haapanen & Tapio, 2016; Norton, 1989; Zylinska, 2014, p. 19) explain the impasse by the mere absence of 'logic' or 'critical thinking', or, conversely, by immersion in a 'fantasy' mode of ratiocinating (Fletcher & Rammelt, 2017) underlying the quest for viable policy options.

All these strands of criticism reveal the need for a line of thought that embraces at once the whole complexity of the problem of intergenerational equity and not just parts of it. In the economism perspective, the issue of *on what ground, one should care (about the future)* is reduced to a valuation of sacrifice as a function of *distance* between generations, whose pace (i.e. rate of discounting) is given by growth trends. As time elapses, subduing uncertainties affecting personal or community well-being may construe a bias towards future, but any further into the future reverses the precautionary attitude towards high discounting rates. To know where eventually a rate settles on the moral ruler between selfishness and selflessness requires complex understanding of the social (Gosseries, 2008; Gowdy et al., 2013; Van den Berg, 2014). The complexity, however, does not reveal itself as challenge to discounted utility, but points to reflective paths of investigation that transgress the areal of growth-related decisional events alone.

4. Revaluing sacrifice in post-growth scenarios

The early literature announcing the emerging current of post-growth thinking (Daly, 1977; Gabor et al., 1978; Georgescu-Roegen, 1971; Meadows et al., 1972; Söderbaum, 1982) projected the transition to a new mode of production in a way that would account for (a) the exhaustible character of natural resources; (b) the nature's limited capacity to provide renewable resources (e.g. oxygen, clean water, wind, pollination, etc.); and (c) the irreversible effect of human activities in the direction of increasing entropy. These tenets have given birth in time to various, overlapping strands of post-growth economics such as green growth, de-growth, steady-state economy, selective growth, evolutionary economic change, or a-growth. Their message cuts across diverse anti-establishment movements (see Bauwens et al., 2019, p. 35; Ioncică & Petrescu, 2016; Lennox & Hollender, 2020; Moore, 2010; Parrique et al., 2019, p. 58; Zylinska, 2014), but essentially all identify themselves with the goal of controlling growth to the end of preserving *good life* between us and future people.

We attempt to confront the model that emerges from post-growth revisionism, which we outline in Table 1, with the challenge of its being up to the task to provide a non-nonsensical answer to the value of sacrifice.

Table 1. Outline of post-growth scenarios.[a]

Core components of phased-in transition	Features	Impact
Assumptions	Accelerated rate of extinction of Earth's biota Accelerated rate of producing high-entropy throughput Finite resource base Risk of social and environmental collapse at planetary scale	A fair distribution of burdens and benefits between communities within the planet's ecological limits
Short- and medium-term policy goals	Developing national accounts of wellbeing Building carbon-saving public assets Downscaling of production, consumption, and waste of goods and services for all non-renewable resources Decoupling-targeted policies Shift in the burden of taxation from economic goods (e.g. incomes) to ecological bads (e.g. pollution) Developing community-based assets (e.g. bonds, currencies, habitats, commons)	Improving the work-life balance
Long-term policy goals	Ecological education and training of ecologically literate workforce Better standards on product durability, sustainability, and fair trade Reform of the multilateral trading system	Creating resilient eco-communities Framing issues of social-ecological justice

a) The plural is meant to emphasize the perspective of various yet related streams of thought within the large basin of post-growth scholarship. No dominant 'grand theory' exists yet, one that would perform not as a disciplinary specialization like 'ecological economics', but like the science of economics itself.

Sources: Compiled from Spash (2002); Jackson (2009); Kallis (2011); Parrique et al. (2019); Bauwens et al. (2019)..

Understanding of sacrifice in a post-growth scenario should overcome first the difficulty of escaping economism's reductionism and finding a substitute for monetary valuation within a wider space of deliberation, at once economic, social, and moral. In this space, to make a value a legitimate value amounts, as Williams suggests, to acknowledge 'disagreements about that particular value that is of interest to us … in a way that we can culturally recognize' (Williams, 1995, pp. 136–138). It is under the influence of this original conflict over one or another facet of the issues traversing the spectrum of human life that we can make sense of the claim a value lays on us.

We adopt here the terminology of Kelly (2012) and Bauwens et al. (2019) to ground the ecological discourse in the original conflict of an economy that can embrace a dual course, extractive and generative towards people and nature: 'extractive', when value, social, economic, and environmental is extracted from the common good; 'generative', when value is added to commons (Bauwens et al., 2019, pp. 8–35). Values that so emerge and enter the post-growth discourse such as intergenerational equity, preservationism, or climate debt are meant to address a novel civilizational stage of humankind, at the same time 'ecologically and socially literate' (Jackson, 2009) and 'ideologically and ethically open' (Brown et al., 2017; Söderbaum, 2019). Accordingly, we explore the three-pronged set of implications, i.e. economic, social, and moral, for a successful resolution to the proper measure of sacrifice in two parts. First, we examine next the configuration of the socio-economic mechanism envisaged to replace the market automatic response by allocative efficiency. A second part, on the moral reason underlying decision-making, constitutes the subject matter of the following section.

The transition of the production mode from extractive to generative trades off stability and efficiency for sustainability and sufficiency. Market and growth are demoted from analytical to descriptive features of the economy; now to the fore come the sustainable scale of economic activity and decoupling, a byword to denote the subtraction of 'uneconomic growth' from the value of economic output. The revised perspective does not just claim to lay out better premises for an ethical valuation of present and future net gains: it is conceived from the outset as a scholarly response to the intergenerational dilemma.

Although the self-correcting, self-stabilizing market mechanism is no longer of analytical interest, the weight of the argument lies further with a similarly imagined state of the economy – the stationary state – towards which ultimately the volume of activity is projected to settle on. The concept is usually referred to J. S. Mill, who reflected on the limits to 'the possibility of unlimited pursuance of riches' (Mill, 1848, p. 746), and is meant to denote a state (or scale, or size) of economy that would allow human needs to be met 'within the ecological limits of the environment' at a lower rate of material, resource, energy (MRE)-intensive throughput (Daly, 2019; Lennox & Hollender, 2020). The possibility of a stationary state is apparently 'desirable', wrote Mill, to accord with his fictional portrait of human nature in which, 'while no one is poor, no one desires to be richer' (Mill, 1848, pp. 748–749), although he also expressed doubts about its feasibility, for 'the energies of mankind should be kept in employment by the struggle for riches, as they were formerly by the struggle of war, until the better minds succeed in educating the others into better things' (Mill, 1848, p. 749).

It may be true that time is indeed ripe now for ecology to educate people 'into better things', but it appears that Mill's plea for self-controlled progress leaves us nevertheless without an orientation beyond the growth imperative ('the struggle for riches'), let alone one addressing the environmental impasse. Instead of a blueprint of economic policy grounded on the concept of 'stationary state', post-growth scenarios seem to be heading purposefully to a direction of vague contour in the absence of a representation of the value of sacrifice. Key decisions, for instance as regards consumption, investment, production, or money supply, challenges the post-growth revisionists with an articulate vision of economic policy, whose outline they 'just don't know' (Jackson, 2009, p. 77). There are at least three questions marks, about scale, specialization, and governance, that make us aware of this leap into the unknown.

The notion of a 'sustainable' scale has been debated for long in the context of observations about the fragility of the ecosystem. It takes first on a purely scientific idea construed around the balance between people's ecological footprint and Earth's biocapacity (see Lennox & Hollender, 2020; Rockström et al., 2009; Xu et al., 2020). Subsequently, versions of value-laden significance have become prominent too. Some, like 'fair ecological footprint', 'ecological integrity', or 'ecological debt', have been developed to emphasize responsibility in conducting market transactions in respect to global environmental constraints (Jackson, 2009, p. 77; Hoffmann, 2011; Victor, 2012; Spash & Gattringer, 2016; Global Footprint Network). Others target values transcending polities and ethnicities such as 'safe environment' or 'ecological justice'. Thick concepts like 'neighbourhoods' (Sen, 2009, pp. 171–173), historical narratives (Moore, 2014), or 'commoning' (Bauwens et al., 2019, pp. 3–6) have added a further dimension of scale, namely human geography. In environmental terms, territory writ large is less a source of factor substitution at country level, according to local conditions of endowments and efficiency, than one of creation and maintenance of shared resources for *good life*.

The multifaceted view of scale, technical, ethical, and geographical suggests how difficult is to act against our inclination (or education) to reduce all different spheres of interactions to a single rational calculative process (Graeber, 2012, p. 95; Zylinska, 2014, p. 43). The impediment reveals itself even more impervious to clear-cut solutions when dealing with the issues of specialization and governance. The former informs about the productive structures that should accompany decoupling and other post-growth strategies as effective, worth pursuing targets of economic policy. The latter answers questions about our capability to carry on this transition. Are we able to make it palatable to ordinary and businesspeople alike? We are mostly used to learn of this life-changing concerns resurfacing in historical not living memory.

Let us first tackle the issue of specialization, which happens to foreshadow for long present-day post-growth revisionism. Veblen was among the first to admit the existence of 'parasitic industries … directed to turning out goods for conspicuously wasteful consumption' which 'would lower the effective vitality of the community to such a degree as to jeopardize its chances of advance or even its life.' (Veblen, 1904, p. 64) In Veblen's footsteps, a handful of economists subsequently advocated for a radical change of economics to correct its reductionist approach (e.g. Ayres, 1944;

Coase, 1988; Galbraith, 1958; Georgescu-Roegen, 1971; Myrdal, 1957), but found no niche of expression as influential as the orthodoxy. In consequence, the post-growth recipe has been never worked out systematically. Until our days, its guidance announces visions rather than policy items; emphasises alternative ways to organise society rather than sustainable economic change (see Fletcher & Rammelt, 2017; Nasiritousi et al., 2014); and indicates an elusive if not disconnected response from constituencies, focusing on government as a major driver of change rather than local bottom-up approaches (Cosme et al., 2017; Soder et al., 2018).

The vague direction is announced by all-purpose interventions, e.g. human-capital intensive services, medical care, energy-conserving manufactured capital, decentralization of banks, or ecological maintenance and protection, and accompanying instruments such as controls on advertising, environmental and consumption taxes, general redistributive taxation etc. (Jackson, 2009; Buch-Hansen, 2018). More amenable to pragmatic interventions seems to be the old-fashioned active industrial policy, among which most notably is the shift in focus from efficiency to sustainability to target 'activities that have the lowest impacts' (Victor, 2012), or, in other words, that are most generative and least extractive. A series of such measures includes, for example, downscaling production and consumption related to *dirty* sectors, emission-intensive inputs, or investments in climate-vulnerable sectors, whereas in parallel resources are prioritized towards renewables generation, carbon storage, or geoengineering. Transversal sectors like finance and administration have already taken the lead in ensuring that new, 'green' regulations be in place (Kemp-Benedict & Kartha, 2019; European Commission, 2020; The Climate Action in Financial Institutions Initiative).

Reflecting the various options of restructuring, from declarative to pragmatic, the measures of economic (and social) impact vary from catastrophic and unfeasible (Tokic, 2012) to possibly dramatic (Jackson, 2009; Kallis, 2011) to manageable (Svenfelt et al., 2019; CLG Europe, 2020). The estimates range results from a wide set of assumptions, which mostly refer to political decisions, foreseeable business decisions, as well as customary norms of various jurisdictions. Against this background, it is safe then to admit that the varying costs we project on the way to a new mode of production are rather incidental to scientifically determined targets (see Eriksson & Reischl, 2019; Nasiritousi et al., 2014; Parrique et al., 2019, p. 15).

If a decline of sort of economic activity or a rise of novel employment opportunities are inescapable on the path to sustainability, so are suffering, austerity, and resistance to change for the most affected thereof. The main item on any scholarly and political agenda would be to configure a prospect for which that sacrifice is worth making. The principle of voluntary sufficiency, 'a conscious and democratic limitation of ends' (Foramitti et al., 2019), provides a starting point in this attempt. There are several possible social demands on the table, an eclectic cluster of propositions though, varying from conventional to untested to not necessarily targeting sustainably economic goals. A set of examples includes:

- Universal income; reduction of working hours (e.g. 21-hour working week); not-for-profit cooperatives; open software and hardware; social enterprises; open contributory systems; shared ownership; cohousing; community gardens;

community-supported agriculture; solidarity economy networks; eco-communities; work sharing; time-banks and job guarantees; commons-centric community currencies (e.g. Bauwens et al., 2019; Foramitti et al., 2019; Kallis, 2011; Kawano, 2018).

How they are supposed to complement each other and make for a full-fledged scientific theory is, again, a practice not worked out. The direction of change seems to rest on the critical aspect of governance, economic and environmental, which, for some observers (e.g. Eriksson & Reischl, 2019; Thorseth & Schuppert, 2018) looks rather outdated, lacking many of the necessary instruments to deal with the climate challenge; for others (e.g. Zwarthoed, 2018), it is well ahead of its time counting on a relatively mature framework of legal and political instruments to represent future generations. Yet, however corrigible or progressist a governance setting may appear, it should also be prepared to account for the democratic deficit: how much and how soon are people expected to align their attitudes to an ecologically conscious path to wellbeing?

5. What obligation do we have to future generations?

Drawing on the lessons of the post-growth debate, we propose a working definition of the moral reason of intergenerational justice set out on the acknowledgment that no generation has most or decisive or enough reason to make *any* sacrifice for future generations. We ground our position in two complementary interpretations of the value of sacrifice: one about the nature of this obligation, another about its moral requirements.

We recall here that one way out to part with economism has been to embrace a perspective on *value* as emerging in a deliberative context about disagreements. The value of *sacrifice* is relative to our adjudication in respect to a wide set of choices derived from technical, economic, institutional, and social calculations. The available options may also take stock of interventions that are not directly targeting environmental harm but nevertheless partake of the post-growth mindset, like 'social care' or 'work-life balance'. Between the conflicting demands of a generative and an extractive economy, the social value associated to the economic action seems to result from a reflective, democratic way of deciding on a 'consumption corridor' (Büchs & Koch, 2019), an idealized consumer preference varying between minimum standards for *good life* and maximum standards to ensure a prospective limit on every individual's use of natural and social resources, from present to future. As emphasized early in the literature (e.g. Nelson, 1977; Söderbaum, 1982), such deliberation on complex social systems requires democratic legitimization, adaptation and learning, conflict, and consensus. These are epistemological requirements that go well beyond the economism perspective; they call for a radically new mindset.

In this view, the concept of 'distance' ceases to play a role in moral deliberation: wrongness does not dissipate in time (or space), neither can it be reduced to a universal moral norm – i.e. discounting future benefits of growth – that dictates the terms of wellbeing equivalence between generations. It makes no difference from a

moral viewpoint to qualify our decision on temporal distance, any more than it does for remoteness in space (Parfit, 1984, p. 357; Spash, 2002, pp. 234–235). To settle disputes in the latter case, we are used to set up complex institutional frameworks in relation to say harm done on people residing in distant places. If remoteness in time could bear on more moral significance than remoteness in space, we would then act less than fully rational unless we would also rule according to a Spatial Discount Rate.

This is a sort of dilemma that Parfit attempted to solve by means of a thought experiment he called the 'non-identity problem' (Parfit, 1984: Ch. 16). He created a template of two policy choices – Depletion and Conservation (of resources) – and asked about their effects on lives 'worth living' in the further future. Since either choice will affect inevitably the identity of most of the people who will live in the future, on a moral norm he calls 'the Two-Tier View' we may have reason to construe a bias towards the near: 'because these lives would be lived by different people, these acts would not be worse for any of these people.' (Parfit, 2011, II: 219). This is a scenario that strongly calls for a moral resolution as regards the interests of future people based on two grounds. First, we have no reason to justify collective future harm even if the effects would be worse for no one if each of them lives a life worth living which would not have existed in alternative futures. If we had that reason, we should also consider whether future people are entitled to a higher quality of life when we agree on some stringent measures of sacrifice; or, conversely, to reclaim a right to a clean environment that past generations owed us. Second, if we conceal the non-identity problem, we falsely believe that our present choices will affect the very same people that will later live (Parfit, 1984, pp. 372–373). Inevitably, on this premise, we return to an assessment of the present value of future costs (in alternative scenarios) when in fact our purpose is to correct defects in future generations' time without causing more serious harm for present generations.

Parfit's experiment is one among various attempts (Gowdy et al., 2013; Singer, 2016, p. xxvii; Van den Berg, 2014) that purport to make moral sense of our evolutionary automatic responses immune to such cases as helping distant strangers. Considering *how harmful* and *how soon* future subjects' destiny *is* affected by our decisions takes us on an ethical route that goes beyond monetization. In dealing with alternative futures, as with counterfactual past, history and culture join our biological nature to alter conceptions of what makes or does not make something 'important' on very long-time scales (Behrens, 2012; Choy, 2018; Silberbauer, 2000). What we owe to future people, suggests Norton (1984), is rather framed in terms of a responsibility analogous to that accepted by an individual who is appointed executor of the trust fund: although decisions affect individuals and their well-being, 'the obligation is to the integrity of the trust, not to those individuals' (Norton, 1984).

Yet, to see how the trust fund logic works we should look further than the initial analogy. *On what ground, one should care (about the future)* presupposes moral requirements of adopting some value of sacrifice of a different kind than the nature of property. The *integrity* of Earth's health, people included, signifies different things to different people (Nasiritousi et al., 2014; Zylinska, 2014, pp. 44–45). It is for that

reason, Singer (2016, p. 19) thinks, that we have become captive from a moral viewpoint to the deliberative realm of the supererogatory, of what is good although not required, which leaves us within a range of interrogations that eventuate in a deliberative dead-end. This is an impasse which moral philosophers refer to, in the footsteps of Sidgwick, as 'the profoundest problem' in ethics because, as Parfit explained, 'impartial and self-interested reasons are *wholly* incomparable. *No* impartial reason could be either stronger or weaker than *any* self-interested reason' (Parfit, 2011, I: 132; our italics).

The habitual way to surpass the clash of environmental values has been to exploit our own species' cultural bias. On this disposition, we show concern for human, as well as for non-human and non-animal interests to varying degrees of benevolence towards nature's preservation. The hypothesis of the anthropocentric imprint is illustrative: nature is an expression of culture and people attempt to answer what is the common good to the extent it is already addressed in what is to live well. Recognized in the literature as early as the 1960s (cf. Maris, 2015), the cultural bias of subduing nature has been a gradual and irreversible progression of human spirit from the time of the Agricultural Revolution to the present-day advance of artificial intelligence. A preference value for blighted landscape, for example, can only be manifest in the context of deliberately pondering over our capacity to keep it intact. Endowment with 'natural rights' (of humans and of other species) follows the same logic inferred from the technological control over nature. We advance therefore the hypothesis that the value of sacrifice stems from a logic of Earth's *integrity* depending on our affirmation of independence towards nature, based on 'admiration and respect' (Williams, 1995, p. 237) rather than on imposing our morality, in all its varieties (Spash, 2002, p. 223ff), on nature as a product of humanity.

Field research reveals practices of approaching nature resembling humankind's animism of long ago. Usually, they engage the researcher with people of small communities, detached or not from 'civilization', that are struggling to counter the impact of the marketplace on their ancestral identity. They retain a sense of well-being when, for example, they are able to attach "old-growth forests" to "ancient mythologies, fantasies of wilderness, … and more generally to 'naturalness'" (Järvensivu, 2013). Or, when their native inclination for interventions based on historical or experiential precedence builds up a genre of knowledge about "properties and uses of natural species, … material artifacts produced as part of cultural practices, … therapeutic techniques and the associated symbolic language; and the public display of games and rituals that provide a glimpse into their lifestyle and cosmogony" (Vereta-Nahoum, 2019; see also Lévi-Strauss, 1962; Choy, 2018).

For Maris (2015), this is a lesson to be considered 'a great asset in facing the present environmental crisis,' because it is meant to pave the way to 'a conceptual, and possibly practical' task of returning to a 'nature not intended for humans.' Eventually, it teaches us the rules of engagement with nature so that attitudes and values of co-existence be encouraged and willingly adopted. If progress has any ultimate significance it might just consist of the fact of enjoying a greater chance now than in the past to amend our moral categories in response to new social circumstances.

6. Concluding

The ecologically oriented economics advances one ambitious message: a (new) social contract is long due to give humankind the chance of good life and rescue the planet from imminent self-destruction. It is a revolutionary point of view, at times even waged from militant positions, that engenders equally grand expectations about its agenda. However, the items on this agenda do not seem yet to fulfil the promise: some are well established, but others need further work and possibly corrections, and all struggle to get accepted in the mainstream.

We did not attempt in this material to contemplate the nuts and bolts of an exceedingly generative mode of production, but, lesser ambitiously, to search for its disciplinary and moral prerequisites. Our attempt has pointed to two critical articulations along the way: for one thing, to the scholarly resistance to dislodge the economism view, but also to the incomplete effort to come up with a similarly dominant yet alternative mindset; for another, to the moral resistance to evade the idealistic view of valuing nature's worth as a process independent of how we relate ourselves directly to social action, including how we think of other people's lives. More than other instances of social action, inter-temporal valuation draws attention to the fact that the social sphere is confined to the cultural patterns we recognize, and which lend legitimacy to our resolutions. There is no rule that can give us certainty about the justice of our moral judgments. At the same time, the deliberative processes are culturally conditioned: the responsibility and legitimacy of our resolutions are anchored in the community practice bounding our experiences.

If present civilization has not secured yet a feasible and widely accepted *modus vivendi* to overcome the environmental dilemma, as they did when confronting other global threats – e.g., containing world wars, or alleviating mass poverty – it is because, we have argued, the way we contemplate our relationship with nature is plagued by one irremediable deficiency – a two-viewpoints logic of superimposing our culture's values on the intrinsic value of the nature itself. The possibility at first to conquer nature and then to master it bequeathed a representation of reality not only illusory, as expressed in the growth paradigm, but also paradoxical. Williams points to the inevitable frustration engendered by this unfortunate coincidence: 'The paradox is that we have to use our power to preserve a sense of what is not in our power. Anything we leave untouched we have already touched. It will no doubt be best for us not to forget this, if we are to avoid self-deception and eventual despair.' (Williams, 1995)

Acknowledging the morality's limits does not provide, however, a reason not to prepare ourselves for a radically different social, political, and economic organization. The current economic recess unexpectedly offers the opportunity to go through a period of rapid change in our organizational canons, productive, financial, and educational, which is a rare experiment in economic life if one can speak of any at all. To ease the understanding of how this experiment may unfold, we have prepared and discussed the highlights of the new agenda as introduced in Table 1. Accordingly, we can relatively easily predict a stage evolution that should lead us on the way from imminent tasks – e.g., ensuring fair distribution of burdens and benefits between communities within the planet's ecological limits – to complex policy interventions

aiming at an ecologically adjusted work-life balance and eventually to an inter-generational manifesto conducive to creating resilient eco-communities and framing issues of social-ecological justice. The perennial caveat, however, rests on humankind's capability to solve "the clash of values", within which Diamond (2005) so emphatically tied up the fate of civilizations.

Note

1. Collapse: "A drastic decrease in human population size and/or political/economic/social complexity, over a considerable area, for an extended time." (Diamond, 2005, p. 3).

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Valentin Cojanu http://orcid.org/0000-0002-2933-2522

References

Ayres, C. E. (1944). *The theory of economic progress*. University of North Carolina Press.
Baer, P., & Spash, C. L. (2008, May). *Cost-benefit analysis of climate change: Stern revisited*. CSIRO Working Paper Series, CSIRO Sustainable Ecosystems.
Bauwens, M., Kostakis, V., & Pazaitis, A. (2019). *Peer to peer: The commons manifesto*. University of Westminster Press.
Behrens, K. G. (2012). Moral obligations towards future generations in African thought. *Journal of Global Ethics*, *8*(2–3), 179–191. https://doi.org/10.1080/17449626.2012.705786
Bonneuil, C., Gemenne, F., & Hamilton, C. (Eds.). (2015). *The Anthropocene and the Global Environmental Crisis: Rethinking modernity in a new epoch*. Routledge.
Brown, J., Söderbaum, P., & Dereniowska, M. (2017). *Positional analysis for sustainable development. Reconsidering policy, economics and accounting*. Routledge.
Buch-Hansen, H. (2018). The prerequisites for a degrowth paradigm shift: Insights from critical political economy. *Ecological Economics*, *146*, 157–163. https://doi.org/10.1016/j.ecolecon.2017.10.021
Büchs, M., & Koch, M. (2019). Challenges for the degrowth transition: The debate about wellbeing. *Futures*, *105*, 155–165. https://doi.org/10.1016/j.futures.2018.09.002
Choy, Y. K. (2018). Cost-benefit analysis, values, wellbeing and ethics: An indigenous worldview analysis. *Ecological Economics*, *145*, 1–9. https://doi.org/10.1016/j.ecolecon.2017.08.005
CLG Europe. (2020, April 28). *Working towards a climate neutral Europe: Jobs and skills in a changing world*. Retrieved from: Report: Working towards a climate neutral Europe: Jobs and skills in a changing world | Corporate Leaders Groups.
Coase, R. H. (1988). *The firm, the market, the law*. Chicago University Press.
Cosme, I., Santos, R., & O'Neill, D. W. (2017). Assessing the degrowth discourse: A review and analysis of academic degrowth policy proposals. *Journal of Cleaner Production*, *149*, 321–334. https://doi.org/10.1016/j.jclepro.2017.02.016
Crutzen, P. J., & Steffen, W. (2003). How long have we been living in the anthropocene era? An editorial comment. *Climatic Change*, *61*(3), 251–257. https://doi.org/10.1023/B:CLIM.0000004708.74871.62
Daly, H. E. (1991 [1977]). *Steady-state economics* (2nd ed.). Island Press.

Daly, H. E. (2019). Growthism: Its ecological, economic, and ethical limits. *Real-World Economics Review*, *87*, 9–22. http://www.paecon.net/PAEReview/issue87/Daly87.pdf.
Diamond, J. (2005). *Collapse. How societies choose to fail or survive*. Penguin Books.
Düwell, M., Bos, G., & van Steenbergen, N. (Eds.). (2018). *Towards the ethics of a green future*. Routledge.
Eriksson, J., & Reischl, G. (2019). Worlds apart, worlds together: Converging and diverging frames in climate and energy governance. *Globalizations*, *16*(1), 67–82. https://doi.org/10.1080/14747731.2018.1518864
European Commission. (2020, January 14). *Financing the green transition: The European Green Deal Investment Plan and Just Transition Mechanism*. Retrieved March 25, 2020, from: European Commission website https://ec.europa.eu/regional_policy/en/newsroom/news/2020/01/14-01-2020-financing-the-green-transition-the-european-green-deal-investment-plan-and-just-transitionmechanism.
Fforde, A. (2013). *Understanding development economics*. Routledge.
Fletcher, R., & Rammelt, C. (2017). Decoupling: A key fantasy of the post-2015 sustainable development agenda. *Globalizations*, *14*(3), 450–467. https://doi.org/10.1080/14747731.2016.1263077
Foramitti, J., Tsagkari, M., & Zografos, C. (2019, September, 19). Why degrowth is the only responsible way forward. *openDemocracy*. https://www.opendemocracy.net/en/oureconomy/why-degrowth-only-responsible-way-forward/
Foster, J. (1994). Beyond costs and benefits: Weighing environmental goods. *Analyse & Kritik*, *16*(2), 133–149. https://doi.org/10.1515/auk-1994-0202
Fressoz, J.-B. (2015). Losing the Earth knowingly: Six environmental grammars around 1800. In C. Bonneuil, F. Gemenne, & C. Hamilton (Eds.), *The anthropocene and the global environmental crisis: Rethinking modernity in a new epoch* (pp. 70–83). Routledge.
Gabor, D., Colombo, U., King, A., & Galli, R. (1978). *Beyond the age of waste*. Pergamon Press.
Gadrey, J. (2004). What's wrong with GDP and growth? The need for alternative indicators. In E. Fullbrook (Ed.), *A guide to what's wrong with economics* (pp. 262–276). Anthem Press.
Galbraith, J. K. (1958). *The affluent society*. Houghton Mifflin.
Galbraith, J. K. (1996). *The good society. The humane agenda*. Houghton Mifflin.
Georgescu-Roegen, N. (1971). *The entropy law and the economic process*. Harvard University Press.
Goody, J. (2006 [2012]). *The theft of history*. Cambridge University Press.
Gosseries, A. (2008). Theories of intergenerational justice: A synopsis. *S.A.P.I.EN.S* [Online]. http://sapiens.revues.org/165
Gowdy, J., Barkley Rosser, J., Jr., & Roy, L. (2013). The evolution of hyperbolic discounting: Implications for truly social valuation of the future. *Journal of Economic Behavior & Organization*, *90S*, S94–S104.
Graeber, D. (2001). *Toward an anthropological theory of value*. Palgrave.
Graeber, D. (2012 [2011]). *Debt. The First 5,000 Years*. Brooklyn: Melville House.
Haapanen, L., & Tapio, P. (2016). Economic growth as phenomenon, institution, and ideology: A qualitative content analysis of the 21st century growth critique. *Journal of Cleaner Production*, *112*, 3492–3503. https://doi.org/10.1016/j.jclepro.2015.10.024
Hamilton, C., Bonneuil, C., & Gemenne, F. (eds.). (2015). *The Anthropocene and the Global Environmental Crisis: Rethinking modernity in a new epoch*. London: Routledge.
Harris, J. M., & Roach, B. (2017). Chapter 12: Global climate change: Science and economics. In *Environmental and natural resource economics: A contemporary approach*. Global Development and Environment Institute, Tufts University. Retrieved from Microsoft Word - 12 Global Climate Change Science and Economics.docx (tufts.edu).
Hoffmann, U. (2011). *Some reflections on climate change, green growth illusions and development space*. UNCTAD Discussion Papers 205, United Nations Conference on Trade and Development.

Ioncică, D.-E., & Petrescu, E.-C. (2016). Slow living and the green economy. *The Journal of Philosophical Economics*, *9*(2), 85–104.

IPCC (Intergovernmental Panel on Climate Change). (2021). Summary for policymakers. In V. Masson-Delmotte, P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, & B. Zhou (Eds.), *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.

Jackson, T. (2009). Prosperity without growth? The transition to a sustainable economy. Sustainable Development Commission. http://www.sd-commission.org.uk/data/files/publications/prosperity_without_growth_report.pdf.

Järvensivu, P. (2013). Transforming market–nature relations through an investigative practice. *Ecological Economics*, *95*, 197–205. https://doi.org/10.1016/j.ecolecon.2013.09.003

Kallis, G. (2011). In defence of degrowth. *Ecological Economics*, *70*(5), 873–880. https://doi.org/10.1016/j.ecolecon.2010.12.007

Kawano, E. (2018). *Solidarity economy. Building an economy for people and planet*. Next System Project. https://thenextsystem.org/learn/stories/solidarity-economy-building-economy-people-planet

Kelly, M. (2012). *Owning our future: The emerging ownership revolution - journeys to a generative economy*. Berrett-Koehler Publishers.

Kemp-Benedict, E., & Kartha, S. (2019, March 19). Environmental financialization: What could go wrong? *Real-World Economics Review*, *87*, 69–89. http://www.paecon.net/PAEReview/issue87/Kemp-BenedictKartha87.pdf.

Kolstad, C., Urama, K., Broome, J., Bruvoll, A., Olvera, M. C., Fullerton, D., Gollier, C., Hanemann, W. M., Hassan, R., Jotzo, F., Khan, M. R., Meyer, L., & Mundaca, L. (2014). Social, economic and ethical concepts and methods. In O. Edenhofer, R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlomer, C. von Stechow, T. Zwickel, & J. C. Minx (Eds.), *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 207–282). Cambridge University Press.

Komlosy, A. (2018). *Work. The last 1000 years*. Translated by J. K. Watson and L. Balhorn. Verso.

Lennox, E., & Hollender, R. (2020). Alternatives to growth-centric development. In *An ECI Teaching Module on Social and Economic Issues*. Economics in Context Initiative, Global Development Policy Center, Boston University.

Lévi-Strauss, C. (1962). *La pensée sauvage*. Plon.

Maris, V. (2015). Back to the Holocene. A conceptual, and possibly practical, return to a nature not intended for humans. In C. Bonneuil, F. Gemenne, & C. Hamilton (Eds.), *The anthropocene and the global environmental crisis: Rethinking modernity in a new epoch* (pp. 123–133). Routledge.

Meade, J. E. (1973). *The theory of economic externalities*. Institut Universitaire de Hautes Etudes Internationales.

Meadows, D. H., Meadows, D. L., Randers, J., & Behrens III, W. W. (1972). *The limits to growth; A report for the club of Rome's project on the predicament of Mankind*. New York: Universe Books.

Mill, J. S. (1848 [1936]). *Principles of political economy with some of their applications to social philosophy*. Green and Co.

Moore, J. W. (2010). This lofty mountain of silver could conquer the whole world": Potosí and the political ecology of underdevelopment, 1545-1800. *The Journal of Philosophical Economics*, *IV*(1), 58–103.

Moore, J. W. (2014). The value of everything? Work, capital, and historical nature in the capitalist world-ecology. *Review*, *XXXVII*(3–4), 245–292.

Myrdal, G. (1957). *Rich lands and poor: The road to world prosperity*. Harper & Row.

Nasiritousi, N., Hjerpe, M., & Buhr, K. (2014). Pluralising climate change solutions? Views held and voiced by participants at the international climate change negotiations. *Ecological Economics*, *105*, 177–184. https://doi.org/10.1016/j.ecolecon.2014.06.002

Nelson, J. A. (2013). Ethics and the economist: What climate change demands of us? *Ecological Economics*, *85*, 145–154. https://doi.org/10.1016/j.ecolecon.2011.07.029

Nelson, R. R. (1977). *The Moon and the Ghetto*. Belknap Press.

Norgaard, R. B. (2019, March 19). Economism and the econocene: A coevolutionary interpretation. *Real-World Economics Review*, *87*, 114–131. http://www.paecon.net/PAEReview/issue87/Norgaard87.pdf.

Norton, B. G. (1984). Environmental ethics and weak anthropocentrism. *Environmental Ethics*, *6*, 131–148.

Norton, B. G. (1989). Intergenerational equity and environmental decisions: A model using Rawls' veil of ignorance. *Ecological Economics.*, *1*(2), 137–159.

Parfit, D. (1987 [1984]). *Reasons and persons*. Oxford University Press.

Parfit, D. (2011). *On what matters* (Vol. I + II). Oxford University Press.

Parrique, T., Barth, J., Briens, F., Kerschner, C., Kraus-Polk, A., Kuokkanen, A., & Spangenberg, J. H. (2019). *Decoupling debunked: Evidence and arguments against green growth as a sole strategy for sustainability*. European Environmental Bureau.

Rockström, J., Steffen, W., Noone, K., Persson, A., Chapin, F. S., Lambin, E. F., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H. J., Nykvist, B., de Wit, C. A., Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P. K., Costanza, R., Svedin, U., … Foley, J. A. (2009). A safe operating space for humanity. *Nature*, *461*(7263), 472–475. https://doi.org/10.1038/461472a

Sayer, A. (2010). Reductionism in social science. In R. E. Lee (Ed.), *Questioning nineteenth-century assumptions about knowledge II: Reductionism* (pp. 5–40). SUNY Press.

Schmelzer, M. (2016). *The hegemony of growth*. Cambridge University Press.

Sen, A. (2009). *Idea of justice*. Harvard University Press.

Silberbauer, G. (2000). Ethics in small-scale societies. In P. Singer (Ed.), *A companion to ethics* (pp. 14–28). Blackwell Publishers.

Singer, P. (2016). *Famine, affluence, and morality*. Oxford University Press.

Soder, M., Niedermoser, K., & Theine, H. (2018). Beyond growth: New alliances for socio-ecological transformation in Austria. *Globalizations*, *15*(4), 520–535. https://doi.org/10.1080/14747731.2018.1454680

Söderbaum, P. (1982). Ecological imperatives for public policy. *Ceres - FAO Review for Agriculture and Development*, *15*(2), 28–30.

Söderbaum, P. (2019). Reconsidering economics in relation to sustainable development and democracy. *The Journal of Philosophical Economics: Reflections on Economic and Social Issues*, *XIII*(1), 19–38.

Spash, C. L. (2002). *Greenhouse economics. Value and ethics*. Routledge.

Spash, C. L., & Gattringer, C. (2016). *The economics and ethics of human induced climate change*. SRE-Discussion, Vienna University of Economics and Business.

Steffen, W., Grinevald, J., Crutzen, P., & McNeil, J. (2011). The anthropocene: Conceptual and historical perspectives. *Philosophical Transactions. Series A, Mathematical, Physical, and Engineering Sciences*, *369*(1938), 842–867. https://doi.org/10.1098/rsta.2010.0327

Stern, N. (2006). *Stern review on the economics of climate change*. HM Treasury, UK. http://www.hmtreasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm

Stiglitz, J. E., Sen, A. K., & Fitoussi, J.-P. (2009). *Report by the commission on the measurement of economic performance and social progress*. Commission on the Measurement of Economic Performance and Social Progress. https://www.cpc.unc.edu/projects/rlms-hse/publications/1921

Svenfelt, Å., Alfredsson, E. C., Bradley, K., Fauré, E., Finnveden, G., Fuehrer, P., Gunnarsson-Östling, U., Isaksson, K., Malmaeus, M., Malmqvist, T., Skänberg, K., Stigson, P., Aretun,

Å., Buhr, K., Hagbert, P., & Öhlund, E. (2019). Scenarios for sustainable futures beyond GDP growth 2050. *Futures*, *111* (August), 1–14.
Thorseth, M., & Schuppert, F. (2018). Governance towards a green future. . In M. Düwell, G. Bos, & N. van Steenbergen (Eds.), *Towards the ethics of a green future* (pp. 167–190). Routledge.
Tokic, D. (2012). The economic and financial dimensions of degrowth. *Ecological Economics*, *84*, 49–56. https://doi.org/10.1016/j.ecolecon.2012.09.011
Van den Berg, H. (2014). Growth theory after Keynes, part II: 75 years of obstruction by the mainstream economics culture. *The Journal of Philosophical Economics*, *VII*(2). The Journal of Philosophical Economics (jpe.ro).
Veblen, T. (1904). *The theory of business enterprise*. Charles Scribner's Sons.
Vereta-Nahoum, A. (2019). Cultures in the market: Cultures for sale? Some words of hope and caution illustrated by Amazonian cases. *Economic Sociology. the European Electronic Newsletter*, *20*(2), 15–23.
Victor, P. A. (2012). Growth, degrowth and climate change: A scenario analysis. *Ecological Economics*, *84*, 206–212. https://doi.org/10.1016/j.ecolecon.2011.04.013
Wallerstein, I. (2011). *The modern world-system IV. Centrist liberalism triumphant, 1789–1914*. Berkeley: University of California Press.
Williams, B. (1995). *Making Sense of Humanity and Other Philosophical Papers 1982-1993*. Cambridge University Press.
Xu, C., Kohler, T. A., Lenton, T. M., Svenning, J.-C., & Scheffer, M. (2020). Future of the human climate niche. *Proceedings of the National Academy of Sciences of the United States of America*, *117*(21), 11350–11355. https://doi.org/10.1073/pnas.1910114117
Zwarthoed, D. (2018). Political representation of future generations. In M. Düwell, G. Bos, & N. van Steenbergen (Eds.), *Towards the ethics of a green future* (pp. 79–109). Taylor & Francis.
Zylinska, J. (2014). *Minimal ethics for the anthropocene*. Open Humanities Press.