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ABSTRACT

One of the main outcomes of the Rio + 20 Conference was the agreement to set Sustainable Development Goals (SDGs). The most common terms in the17 goals are economic growth, resilience and inclusion, all of which are critically examined in this article. This article discusses how these goals are reflected within existing sustainability programs at a vocational college, and at the undergraduate and postgraduate university levels in The Netherlands. Within all three institutions the author has integrated lectures on sustainable development with specific emphasis on the SDGs. The aim was to engage students in critical discussion, allowing reflection on the issues and paradoxes that characterise the larger discourse of sustainability. The case studies illustrate how curriculum aimed at this awareness can be developed stimulating the students' recognition of critique of economic development, inclusion and resilience. As a result of the courses, the students were able to develop a certain degree of critical, imaginative, and innovative thinking about sustainable development in general and the SDGs in particular. Cradle to cradle and circular economy approaches were named as more promising for current production systems. This article concludes with the recommendation as to how the SDGs can be critically taught.

Introduction

The Intergovernmental Negotiations on the Post 2015 Development Agenda have led to the adaptation of *The 2030 Agenda for Sustainable Development* (UN 2015). Part of the agenda was the formulation of the Sustainable Development Goals (SDGs). These goals follow the grand preamble of the United Nations that it is 'resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet' (UN 2015). These are the 17 goals, accompanied by 169 specific targets meant to advance the goals in concrete ways (see Table 2).

As Lysgaard, Reid, and Van Poeck (2015) have noted, adding the troublesome idea(l) of sustainability and the SDGs to the already disputed larger topic of 'education', has made for neither clear waters nor smooth sailing, particularly in policy circles. If the SDGs are to 'inspire' environmental education (EE) and education for sustainable development (ESD), the SDGs import in relation to education needs to be assessed. This article supports the position that critical analysis of sustainable development, and by extension, the SDGs, can enable students and staff to deal with accelerating change, increasing complexity, contested knowledge claims and inevitable uncertainty (Lotz-Sisitka et al. 2015).

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The purpose of this article is to suggest how the SDGs could be critically addressed in higher education by combining instrumentalist and pluralist teaching approaches. This article will examine how the SDGs fit within the context of existing sustainability education in the three institutions in Netherlands culminating in a reflection on the type of issues and paradoxes that characterise the larger discourse of sustainability in educational practice. This article will reflect upon the pedagogical tools available to address the SDGs – within and beyond the Netherlands. The Dutch context provides a background of a country where sustainability challenges increase simultaneously with economic growth and where the level of environmental awareness and manifestation of ecological modernisation is highly questionable given the present level of consumption (e.g. van Vuuren and Smeets 2000; Ferrer-i-Carbonell and van den Bergh 2004; Kopnina 2014a).

The case studies include a combination of pluralistic, participatory and transformative approaches (Wals 2010; 2012; Lysgaard, Reid, and Van Poeck 2015; Lotz-Sisitka et al. 2015) as well as more instrumental ecocentric approaches (Bonnett 1999; Kopnina 2012, 2014b, 2014c; Kopnina and Gjerris 2015; Efird 2016). The inclusion of these different approaches occurs through transformative education that encourages reflexive social learning (Wals 2012; Lotz-Sisitka et al. 2015; Van Poeck 2015) as well as restricts the tendency of 'anything goes' relativism (Wals 2010) by upholding environmental sustainability as an important educational objective (Kopnina 2016b).

The author of this article is also a lecturer at (a) the business school at The Hague University of Applied Science (HHS); (b) the honours Bachelor program at the liberal arts college at Leiden University College (LUC), and (c) the postgraduate program at the anthropology department at Leiden University (LU). The research on these three institutional cases involved the perceptions of students about sustainable development and the key concepts articulated in the SDGs, namely economic growth, resilience, and inclusion. The three institutional cases are meant to open up possibilities for consequent research and teaching practice as a response to sustainability challenges requiring a 'paradigm shift and a transition towards doing better things differently' (Lotz-Sisitka et al. 2015, 73).

The overarching goal of teaching these courses was to increase students' understanding of and concern for the outcomes of the SDGs. This goal is based on the author's concern that the outcomes of the SDGs might be harmful to the advancement of environmental and social sustainability, and critical learning can provide ways to alleviate these undesired outcomes by supporting alternative understanding and practice examples. One among several aims of the courses at all three institutions was to enable students to reflect upon their own ethical positioning on sustainable development and the SDGs, using the frames of reference of the respective course discipline (business studies for HHS, anthropology for LU, and a broad spectrum of social and natural science disciplines for LUC).

To expose these educational goals behind the case studies, the sections below introduce critical perspectives on economic growth, resilience, and inclusion. These sections present both theoretical background upon which my own scepticism in regard to the SDGs is based, and descriptions of the educational content in the three cases presented in the article. The sections on economic growth, resilience, and inclusion are followed by the discussion of some of these perspectives in three institutions in the Findings and Reflection sections.

Disputing economic growth

Generally, as it was explained in all three courses, the SDGs fit within the wider 'sustained and inclusive economic growth' strategy (UN 2015). As illustrated by the UN documents, the equitable economic growth is seen as a panacea for sustainability challenges, such as poverty, health, mortality, and climate change. Yet, the idea of 'sustainable economic growth' has been largely criticised as oxymoronic in select literature (see Table 1). Critical scholars have been tracking the rebranding and packaging of unsustainable endeavour under the banner of economic growth, which fuels a massive expansion of industrial activities, competition for increasingly scarce resources, and related social inequalities and upheaval (e.g. Rees 2010; Wijkman and Rockström 2012; Kopnina and Blewitt 2014; Washington 2015). As Zizek (2010) has commented in a short video segment shown in all three classes, combatting the

Table 1. Summary of educational activities at HHS, LUC and LU.

Course	Literature (used in addition to films and excursions)	Written assignments	Lectures and in-class discussions (group)	Student-led discussions
HHS (PBE)	Lidskog and Elander (2010); Isenhour (2010); Kopnina and Blewitt (2014); Braungart and McDonough (2002); etc.	An individual assignment on sustainable business, linked to films and excursions; Written exam on the assigned literature	Weekly lectures. Group discussion of literature; individual presentation of written assignment	The students were asked to discuss a number of (sustainable) business-related cases in class
LUC (E&D)	Naess (1973); Braungart and McDonough (2002); Lewis (2005); Isenhour (2010); Lidskog and Elander (2010); Rees (2010); Crist (2012); Kopnina and Blewitt (2014); Derby, Piersol, and Blenkinsop (2015); Goodall (2015); Washington (2015), etc.	An individual assignment per week, linked to films, excursions and/or literature; Written essay using subjects/themes within the course	Weekly lectures alternated with discussions and student-led debates (e.g. Poverty can be solved by economic growth or economic growth is the cause of poverty; Justice for people should come before justice for the environment).	Weekly discussion of the assigned articles, with individual students being assigned the article to discuss.
LU (E&D I and II)	Lewis (2005); Isenhour (2010); Lidskog and Elander (2010); Rees (2010); Crist (2012); Derby, Piersol, and Blenkinsop (2015); Goodall (2015); Washington (2015), etc.	An essay relating students' anthropological fieldwork (planned for January 2016) to the literature, films, and excursions offered in class	The same as for LUC (above)	The same as for LUC (above)

evils of poverty involves remedies that do not cure the disease but merely prolong it. The proper aim should be to 'reconstruct society on such a basis that poverty will be impossible.'

The aim of perpetuating economic growth also clashes with the empirical evidence of ecological limits (e.g. Daly 1991; Rees 2010; Washington 2015). As discussed in HHS, LU, and LUC classes, subordinating environmental integrity to economic agendas reifies the anthropocentric power hegemonies that have led to environmental problems in the first place (e.g. Kopnina and Shoreman-Ouimet 2013; Rolston 2015; Shoreman-Ouimet and Kopnina 2015). Daly (1991, 99) notes that the verb 'to grow' has evolved from its original meaning, which was to 'develop to maturity' or 'sufficiency'. Instead, industrial or economic expansion has become a (cancer-like) growth and a goal in and of itself (Crist and Cafaro 2012), sustaining the unsustainable (Blühdorn 2007). If an alternative path to economic development cannot be found, raising the worldwide 'living standards' will have 'potentially catastrophic impacts on the global ecosystem' (Nemetz 2013, 52). Thus, applying the 'lessons' of industrial growth to developing countries without fundamentally altering the economic growth model used in developed countries is likely to exacerbate sustainability challenges (Hansen and Wethal 2014).

Disputing inclusion

Inclusion, as formulated in the SDGs, refers to sharing the benefits of economic growth with developing countries and vulnerable communities. Development strategies pursued in industrialising countries stimulate economic growth (e.g. The World Bank 2015), resulting in further environmental degradation and the crisis of resources that enhances poverty (Hansen and Wethal 2014). This process is in line with the dependency theory, in which critical economists have pointed out that the development aid, foreign debt, and disadvantageous trade make poor countries financially dependent on handouts (e.g. Daly 1991; Easterly 2006). In this context, 'inclusion' in economic growth model does not address but further exacerbates social inequalities.

Also, 'inclusive' framework proposed by the SDGs *ex*cludes nonhuman species. To counteract this tendency, translated into teaching practice, the recognition of exclusion calls for teaching non-anthropocentric values in EE/ESD (Bonnett 1999; Kopnina 2012; Kopnina and Meijers 2014) and for 'inclusive pluralism' that embraces representation of non-humans (Kopnina and Gjerris 2015; Kopnina and Cherniak 2016). Inclusive pluralism is a far cry from the SDGs' anthropocentric inclusion rhetoric (e.g. the aim 15.6 is to 'Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources' or aim 15a to 'sustainably use biodiversity and ecosystems' – UN 2015). The words 'benefits' and 'utilization' testify to subjugating environmental to economic objectives. This objectification is reinforced when nature falls within the language of corporate enterprises (e.g. Rolston 2015), instituting management or mastery over environment (Bonnett 1999; Derby, Piersol, and Blenkinsop 2015). This process results in modes of thinking and acting that are counterproductive to solving environmental problems (Wee and Mason 2016). In this context, the SDGs' *inclusion* of capital, profit, and the competition in order to shape a supposedly sustainable economy in affect *excludes* environment.

Disputing resilience

The UN (2015) aims to make bold steps 'to shift the world onto a sustainable and resilient path' by the means of developing 'resilient infrastructure', 'resilient cities'. But what is resilience? The concept of resilience derives from ecology and engineering and serves a system-maintaining function described as '… buffer capacity for preserving what we have and recovering to where we were'). Resilience is defined as the capacity of both social and natural systems to adapt to hazards, known as adjustment adaptation (Bassett and Fogelman 2013; O'Brien et al. 2015). Resilience can also refer to the ability to absorb disturbances, to be changed and then to re-organise and still have the same identity, or to retain the same basic structure and ways of functioning (Pokrant 2016).

The recent resilience literature indicates that not all resilience (naturally, depending on how it is defined) is necessarily desirable (e.g. Lewis and Kelman 2010; Pelling 2011; Sudmeier-Rieux 2014; Weichselgartner and Kelman 2015). Rather than focus on resilience, a number of authors focus on incremental change (Kates, Travis, and Wilbanks 2012), and acknowledge differences between ecosystems and societies (Weichselgartner and Kelman 2015). The society might be highly resilient through technological advancement at the cost of thoroughly 'denaturing' the planet (Crist 2012). Also, has commented, accepting resilience is actively preventing us from taking the necessary actions to avert climate change. In fact, 'resilience' and 'adaptation' to climate change imply doing business as usual and adapting to negative consequences (Kopnina 2016a).

In the article tellingly titled 'The UN Decade of Education for Sustainable Development: Business as usual in the end', Huckle and Wals (2015) suggest that ESD has 'failed to acknowledge or challenge neoliberalism as a hegemonic force blocking transitions towards genuine sustainability' (491). Lotz-Sisitka et al. (2015) have argued that if we are to fully expand the 'learning modes' needed for responding to the 'wicked problems' of sustainability, we need to do so via pedagogies that are not constrained by current use of conservative and maladaptive concepts such as resilience. Wicked problems refer to the type of issues that deal with intricate, multifaceted and contradictory problems such as climate change which no one single action can solve, and solutions themselves might have severe side effects (Pokrant and Stocker 2011). As such, Lotz-Sisitka et al. (2015, 74) note that resilience thinking is 'inadequate or inappropriate for leading to sustainability, especially when viewed from a social science/ learning perspective'.

Increasingly 'resilient' policies of neoliberalism (Wilk 2002) and democratic governance (Lidskog and Elander 2010) delegate responsibility for sustainable choices to consumers. Yet, the clever marketing leading to the 'rebound effect' easily appeases consumers (Isenhour 2010), making consumption itself more resilient (e.g. Kopnina 2016d).

Also, resilience thinking does not apply to nonhumans and their habitats. The economic sustainability through adaptation is placed before the planet (e.g. Rees 2010; Washington 2015). The 'fixing' of the current predicament through top-down management and clever innovation is rarely related to ethical concerns about non-humans (Naess 1973). The human population can be materially sustained by monocultures, and supported by medical and other technologies, and much more resilient to pollution, climate change, desertification, and deforestation than flora and fauna (Crist 2012). The resilience of non-human species and their habitats to continuous anthropogenic expansion and industrial activity is less evident (Cafaro 2015). The World Wildlife Fund's Living Planet Report (WWF 2014) and MEA 2005) both testify to intensifying threats to the very survival of natural systems based on evidence of mass extinctions in the last few decades.

The SDGs only mentions biodiversity in relation to natural resources (goal 14.a, for example, aims to 'enhance the contribution of marine biodiversity to the development of developing countries'). Yet, from a non-anthropocentric perspective, the sixth extinction can be characterised not as a loss of resources but as interspecies genocide (Crist 2012). This radical position calls for immediate remedial action that requires harnessing both human population and economic growth (Crist and Cafaro 2012; Cafaro 2015). Commodification of nature as a resource or an ecosystem service in the quest for human resilience is thus ethically questionable (e.g. Shoreman-Ouimet and Kopnina 2016a, 2016b).

Privileged discourses and alternative ways of addressing (un)sustainability

The positivist tone of the SDGs suggests that 'sustainable economic development' can and should be achieved, as underlined through linguistic assimilation of sustainable development as a desired and indisputable aim rather than a questionable concept. This linguistic manipulation supports the privileging of a particular way of knowing which serves here to shift the meanings attached to words (Tochon 2009). The language used in ESD has resulted in concern *about* the environment rather than concern *for* the environment, where words end up concealing hidden agendas (Jickling and Spork 1998). Ultimately, the language determines what can be known, and sensitizes us to the power of words and

their meanings that are either subjugated or promoted to the point where they simply belong (Wee and Mason 2016).

One of the examples of this subjugation is the double challenge of poverty reduction and climate change highlighted in the SDGs. The former challenge is to be addressed by 'equitable economic growth' and the latter by 'strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in all countries' (UN 2015). Thus, resilience and adaptation (rather than mitigation) of climate change and economic growth are uncritically framed as joint forces. While ethical considerations about economic and social equality dominate ESD (Kopnina 2012), animal welfare issues or deep ecology are marginalized (Kopnina and Gjerris 2015). Essentially, much of sustainable development rhetoric exhibits a robust anthropocentric bias (Crist 2012; Cafaro and Primack 2014; Cafaro 2015; Terborgh 2015; Kopnina 2016c), also present in ESD (Bonnett 1999; Kopnina 2012, 2013c, 2014b, 2015a; Kopnina and Meijers 2014; Derby, Piersol, and Blenkinsop 2015; Kopnina and Cherniak 2016). As many ESD researchers have noted, due to this anthropocentrism as well as a number of other factors, sustainable development needs to be approached with caution. As Bengtsson (2016, 163) has observed, realising that the way we conceive, interpret, construct, and critique of sustainable development and its policy-making processes and, inevitably, evaluate its consequences, greatly vary, ESD educators 'all call for a radicalization of the conception of education and envisioning of a future, where the radical refers ultimately to differences in our perceived pre-dominant conceptions of, and practices in education, and, indeed, the world'. Noting that educational practitioners and researchers' moral foundations and hence 'world views' vary, Jickling (2016, 129) has proposed that educational work may be better suited to the work of nurturing critical, imaginative, and innovative thinkers who can dive into the complex issues involved in sustainable development and make social and environmental progress. This nurturing work may have a potential to counteract the central critique put forward against ESD that it had 'little impact' (Jickling 2016, 164) and has not brought about significant change towards a less anthropocentric and less destructive ecological system (Kopnina 2016b).

I have used the concepts of economic growth, resilience, inclusion, as well as environmental ethics for discussion in class as a way of stimulating critical thinking about sustainable development in general and SDGs in particular. While the author is aware of ignoring how these concepts are interpreted and used in discourses that lie outside the scope of this article, the choice was made to move beyond mere representation of complexity to make these concepts teachable, as well as operational in instructing concrete steps to address (un)sustainability.

These concrete steps are based on alternative production systems that include the steady state economy (Daly 1991), circular economy (Lieder and Rashid 2016) and cradle to cradle (C2C) frameworks (Braungart and McDonough 2002). These frameworks promote significant changes in manufacturing that reach beyond efficiency gains, and require different production processes and new business models that change the way we think about the economy and production (Brennan, Tennant, and Blomsma 2015). These include ecocentric mindset that views ecological integrity as a foundation of sustainable production. In education, an ecocentric mindset can lead to the capacity to perceive (and enjoy) nature's personhood (Efird 2016) and successful integration of human and other species' needs, as illustrated by conservation education programs described by Goodall (2015). While the author has discussed these alternatives to conventional sustainable development models in great detail elsewhere (*anonymous references*), suffice is to say here that the SDGs fall short of realising these radically transformative aims. In the light of the SDGs' questionable objectives, the case studies below offer a brief summary of the curriculum for different Dutch programs that help to address the SDGs.

The case studies

In the Netherlands, environmental education is represented by *Nature and Environmental Education* (Natuur en Milieu Educatie) and many ad hoc EE and ESD initiatives at primary, secondary, and vocational schools and universities (for a survey of EE in Dutch elementary schools see Pauw and Petegem 2013; Kopnina and Williams 2012; Kopnina 2013a; in vocational schools and universities see Kuhlemeier, Van

Den Bergh, and Lagerweij 1999; Wesselink and Wals 2011; Kopnina 2013b, 2014b, 2015a, 2015b, 2015c; Wals and van der Waal 2014; de Wolf and de Hamer 2015). EE and ESD in the Netherlands can be characterized as blended learning, mixing formal and informal education, involving multiple stakeholders, such as schools, communities, garden centres, local businesses, and non-governmental organizations, with subjects of environmental or social sustainability integrated within existing courses (Wesselink and Wals 2011; Kopnina 2013a, 2015a, 2015b).

The author is involved in coordinating and teaching of three sustainability-related courses. These are Sustainable Business minor program at The Hague University of Applied Science (HHS); Environment and Development course at the Leiden University College (LUC); and Environment and Development course at a Master of Anthropology program at Leiden University (LU). In the syllabi at all three institutions, the lecturer has identified a number of learning outcomes including development of knowledge, skills, attitudes and values to address sustainable development. While the three courses used various content - the more 'applied' instruction at the vocational level and more theoretical 'literature-heavy' teaching at the university level - they were nonetheless designed with the same intention of raising awareness and reflexive thinking (thus stimulating pluralism). Written assignments and group projects within all three institutions were intended to assess whether the students have learned what the lecturer hoped they would. The courses were taught between September and December 2015.

HHS is a higher vocational education institute, with International Business Management Studies (IBMS) department being the largest at the school, with over 400 students in the first year. A part of IBMS, sustainable business minor is an elective course consisting of five modules. The modules included subjects ranging from Corporate Social Responsibility (CSR) and global supply chain, Introduction to circular economy and C2C frameworks; and Politics, Business and Environment (PBE). Most of the 22 international students enrolled (10 Dutch, 6 European, 4 South American, and 2 Chinese) were in their second and third year of study, between 21 and 24 year old; 12 males, 10 females, having a background in international business, marketing, finance, and branding.

LUC offers Bachelor degrees in Liberal Arts and Sciences, focusing on issues of Peace, Justice, and Sustainability. At the elective course Environment and Development (E&D), there were 17 international (predominantly European) students in their third year of study. Most of the students were between 21 and 24 year old; 5 males, 12 females (9 Dutch, 7 European, 1 Indian), which had a background in different subjects, ranging from public administration to international studies.

At LU, a Master (MA) of Anthropology double-block course was also titled Environment and Development (E&D I and II), and involved 8 students (5 Dutch, 2 European, 1 Brazilian), between the ages 23 and 29, all female but one. The students had either background in anthropology or in general social sciences. At both LUC and LU, the author has lectured on the subjects of the SDGs, the paradoxes of sustainable development, economic growth, inclusion, resilience, as well as environmental ethics and alternative methods of production.

Methodology and personal reflection on teaching

Research methodology involved in-class observations, student reports and evaluations. The case study approach was used (Yin 1994). The students were told that parts of the in-class discussions may be used in the lecturer's own research. In cases when sensitive subjects or ideas were presented, demographic details were excluded from the analysis. The collected empirical materials were analysed using the qualitative analysis program MAXQDA. This program helped to generate a number of statements from both the written assignments and in-class discussions that enabled the researcher to thematically group and organize summaries presented in Table 2.

Teaching sustainable development at different school levels presented a challenging opportunity to research my own practice as a lecturer, as well as an opportunity to engage students with some of the concepts presented in the introduction. The courses were taught including both the elements of prescriptive, instrumental education for sustainability as well as more pluralistic and participatory learning.

Table 2. Select SDGs' areas corresponding to the programs at HHS, LUC and LU.

The SDGs	HHS	LUC	LU
1. End poverty in all its forms everywhere.	An accent on CSR in relation to poverty, questions concerning the role of MNC's in relation to global inequalities	The general question of poverty and social inequality, their origin, what is new about, and the issues associated with addressing them	Same as for LUC, with the additional cultural element, poverty in cross-cultural perspective (in relation to the film Schooling the World)
2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.	Food security and autonomy are discussed in the context of corporate and 'traditional' provision; (fair) production, consumption and distribution of food	The same as for HHS, with the addition of discussion on food autonomy and dependency theory; and what 'sustainable agriculture' entails	The same as for LUC, but with a greater emphasis on non-Western modes of food provisioning, traditional agro-systems.
3. Ensure healthy lives and promote well-being for all at all ages.	Discussion of general indicators of well-being and generational changes. Case studies from (sustainable) business practice in which CSR has positively affected health and/or well-being of company employees or clients	The same as for HHS, except for case studies, additionally the discussion of 'poor' and 'rich' word diseases; medical advancements that have driven out most of the infectious diseases and enabled population growth	The same as for LUC, with an added emphasis on cultural framing of well-being, historical overview of pre-industrial' or modern indigenous communities and global Western definitions of well-being; using case studies of traditional communities
4. Ensure inclusive and quality education for all and promote lifelong learning.	Particular focus on the film Schooling the World, different ways of viewing Western education, self-reflection on being international business students	The same as for HHS, additionally weighing advantages and disadvantages of pro-economic development education	The same as for LUC, including self-reflection on being international Masters anthropology students and cultural observers
5. Achieve gender equality and empower all women and girls.	Discussion of equality in the context of human rights, global women's empowerment as part of Western and globalizing tradition	The same as for HHS, with specific emphasis on interdisciplinary approaches to gender equality: legal, political, ethical	The same as for LUC, with the discussion about culturally specific versus 'universal' (or Western defined) gender rights, roles, perceptions
6. Ensure access to water and sanitation for all.	Discussion of state and corporate provisions versus the notion of autonomy (arrangements regarding water and sanitation provisions). The students were asked to provide case studies from (sustainable) business practice, which have positively affected water and sanitation	The same as for HHS, except for case studies, with greater accent on historical developments in relation to water supply and sanitation, e.g. from the Roman viaducts to canal-building during industrial revolution, and 'modern' irrigation systems in developing countries	The same as for LUC, with an added comparative cultural and historical element and examples of autonomy from international case studies of local irrigation systems
7. Ensure access to affordable, reliable, sustainable and modern energy for all.	Discussion on the subject of (renewable) energy and climate change. Critique of current energy provision from C2C perspective (Braungart and McDonough 2002)	The same as for HHS, with greater emphasis on current events such as an COP conference in Paris (2015), political negotiations, and media analysis of energy politics	The same as for LUC, with emphasis on the articles assigned in class, see Table 1. Additionally, cross-cultural comparisons between 'traditional' energy use and modern provision
8. Promote inclusive and sustainable economic growth, employment and decent work for all.	Discussion about conflict and congruence between economic growth and sustainability; emphasis on paradoxes and contradictions as discussed in assigned literature and films	The same as for HHS, with emphasis on articles by Rees 2010; Wijkman and Rockström 2012; and Washington 2015;	The same as for LUC, with emphasis on the articles assigned in class, see Table 1

9. Build resilient infrastructure, promote sustainable industrialization and foster innovation.	Discussion of 'sustainable industrialization' in a similar context as 'sustainable economic growth'. Discussing innovation in the positive context	The same as for HHS, discussing innovation in business, technology, and other areas connected to alternative forms of development (C2C as the 'third industrial revolution')	The same as for LUC, but with specific reference resilience as a broader social and cultural change
10. Reduce inequality within and among countries.	Discussions of 'big questions' of justice and inequality as applied in CSR contexts. Specific discussion of challenges in Lidskog and Elander (2010) article.	Discussions of 'big questions' of justice and inequality in cross-disciplinary perspectives (legal, political, ethical)	Intra-generational justice: culturally and historically specific versus Brundtland report perspective (e.g. Is inequality 'new'? Are there examples of egalitarian societies?)
11. Make cities inclusive, safe, resilient and sustainable.	Discussion of 'sustainable cities', sustainable construction/building, C2C certification	The same as for HHS, with specific focus on social inclusion in urban contexts and urban environment (Derby, Piersol, and Blenkinsop 2015)	The same as for LUC, with added discussion of urban vs. rural context, and re-iterating discussion points in relation to resilience
12. Ensure sustainable consumption and production patterns.	Discussion of sustainable production and consumption, C2C critique of eco-efficiency approaches, examination of consumer-based approaches with focus on Isenhour (2010)	The same as for HHS, with additional literature on socio-cultural and political aspects of consumption, focusing on Wilk (2002) and Zizek (2010)	The same as for LUC, with an added emphasis on consumption in cross-cultural and historical perspective
13. Take urgent action to combat climate change and its impacts.	Climate change is discussed in two separate lectures and guest lectures, focus on the major bottlenecks (Lidskog and Elander 2010), e.g. industrial lobbies. The COP Summit in Paris (2015)	The same as for HHS with greater emphasis on social equality, intergenerational justice and ecological justice (Crist and Cafaro 2012) in relation to climate change	The same as for LUC, with specific focus on vulnerable communities and risk areas in developing countries, local and top-down adaptation. Climate change and nonhuman species
14. Conserve and sustainably use the oceans, seas and marine resources.	Conservation of the global commons (e.g. oceans) is discussed in the context of commodification of nature and biodiversity loss (Shoreman-Ouimet and Kopnina 2015)	An extended discussion of commodification of nature as well as various conservation strategies (Goodall 2015) and deep ecology (Naess 1973)	The same as for LUC, with an added emphasis on anthropological critique of neoliberal conservation and counter-critique (Shoreman-Ouimet and Kopnina 2015)
15. Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.	Sustainability of natural habitats, biodiversity loss and scarcity of resources discussed in a larger context of tragedy of the commons, population growth, and expansion of industrial activities	The same as for HHS, with focus on the dilemmas surrounding 'sustainable resource management.' Biodiversity loss discussed from a non-anthropocentric perspective	The same as for LUC, with 'field' examples of local/traditional versus modern forms of environmental management
16. Promote just, peaceful and inclusive societies.	Discussion of intergenerational justice, as well as human rights and democratic participation in decision-making processes (Lidskog and Elander 2010)	The same as for HHS, with more problematic aspects of social inclusion and economic equality discussed (Rees 2010; Washington 2015). 'Inclusive pluralism' and eco-representation (Lidskog and Elander 2010).	The same as for LUC, with additional discussion on indigenous, nomadic, and generally more egalitarian societies
17. Revitalize the global partnership for sustainable development.	The global partnership is discussed in the context of sustainable development and its paradoxes	The same as for HHS, with the specific discussion of 'ways forward' define and act upon the principles of sustainable development	The same as for LUC

Instrumentalism was reflected in my choice of lecture subjects and explicit positioning (e.g. criticism of economic development, support of deep ecology, etc.). I have explicated my own preferences and possibly biases inviting students to be equally open about their own positioning. In all three institutions, I have started the lectures by opening up questions about sustainable development, inquiring how the students understood the concept, and how they related it to economic growth, inclusion and resilience. After that, lectures have focused on the concept of sustainability, both from the mainstream as well as in alternative perspectives. Lectures were presented 'classically' through expert and positivist method, which is currently unpopular in liberal educational practice. This 'authoritative' method was chosen in order to avoid what Wals (2010) has described as 'anything goes' relativism or what Kopnina (2012) has referred to as pluralism for the sake of pluralism – an open-ended discussion without specified ends. There is a risk that without initial instruction, the supposedly pluralistic approach will be still framed by, and reproduce, the dominant SDG discourse rather than contest it. In applying this insight to my own educational practice, my 'expertise' entailed the inclusion of the key controversies about economic growth, resilience and inclusion, as well as instruction in alternatives, including ecocentric orientation and circular economy (thus stimulating expert-led learning). The lecturers were followed by the discussions, calling for a more interpretative, pluralistic and participatory learning. In this case participatory learning meant that the students were encouraged to present their own views without instructor's interference, with social learning facilitated by peer feedback.

A deeper theoretical understanding and critique of conventional 'sustainable development' was used at the university levels (LU and LUC). For example, LU and LUC students were asked: How can the planet support the aim of sustaining 'at least 7 per cent gross domestic product growth per annum in the least developed countries' (UN 2015)? Individual student-led discussions of assigned articles were employed weekly. During individual discussions, the students took notes on assigned literature, summarizing main argument, providing reflection, and asking for feedback from other students. Grading criteria for LUC and LU involved ability to lead and engage in meaningful discussion, asking relevant questions related to literature, and demonstrating insight and perception.

The more 'applied' approach to illustrating sustainability was used at the vocational level at HHS. The students were also involved in project group investigations of corporate case studies. As part of their written assignments, outlined in Table 1, the students were asked to develop their own project in sustainable business, using examples from the 'best practices' of certified C2C companies or Ellen MacArthur Foundation for circular economy cases (http://www.ellenmacarthurfoundation.org/case_studies/). The students were asked to reflect on these cases using both mainstream (growth-oriented models) and alternative sustainability models. Similar to LU and LUC, the requirements included active involvement and participation.

Table 1 summarizes the type of materials used in all three courses, including assigned literature (hereby arranged alphabetically and in chronological order) and films. The students at all three schools were shown the same films *Schooling the World* (see a review of previously recorded student reactions in Kopnina 2013b and 2015b) and *If A Tree Falls* (see a review in Kopnina 2014c and 2015c) as well as shorter films on the subject of sustainability (e. g. Zizek 2010). All three groups had guest speaker lectures and/or attended excursions to Patagonia (the outdoor equipment company's office in Amsterdam); WWF (the Dutch office in Zeist); green investment banks and renewable energy companies in The Hague.

Findings

Table 2 summarises the discussion subjects that corresponded to select SDGs. Not all the SDGs were explicitly discussed in the courses, and some were addressed in reference to related subjects, including industrialisation, ethics, and sustainability.

The essential observation drawn from student assignments and discussions relates to the recognition (if not acceptance) of critique of economic development, inclusion and resilience, the way they are currently formulated in the SDGs. Initial responses to the question about sustainable development in all three institutions was uncertain (e.g. some students said they did not know much about

sustainable development) and positive (many saw sustainable development as a 'good thing'). Consequent responses, as the same question was repeated in the last week of the course, were more mixed, ranging from cautious to cynical.

The students at all three institutions were able to point out, both in in-class discussions and written assignments, that the United Nations-supported 'mainstream' idea of sustainable development does not go far enough in addressing unsustainability. C2C and circular economy approaches were named as more promising options for positive change in current production systems. Population growth and current anthropocentric ideology were outlined as the main obstacles to reaching these solutions.

There were also some essential differences in how students from different institutions – as well as students within the same class – related to these subjects. While pluralistic and participatory learning has encouraged students to express their opinions prior to lectures, as well as dispute positions presented in lectures or study materials, it appeared that some students were more engaged then others depending on their country of origin or individual differences. In all three institutions it was easier for the European and American students to be vocally critical, while Asian (and particularly Chinese) students found it more difficult to engage in a confrontational discussion in class. However, the differences in perception were also individual rather than country- or culture- based. For example, in their essays, both Chinese and Dutch students reflected that the SDGs do not take nature or animals into account. As Chinese student phrased it, 'I thought it was just in my country that people did not care about [animals], but I have learned that an international organization [UN] is not much better'. Ironically, another Chinese student from the same class has written: 'Animals are respected in China. Respecting nature has been part of our cultural tradition… The United Nations thinks of human development but it stops the development of nature'.

Although literal interpretation of written assignments or in-class statements is not a clear indicator of the students' ethical orientation, or ability to act upon understandings outside of classroom, course evaluations indicate that 'something has moved'. To use a few examples from comments in these evaluations: 'sustainable development is more complex than I thought' (HHS), 'this course was the most depressing and simultaneously the most empowering that I have followed so far' (LUC), and 'anthropologists can learn from the UN how NOT to do things' (LU).

In their written assignments some of the HHS students have noticed that the 'best practice' companies on the Ellen MacArthur website are not reaching beyond conventional production models. For example, as the (Dutch female) student has noted in her written assignment, other than attempting to 'recover components for the automotive industry', Autocraft Drivetrain Solutions' ultimate goal is 'expanding into other types of product or components as a path for further growth, with the goal to become a GBP 20 million company within 5 years' (http://www.ellenmacarthurfoundation.org/case_studies/autocraft-drivetrain-solutions). As the student has noted, 'the underlying unsustainability of the automotive industry or profound implications of further growth remain unchallenged'. However, when this and other cases from MacArthur website were deliberated in class, the group discussion has veered off in the direction of consensus over the advantages of growth possibilities offered by these 'best practice' examples.

Judging from the course evaluations of business students, one of the most valuable outcomes of the PBE course was the hands-on examples of innovative business models. Some HHS students were attracted to innovative designs, naming solar airplanes or hyperloop (a futuristic public transport system based on vacuum created in the tubes) as examples of sustainable transport of the future. Others have come up with 'pre-industrial' designs, such as clay pots. In this framing, 'resilience' could be seen as an ability to adapt 'futuristic' designs or to revert to the traditional ways of production, without halting economic development altogether. 'Inclusion' was applied to the inclusion of circular economy and C2C into economies of scale reaching target groups beyond wealthy Western consumers but also including the growing populations in developing countries. Disputing economic growth models has remained the most challenging for the HHS students as they were used to seeing business as an essentially profit-making enterprise. In their product presentation one of the teams has noted that the circular economy is 'new engine of growth'. The group has struggled to conceptualise potential pitfalls

and challenges associated with growth and ended up presenting an open-ended proposal for 'global transition toward sustainable development'.

Students at LUC have also engaged with the circular economy and C2C production systems, but mostly through literature drawing on a wide spectrum of social and natural science disciplines. Based on this literature, the students have noted a discrepancy between the desire to (to quote the female English student's assignment) 'base production on natural models', and the reliance on 'good old trusted growth models' to implement the transition. For example, a team of LUC students has focused on the European Commission's role in propagating circular economy, noting that it is narrowly focused on advancing economic growth afforded by eco-industries and eco-innovation, which 'currently supply a third of the global market for green technologies, worth a trillion euro and expected to double by 2020' (EC[1]). What if the fossil fuel technologies were to remain more profitable, the students inquire, would the European Commission still support eco-innovation?

Generally, witnessed both through the analysis of the in-class discussions, written assignments and course evaluations, LUC students demonstrated differences stemming from their interdisciplinary background. Greatest differences were between those students who have previously followed the economics-heavy courses, and those that have followed sustainability-related courses, as the former were predictably more critical of the lecturer's choice of literature and development scepticism.

For LU anthropology students, the most significant lessons were drawn from cultural, small-scale, and traditional 'pre-industrial' production models as an alternative to the dominant top-down sustainable development directives. These models were discussed, among others, in the context of debates about the film *Schooling the World*. LU students were familiar with examples of traditional agrarian societies and with the critique of economic development as a neo-colonial enterprise, drawing their insights from their BA anthropology studies (e.g. Lewis 2005). The more practical aspects of utilising the C2C and circular economy models of production were more difficult to conceptualise as these were not mentioned in anthropology courses the students previously took. However, after the exposure to these concepts in the E&D II course, the students were able, in the words of one Dutch female student, 'to better see the bigger picture as far as sustainability is concerned'.

Reflection

Tables 1 and 2 indicate how the SDGs can be contextualized to provide a potent ground for discussing economic growth, inclusion, and resilience. Whether the students learn to respond to the challenges outlined in the SDGs in the emancipatory manner that emphasizes capacity-building and critical thinking (Jickling and Wals 2008; Wals 2012) as well as develop the capacity to perceive environment's value (Efird 2016) remains to be seen. It is unlikely that the concrete outcomes can be accurately 'measured' in well-defined units such as graded competencies and quantifiable skills. Understanding of the more challenging aspects of sustainable development and indeed of the SDGs is likely to develop after the information (cognitive aspects) has 'sunk in' and students' perceptions (as well as affective attitudes) have further evolved through continuous learning. This continuous learning occurs outside and inside the classroom, supported by both in-class experiences and other formative events in students' lives. These formative events are likely to take place outside of the Netherlands, reflecting the increasing globalization of job markets and broad spectra of professions in areas as diverse as business, anthropology, and liberal arts.

The detachment required for facilitating open discussions and engagement involved in stating my own position presented some challenges in relation to my role as lecturer. An example of this is a challenge of combining an ambition of facilitating a pluralistic deliberation among the students, even when it led to the undesirable consensus (as in acceptance of circular economy as an engine of growth by HHS students). In cases when the students' collective opinion (perhaps in part formed through the necessity to conform to the 'popular' or majority opinion, or 'groupthink') did not rhyme with my own, I have encouraged students to dispute my own stated position by providing counter-arguments. This didactic strategy was based on one of the course aims that the students should be able to reflect upon

their own moral choices and positions by using both empirical evidence and ethical arguments. An example of this strategy includes a LU class discussion that has led to the statement that 'respect for nature' is a beautiful but unattainable goal. I have responded that the women's right to vote in The Netherlands has only been legally accepted a few decades ago, and so has the relinquishment of the Dutch colonies. The expansion of civil liberties was used to inspire hope that respect for the oppressed can be progressively learned and that caring for nonhumans could be the next step of 'moral evolution'. I have added that perhaps current anthropocentrism is a temporary 'devolution' due to the capitalist/industrial ideology. Linking it to anthropological background of students, I have suggested that there are many cross-cultural and historical examples of ecocentrism found in early ethnographies, inviting students to look for case studies that contradict this assertion. The following class has generated more ecocentric discussions, if not consensus, on the subject of inclusion of non-human species. Overall, my experience as a lecturer and a researcher, as well as an activist, has been rewarding. I have witnessed the ability of students to look beyond conventional framings of the SDGs, combining instrumentalist and pluralist teaching approaches.

Conclusion

The Dutch case studies are examples of how complex issues related to sustainable development and the SDGs can be addressed at both undergraduate and postgraduate university levels. The Dutch context provided a number of opportunities. First, the context of The Netherlands where sustainability challenges grow simultaneously with economic growth (e.g. van Vuuren and Smeets 2000; Ferrer-i-Carbonell and van den Bergh 2004; Kopnina 2014a) provides a backdrop for the meaningful discussion of sustainability challenges. The Dutch higher education system provides a good backdrop for reflecting on how the relatively 'privileged' students in an economically developed country may be brought to think about 'development' elsewhere, with the lecturer both facilitating open discussion and providing expert guidance. Second, the Dutch EE and ESD tradition opens up the possibility for building upon existing curriculum. Third, the Dutch international classrooms can be seen as a microcosm of an increasingly cosmopolitan democratic society grappling with the paradoxes of sustainable development.

Without realising the ironies, paradoxes and outright manipulation of sustainable development rhetoric, the grand promise of the UN to 'free the human race from the tyranny of poverty' and 'to heal and secure our planet' is not likely to lead to anything more than sustaining the unsustainable (Blühdorn 2007). As an environmental philosopher Terborgh (2015, xi) has stated:

> It seems to me that we are farther from achieving ecological sustainability today than we were several decades ago. As a global society, we are distracted by too many other issues – wars, epidemics, unemployment, a struggling economy. In the cacophony of daily events, we appear to have lost sight of the fundamental importance of a healthy biosphere to the well-being of both humans and nature. Restoring confidence in the future can only come about through a renewed commitment to ecological sustainability inspired by a vision of a beautiful, secure, and equitable future.

The SDGs are far off from these aims, rather manipulating sustainability in the service of 'sustainable and inclusive economic growth'. Our students should be aware of this manipulation. Examples above illustrate how curriculum aimed at this awareness can be developed stimulating the students' recognition of critique of economic development, inclusion and resilience. As a result of the courses, the students at all three institutions were able to realize that the mainstream idea of sustainable development does not reach far enough and develop critical, imaginative, and innovative thinking about sustainable development in general (Jickling 2016) and the SDGs in particular.

Note

1. http://ec.europa.eu/smart-regulation/impact/planned_ia/docs/2015_env_065_env+_032_circular_economy_en.pdf

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References

Bassett, T. J., and C. Fogelman. 2013. "Déjà Vu or Something New? The Adaptation Concept in the Climate Change Literature." *Geoforum* 48: 42–53.
Bengtsson, S. L. 2016. "Hegemony and the Politics of Policy Making for Education for Sustainable Development: A Case Study of Vietnam." *The Journal of Environmental Education* 47 (2): 77–90.
Blühdorn, I. 2007. "Sustaining the Unsustainable: Symbolic Politics and the Politics of Simulation." *Environmental Politics* 16: 251–275.
Pauw, J., and P. Petegem. 2013. "The Effect of Eco-schools on Children's Environmental Values and Behaviour." *Journal of Biological Education* 47 (2): 96–103.
Bonnett, M. 1999. "Education for Sustainable Development: A Coherent Philosophy for Environmental Education?." *Cambridge Journal of Education* 29 (3): 313–324.
Braungart, M., and W. McDonough. 2002. *Cradle to Cradle: Remaking the Way We Make Things*. London: Vintage Books.
Brennan, G., M. Tennant, and F. Blomsma. 2015. "Business and Production Solutions: Closing the Loop." In *Sustainability: Key Issues*, edited by H. Kopnina and E. Shoreman-Ouimet, 219–239. New York: Routledge.
Cafaro, P. 2015. "Three Ways to Think about the Sixth Mass Extinction." *Biological Conservation* 192: 387–393.
Cafaro, P., and R. Primack. 2014. "Species Extinction is a Great Moral Wrong." *Biological Conservation* 170: 1–2.
Crist, E. 2012. "Abundant Earth and Population." In *Life on the Brink: Environmentalists Confront Overpopulation*, edited by P. Cafaro and E. Crist, 141–153. Athens: University of Georgia Press.
Crist, E., P. Cafaro, eds. 2012. "Human Population Growth as If the Rest of Life Mattered." In *Life on the Brink: Environmentalists Confront Overpopulation*, edited by P. Cafaro and E. Crist, 3–15. Athens: University of Georgia Press.
Daly, H. E. 1991. *Steady State Economics*. Washington: Island Press.
Derby, M. W., L. Piersol, and S. Blenkinsop. 2015. "Refusing to Settle for Pigeons and Parks: Urban Environmental Education in the Age of Neoliberalism." *Environmental Education Research* 21 (3): 378–389.
Easterly, W. 2006. *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*. New York: The Penguin Group.
Efird, R. 2016. "Perceiving Nature's Personhood: Anthropological Enhancements to Environmental Education." In *The Handbook of Environmental Anthropology*, edited by H. Kopnina and E. Shoreman-Ouimet, 441–451. New York: Routledge.
Ferrer-i-Carbonell, A., and J. C. van den Bergh. 2004. "A Micro-econometric Analysis of Determinants of Unsustainable Consumption in the Netherlands." *Environmental and Resource Economics* 27 (4): 367–389.
Goodall, J. 2015. "Caring for People and Valuing Forests in Africa." In *Protecting the Wild*, edited by G. Wuerthner, E. Crist and T. Butler, 21–26. Washington, DC: The Island Press.
Hansen, A., and U. Wethal, eds. 2014. *Emerging Economies and Challenges to Sustainability: Theories, Strategies, Local Realities*. New York: Routledge.
Huckle, J., and A. E. J. Wals. 2015. "The UN Decade of Education for Sustainable Development: Business as Usual in the End." *Environmental Education Research* 21 (3): 491–505.
Isenhour, C. 2010. "On Conflicted Swedish Consumers, the Effort to Stop Shopping and Neoliberal Environmental Governance." *Journal of Consumer Behaviour* 9: 454–469.
Jickling, B. 2016. "Losing Traction and the Art of Slip-Sliding Away: Or, Getting over Education for Sustainable Development." *The Journal of Environmental Education* 47 (2): 128–138.
Jickling, B., and H. Spork. 1998. "Education for the Environment: A Critique." *Environmental Education Research* 4 (3): 309–327.
Jickling, B., and A. E. J. Wals. 2008. "Globalization and Environmental Education: Looking beyond Sustainable Development." *Journal of Curriculum Studies* 40 (1): 1–21.
Kates, R. W., W. R. Travis, and T. J. Wilbanks. 2012. "Transformational Adaptation When Incremental Adaptations to Climate Change Are Insufficient." *Proceedings of the National Academy of Sciences* 109 (19): 7156–7161.

Kopnina, H. 2012. "Education for Sustainable Development (ESD): The Turn Away from 'Environment' in Environmental Education?" *Environmental Education Research* 18 (5): 699–717.

Kopnina, H. 2013a. "An Exploratory Case Study of Dutch Children's Attitudes toward Consumption: Implications for Environmental Education." *The Journal of Environmental Education* 44 (2): 128–144.

Kopnina, H. 2013b. "Schooling the World: Exploring the Critical Course on Sustainable Development through an Anthropological Lens." *International Journal of Educational Research* 62: 220–228.

Kopnina, H. 2013c. "Evaluating Education for Sustainable Development (ESD): Using Ecocentric and Anthropocentric Attitudes toward the Sustainable Development (EAATSD) Scale." *Environment, Development and Sustainability* 15 (3): 607–623.

Kopnina, H. 2014a. "Christmas Tale of (Un)Sustainability: Reflecting on Consumption and Environmental Awareness on the Streets of Amsterdam." *Sustainable Cities and Society* 10: 65–71.

Kopnina, H. 2014b. "Future Scenarios and Environmental Education." *The Journal of Environmental Education* 45 (4): 217–231.

Kopnina, H. 2014c. "If a Tree Falls: Business Students' Reflections on Environmentalism." *International Journal of Environment and Sustainable Development* 8 (3): 311–329.

Kopnina, H. 2015a. "If a Tree Falls and Everybody Hears the Sound: Teaching Deep Ecology to Business Students." *Journal of Education for Sustainable Development* 9 (1): 101–116.

Kopnina, H. 2015b. "Metaphors of Nature and Development: Reflection on Critical Course of Sustainable Business." *Environmental Education Research* 22 (4): 571–589.

Kopnina, H. 2015c. "If a Tree Falls and Everybody Hears the Sound: Teaching Deep Ecology to Business Students." *Journal of Education for Sustainable Development* 9 (1): 101–116.

Kopnina, H. 2016a. "The Victims of Unsustainability: A Challenge to Sustainable Development Goals." *International Journal of Sustainable Development & World Ecology* 23 (2): 113–121.

Kopnina, H. 2016b. "Of Big Hegemonies and Little Tigers: Ecocentrism and Environmental Justice." *The Journal of Environmental Education* 47 (2): 139–150.

Kopnina, H. 2016d. "Animal Cards, Supermarket Stunts, and the World Wide Fund for Nature: Exploring the Educational Value of a Business-environmental Non-governmental Organization Partnership for Sustainable Consumption." *Journal of Consumer Culture* 16 (3): 926–947.

Kopnina, H. 2016. "Half the Earth for People (or More)? Addressing Ethical Questions in Conservation." *Biological Conservation* 203 (2016): 176–185.

Kopnina, H., and J. Blewitt. 2014. *Sustainable Business: Key Issues*. New York: Routledge.

Kopnina, H., and B. Cherniak. 2016. "Neoliberalism and Justice in Education for Sustainable Development: A Call for Inclusive Pluralism." *Environmental Education Research* 22 (6): 827–841.

Kopnina, H., and M. Gjerris. 2015. "Are Some Animals More Equal than Others? Animal Rights and Deep Ecology in Environmental Education." *Canadian Journal of Environmental Education* 20: 109–123.

Kopnina, H., and F. Meijers. 2014. "Education for Sustainable Development (ESD)." *International Journal of Sustainability in Higher Education* 15 (2): 188–207.

Kopnina, H., and E. Shoreman-Ouimet, eds. 2013. *Environmental Anthropology: Future Directions*. New York: Routledge.

Kopnina, H., and M. Williams. 2012. "Car Attitudes in Children from Different Socio-Economic Backgrounds in the Netherlands." *Transport Policy* 24: 118–125.

Kuhlemeier, H., H. Van Den Bergh, and N. Lagerweij. 1999. "Environmental Knowledge, Attitudes, and Behavior in Dutch Secondary Education." *The Journal of Environmental Education* 30 (2): 4–14.

Lewis, D. 2005. "Anthropology and Development: The Uneasy Relationship." In *A Handbook of Economic Anthropology*, edited by J. G. Carrier, 472–486. Cheltenham: Edward Elgar.

Lewis, J., and I. Kelman. 2010. "Places, People and Perpetuity: Community Capacities in Ecologies of Catastrophe." *ACME an International E-Journal for Critical Geographies* 9 (2): 191–220.

Lidskog, R., and I. Elander. 2010. "Addressing Climate Change Democratically: Multi-level Governance, Transnational Networks and Governmental Structures." *Sustainable Development* 18 (1): 32–41.

Lieder, M., and A. Rashid. 2016. "Towards Circular Economy Implementation: A Comprehensive Review in Context of Manufacturing Industry." *Journal of Cleaner Production* 115: 36–51.

Lotz-Sisitka, H., A. E. J. Wals, D. Kronlid, and D. McGarry. 2015. "Transformative, Transgressive Social Learning: Rethinking Higher Education Pedagogy in times of Systemic Global Dysfunction." *Current Opinion in Environmental Sustainability* 16: 73–80.

Lysgaard, J. A., A. Reid, and K. Van Poeck. 2015. "The Roots and Routes of Environmental and Sustainability Education Policy Research–An Introduction to a Virtual Special Issue." *Environmental Education Research* 1–13.

MEA (Millennium Ecosystem Assessment). 2005. *Living beyond Our Means: Natural Assets and Human Wellbeing, Statement from the Board, Millennium Ecosystem Assessment*. United Nations Environment Programme (UNE). www.millenniumassessment.org

Naess, A. 1973. "The Shallow and the Deep: Long-range Ecology Movement." *Inquiry* 16: 95–100.

Nemetz, P. 2013. *Business and Sustainability Challenge: An Integrated Perspective*. New York: Routledge.

O'Brien, K., S. Eriksen, T. H. Inderberg, and L. Sygna. 2015. *Climate Change and Development: Adaptation through Transformation*, 273–289. New York: Routledge.

Pelling, M. 2011. *Adaptation to Climate Change: From Resilience to Transformation*. New York: Routledge.

Pokrant, B. 2016. "Climate Change Adaptation and Development Planning: From Resilience to Transformation?" In *The Handbook of Environmental Anthropology*, edited by H. Kopnina and E. Shoreman-Ouimet. New York: Routledge.

Pokrant, R. J., and L. Stocker. 2011. "Anthropology, Climate Change and Coastal Planning." In *Environmental Anthropology Today*, edited by H. Kopnina and E. Shoreman-Ouimet, 179–194. New York: Routledge.

Rees, W. 2010. "What's Blocking Sustainability? Human Nature, Cognition, and Denial." *Sustainability: Science, Practice, and Policy* 6 (2): 13–25.

Rolston, H. I. I. I. 2015. "Environmental Ethics for Tomorrow: Sustaining the Biosphere." In *Sustainability: Key Issues*, edited by H. Kopnina and E. Shoreman-Ouimet, 347–359. New York: Routledge.

Shoreman-Ouimet, E., and H. Kopnina. 2015. "Reconciling Ecological and Social Justice to Promote Biodiversity Conservation." *Biological Conservation* 184: 320–326.

Shoreman-Ouimet, E., and H. Kopnina. 2016a. *Conservation and Culture: Beyond Anthropocentrism*. New York: Routledge Earthscan.

Shoreman-Ouimet, E., and H. Kopnina. 2016b. *Culture and Conservation: Beyond Anthropocentrism*. New York: Routledge Earthscan.

Sudmeier-Rieux, K. I. 2014. "Disaster Prevention and Management." *An International Journal* 23 (1): 67–80.

Terborgh, J. 2015. "Foreword." In *Protecting the Wild: Parks and Wilderness, the Foundation for Conservation*, edited by G. Wuerthner, E. Crist and T. Butler, xi–viii. Washington, London: The Island Press.

The World Bank. 2015. *Shock Waves: Managing the Impacts of Climate Change on Poverty?* https://openknowledge.worldbank.org/handle/10986/22787

Tochon, F. 2009. "The Key to Global Understanding: World Languages Education – Why Schools Need to Adapt." *Review of Educational Research* 79 (2): 650–681.

UN (United Nations). 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*. https://sustainabledevelopment.un.org/post2015/transformingourworld

Van Poeck, K. 2015. "Education as a Response to Sustainability Issues." *Practices of Environmental Education in the Context of the UN Decade of Education for Sustainable Development, Environmental Education Research* 21 (4): 649.

van Vuuren, D. P., and E. M. W. Smeets. 2000. "Ecological Footprints of Benin, Bhutan, Costa Rica and the Netherlands." *Ecological Economics* 34 (1): 115–130.

Wals, A. E. J. 2010. "Between Knowing What is Right and Knowing That is It Wrong to Tell Others What is Right: On Relativism, Uncertainty and Democracy in Environmental and Sustainability Education." *Environmental Education Research* 16 (1): 143–151.

Wals, A. E. J. 2012. "Learning Our Way out of Unsustainability: The Role of Environmental Education." In *The Oxford Handbook of Environmental and Conservation Psychology*, edited by S. D. Clayton, 628–644. Oxford: Oxford University Press.

Wals, A. E. J., and M. E. van der Waal. 2014. "Sustainability-Oriented Social Learning in Multi-Cultural Urban Areas: The Case of the Rotterdam Environmental Centre." In *Greening in the Red Zone*, edited by M. Krasny and J. Dillon, 379–396. Frankfurt Springer: Resilience and Community Greening.

Washington, H. 2015. *Demystifying Sustainability: Towards Real Solutions*. London: Routledge.

Wee, B., and H. Mason. 2016. "Children's Language about the Environment." In *The Handbook of Environmental Anthropology*, edited by H. Kopnina and E. Shoreman-Ouimet, 401–411. New York: Routledge.

Weichselgartner, J., and I. Kelman. 2015. "Geographies of Resilience Challenges and Opportunities of a Descriptive Concept." *Progress in Human Geography*. doi: 10.1177/0309132513518834.

Wesselink, R., and A. E. J. Wals. 2011. "Developing Competence Profiles for Educators in Environmental Education Organisations in the Netherlands." *Environmental Education Research* 17 (1): 69–90.

Wijkman, A., and J. Rockström. 2012. *Bankrupting Nature: Denying Our Planetary Boundaries*. New York: Routledge.

Wilk, R. 2002. "Consumption, Human Needs, and Global Environmental Change." *Global Environmental Change* 12 (1): 5–13.

de Wolf, M., and A. de Hamer. 2015. "Education for Sustainable Development in the Netherlands." In *Schooling for Sustainable Development in Europe*, 361–380. Springer.

WWF (World Wildlife Fund). 2014. *Living Planet Report 2014*. Accessed November 23, 2015. http://www.worldwildlife.org/pages/living-planet-report-2014

Yin, R. 1994. *Case Study Research: Design and Methods*. 2nd ed. Thousand Oaks, CA: Sage.

Zizek, S. 2010. *First as Tragedy, Then as Farce*. https://www.youtube.com/watch?v=hpAMbpQ8J7g