Revisiting the "trans-human" Gestalt: Discussing 'Nature' and 'Development' with Students of Sustainable Business

HELEN KOPNINA[1]

Abstract

This article explores the perceptions of development through metaphor use by students of International Business Management Studies at The Hague University of Applied Sciences. Students' reflections upon the concepts of nature and development before and after educational intervention are examined through discourse analysis and narrative analysis. Results show that initially, students reflect the dominant development paradigm which tends to conflate 'nature' with 'natural resources'. This study suggests that the critical course has the potential to shift the student focus from the unquestioning acceptance of economic development and instrumental view of nature to the recognition of more ecologically benign and culturally variable paths to sustainability. In terms of pedagogy, the "trans-human" Gestalt, or mindset conducive to planetary consciousness, may require a distinct type of didactic strategy, discussed in this article. It is concluded that while transformative social learning towards sustainability requires the integrative switching back and forth between the various mindsets, effective, ecologically engaged and critical learning may require a more fixed, committed and above all affirmative action approach.

Keywords: anthropocentrism; environmental education; education for sustainable development (ESD); metaphors; planetary consciousness

Introduction

In the Belgrade Charter (UNEP and UNESCO, 1976) the objectives of environmental education are summarized as helping students to acquire an awareness of and sensitivity to the environment and its allied problems as well as basic understanding of the environment and humanity's responsibility towards it.

In line with the Brundtland definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987), the concept of Education for Sustainable Development (ESD) has emerged. The objectives of ESD can be summarized as promoting human, social, economic sustainability as well as natural (environmental) sustainability that is often linked back to 'natural capitals' (Breiting, 2009; Schroter, 2010). ESD has become the dominant perspective of environmental education (Sauvé, 2005:29), or become one of its key objectives (McKeown and Hopkins, 2003). Many critical educational researchers have noted, however, that since sustainable development

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[1]   Helen Kopnina is Researcher/Lecturer at The Hague University of Applied Sciences. Email: h.kopnina@hhs.nl

semantically implies sustaining development as an economic top-down enterprise, the very foundations of development need to be critically examined.

This article aims to examine the question of how concepts of 'nature' and 'development' are being perceived by the students of International Business Management Studies (IBMS) at The Hague University of Applied Science (HHS) in The Netherlands. The case study is based on the twelve-week critical course described in the Methodology section of this article, written assignments as well as discussions with students before and after the course. The research reported in this article is embedded in the critical scholarship of ESD on the one hand and conceptions of nature and corresponding metaphors on the other hand.

Metaphors are hereby defined as the main mechanism through which we comprehend abstract concepts and perform abstract reasoning and by which we understand a relatively abstract or relatively unstructured subject matter in terms that are more concrete subject matter and are mostly unconscious and automatic (Lakoff, 1993:244-245).

Nature metaphors

There is a large body of literature on connections between language and what can be termed ecological intelligence. Gregory Bateson's *Steps to an Ecology of Mind* (1972) and *Perspectives on the Ideas of Gregory Bateson, Ecological Intelligence, and Educational Reform* (Bowers, 2011) discuss how metaphors have a history that carries forward the culturally specific assumptions of earlier thinkers — including their silences and misconceptions. Bateson's ideas provide the conceptual framework for introducing educational reforms that address current ecological crises and education by explaining why educators unconsciously continue to perpetuate the deep cultural assumptions that were constituted before there was an awareness of the limits to growth, and how the emphasis on a possessive form of endless material progress undermines traditions of self-reliance within the diversity of cultural traditions that embedded sustainability.

Meijers and Lengelle (2012) describe metaphors as the first step towards the understanding of the not-yet well-understood emotion into a consistent story. The 'story' that the students attempt to tell is the relationship between self and biodiversity, a complex and emotionally loaded subject. 'Re-storying' often starts with helping students to find the 'right' metaphors. From metaphors, a person can move towards finding analogies, developing personal constructs and finally shaping coherent 'second' stories (Meijers and Lengelle, 2012:15). In the context of the present study, the 'stories' were told as part of the critical sustainable development course in which students were allowed to share their thoughts in a classroom environment, enriched with suggested literature and films. The focus was not on understanding a boundary experience or explaining it, but on the relationship that allows individuals to find their own way of articulating experiences (Meijers and Lengelle, 2012). The particular focus of in-class discussions was a human relationship to nature and discussion of boundaries as well as continuities between the students' Self and Nature. In this view, a nature identity can be seen as part of the self, as a dynamic multiplicity of positions or voices in the landscape of the mind, with the

possibility of dialogical relationships between these positions or voices. A nature identity can thus be defined as a dynamic multiplicity of personal positions or voices regarding nature, accessible through metaphors.

Audebrand (2010) argues that metaphors are integral to the way we act, interact, and think about the world and thus are also central to the discussion of sustainability. According to environmental philosopher Anthony Weston (1992), metaphors are required in the early stages of the development of new values, for example, for the non-anthropocentric appreciation of nature.

From a constructionist perspective, language can provide us with only a provisional understanding of reality in which metaphor becomes more than a matter of the spoken or written word but related to consciousness, including planetary consciousness (Wals and Dillon, 2013). This view denotes that our conscious awareness (our knowledge of the world) is an analog or metaphor of reality, the process through which meaning is socially constructed (Mignot, 2004).

The case of biodiversity provides a good opportunity to study the 'social construction' of a concept and a social problem and thus for a study of metaphors related to the environment (Väliverronen, 1998: 31). Väliverronen states that numbers, statistics, and graphics can also function as metaphors in their supposed ability to carry the ethos of objectivity of science.

Development and natural resources

In the discourse of development, 'environment' is often represented as 'natural capital' used by humans and no intrinsic value of non-human species is recognized. Framing 'environment', 'nature', 'wilderness', or 'biodiversity' as a 'common good' and putting a price on 'ecosystem services' or 'natural capital' became increasingly prominent (e.g. De Groot, 2002).

Fresco (2008) and Marris (2011) have argued that humans have such a significant influence upon the planet that they have no choice but to effectively "manage" it and not to bemoan the "imaginary wilderness". In this view, the lines between what is authentic, real, organic or natural versus what is artificial are blurred (Horigan, 1988). Additionally, scholars have argued that humans have influenced and changed their environment since ancient times (Radkau, 2008) and thought it plausible that these human interventions had affected the local weather long before the well-publicized climate change (Neumann 1985; Coates 1998). Paul Rabinow reflects on the human influence on nature in the concept of *biosociality*:

> "If sociobiology is culture constructed on the basis of a metaphor of nature, then in biosociality, nature will be modeled on culture understood as a practice. Nature will be known and remade through technique and will finally become artificial, just as culture becomes natural" (Rabinow, 1992: 234-240).

The view of nature as socially constructed and needing 'management' has been criticized on two grounds. First, such an instrumental view denies the intrinsic value of other species (e.g. O'Riordan, 1981; Yearley, 1991). Considering that biodiversity is necessary for humans, one can argue that preservation of 'some' biodiversity would be sufficient to satisfy human needs thus condemning the rest of 'nature' to extinction, undermining the very evolutionary unfolding of species (Crist, 2012).

The second criticism can be traced back to recent publications in *Nature* (e.g. Rockström et al, 2009; Isbell et al 2011) or *Ecological Economics* (e.g. de Groot, 2009; Boyd, 2007) about high interdependency of all species and the importance of their preservation for human welfare. These scholars argued that 'all' biodiversity is needed in order to address human needs for clean water, clean air, breakdown of waste, as complex ecological systems were shown to do all that (Isbell et al, 2011; Polasky et al, 2012).

Critics of the economic capture approach to nature have pointed out that mainstream sustainable development discourse sees the value of non-human species independent of instrumental human use of nature and what environmental education scholars have termed planetary consciousness (Stevenson, 2013; Wals and Dillon, 2013). It is thus questionable whether a utilitarian approach to non-human species offers any protection to those 'left over'. In fact, the concept of natural resources is likely to 'sanction the accelerated extinction rates for 'redundant', useless or 'inconvenient' species if technological substitutes can be found for the services provided by certain species (Eckersly, 2005:366).

Some researchers have suggested that the 'natural resource' approach is fundamentally and ethically flawed as it works as a 'discursive incarceration of the living world' because it has 'engraved the delusion of human supremacy into common-sense, science-sense, technocratic, and political thinking, policy discourse and other social arenas' (Crist, 2012:145). Both the economic approach to nature and social constructivism of nature can also signify superiority of human technology and reduce nature to the passive knowledge –recipient rather than the generator of reality:

> Metaphors of human labor regarding the creation of knowledge abound — familiar examples are building, constructing, assembling, manufacturing, inventing, or producing knowledge. Such vocabulary trades heavily on received distinctions between nature/natural and culture/artifactual… Representations of nature can be, and are, said to distort, imaginatively project, misconstrue, misinterpret, embellish, provisionally understand, approximate, work for all intents and purposes, intuit, predict, accurately explain, or deeply discern…. Postmodern constructivism… ousts the wealth of epistemic valuations … in favor of a narrow, skewed set of metaphors (Crist, 2004:10).

The critics of constructivist tradition have warned that emphasizing the role of metaphor and the rhetorical nature of social reality may be complacent in reducing nature to a subjective discursive element (Eckersley, 2005:366). Kidner (2000) argues that constructivism "provides a model of nature which fits seamlessly into the industrialist view of the world." According to Crist (2004:1),

Constructivists employ skewed metaphors to describe knowledge production about nature as though the loaded language use of constructivism is straightforward and neutral. They also implicitly rely on a humanist perspective about knowledge creation that privileges the cognitive sovereignty of human subject over nature. Politically, the constructivist approach fails to take the scientific documentation of the biodiversity crisis seriously; it diverts attention toward discourses about the environmental predicament, rather than examining that predicament itself; and it indirectly cashes in on, and thus supports, human colonization of the Earth.

Keeping in mind this criticism, the authors are wary of using metaphors as a way of social constructions – rather we see the cognitive and effective understanding of self in relation to 'nature' as a starting point for triggering learning processes in which the bond with nature can be and is reinforced.

Nature through ESD

Some ESD scholars have called for the discussion of general ethics, encouraging ESD researchers and practitioners to look beyond the obvious, to practice becoming more critical and to explore ethics as an everyday activity. Indeed, the workbook exploring ethics for education prepared for UNEP (Jickling at al 2006: 1) invites stakeholders to re-imagine possibilities, to 'think outside the box' and to creatively 're-imagine the future with new possibilities' as well as 'to think about how ethical questions are being discussed in different places and cultures around the world'. In acknowledging plurality of perspectives on ESD, scholars, and practitioners assume that heterogeneity of opinion offers more promise for finding creative solutions to sustainability challenges (e.g. Læssøe and Öhman 2010). Wals (2010b) lists the "trans-human" Gestalt on the more than human world, allowing more eco-centric and bio-centric mind-sets as one of the many possible lenses. Other perceptions include anthropocentric, instrumental, and socially and economically dominated perspectives – thus all flowers should be allowed to bloom.

Yet, as Kopnina (2012a, 2012b, 2013b) has asserted, the celebration of plurality in conceptions and approaches in ESD tends to ignore the commonality of anthropocentric perspectives in the very educational theorists and practitioners who claim to be open to all perspectives. The literature on ESD is replete with references to 'natural resources' and 'ecosystem services' (e.g. Gough and Scott, 2007), and has little to say about deep ecology (Naess, 1973). Outside a few exceptions, such as the Earth Charter framework for ESD (http://www.earthcharterinaction.org/content/pages/UNESCO%20Chair%20Project), the dominant perspective in ESD says little about the intrinsic value of nature (Bonnett, 2007). The key orienting idea of sustainable development does not pay enough attention to the pivotal theme which Bonnett considers central to all environmental education, *our understanding of our relationship to nature* (Bonnett, 2007: 707), which is overridden by the economies of capital accumulation through metaphors of natural resources or capital. In Crist's words, by employing the notion of natural resources, we are not in danger of

losing "natural capital" for present and future generations, but on the contrary, having conceptually and physically constituted the world *as* natural capital, we have nearly lost a living, numinous world (Crist, 2013).

Critical scholars of ESD have suggested that the very notion of the triple bottom line ignores the ecological need for the biosphere for which economic development is not an imperative since it only contributes to human development (Kopnina, 2012a). Many paradoxes of sustainable development were identified. The two prime terms 'sustainability' and 'development' have somewhat contradictory meanings. 'Sustainability' implies continuity and balance, while 'development' implies dynamism and change. Thus, environmentalists are drawn to the 'sustainability' angle, while governments and businesses place the focus on 'development' (Giddens, 2009).

It was noted that discourse on sustainable development espouses an oxymoronic goal of maintaining economic growth, re-distribution of wealth and keeping the health of the ecosystem intact (Rees, 1992; Mander and Goldsmith, 1996). Additionally, there is a strong belief that by solving human problems associated with environmental justice (equal distribution of environmental benefits and risks) and raising the living standards of the poor, the ecologically sustainable society can be achieved. As Kidner (2000) suggests, decoupling population growth from increasing consumption, as sustainable development discourse implicitly does, may function as a mechanism against facing the devastation of the biosphere — an undertaking long underway but gathering momentum with the imminent bottlenecking of triumphant global consumerism, and unprecedented population levels.

While combating social problems such as racism, sexism, and economic inequality are acknowledged, discrimination against other species or ecological justice appears to be a non-issue, as an overview of ESD indicators suggests (Reid et al, 2006). While ethical assumptions underlying sustainable development condemn different types of social discrimination, the daily mechanized slaughter of farm animals for human consumption or the development of pristine natural areas for human cultivation is rarely morally disputed (Crist, 2013).

This anthropocentrism can be explained by financers or 'sponsors' of ESD programs and their vested interests in the economic valuation of nature. Literature identifying donors of ESD programs suggests that they are mostly 'inspired' by intergovernmental organizations such as the UNESCO as well as corporate elites (Crossley and Watson, 2003; Jickling and Wals, 2008), non-governmental organizations or NGO's (Blum, 2009); government ministries concerned with 'development' (Black, 2010); and 'commercial partners' (Lewis and Kanji, 2009). It is questionable whether ESD really has the capacity to challenge the status quo, given its corporate and political sponsorship (Jickling, 2005)? Would plural approaches to sustainability prepare students to acknowledge the paradoxes of sustainable development and particularly its anthropocentric bias? According to Bonnett (2007:710):

Brundtland-type definitions of sustainable development reflect highly anthropocentric and economist motives that lead to nature being seen essentially as a resource -- an object to be intellectually possessed and physically manipulated and exploited in whatever ways are perceived to suit (someone's version of) human needs and wants. That is to say: they are redolent with the general metaphysics of mastery that informs modernity and is precisely the root cause of our current environmental predicament. With humanistic hubris, nature is constantly to be challenged, set in order, re-engineered, etc., to meet human needs -- and often, not even this, but merely human convenience. The underlying attitude is implicit in the metaphors sometimes employed to describe our achievements and aspirations: man conquered Everest, tamed the jungle, needs to manage the oceans, etc.

In criticizing the notion of critical pedagogy in eco-justice education, Chet Bowers (2002: 23) has noted:

A… root metaphor that critical pedagogy theorists share with the tradition of thought that underlies the Industrial Revolution has its origins in the Biblical mythopoetic narrative of creation: that is, that "man" was created as superior and separate from the natural world. This root metaphor, which is called anthropocentrism in environmental literature, is especially prominent in western thinking. It was basic to the thinking of industrialists, economists, property owners, and critical pedagogy theorists. The latter, however, do not express their anthropocentric pattern of thinking by reducing nature to an exploitable resource. Rather, it is expressed in how they frame the problem of human emancipation in a way that ignores the ecological crisis.

The exploration of metaphors can provide a helpful tool in addressing how students perceive sustainability and sustainable development before and after the educational intervention.

ESD and metaphors

The shadow role of these 'sponsors' can be gleaned from the metaphors employed by corporate leaders, for example by 'journey' and 'war' metaphors. In reflecting upon the journey metaphor promoted in much business discourse on sustainability, Milne et al (2006) suggest that in constructing 'sustainability as a journey', purveyors of corporate rhetoric can avoid becoming embroiled in debates about future desirable and sustainable states of affairs. In fact, the corporate journey metaphor appears to seriously engage with elements of the discourse around sustainable development and sustainability, but yet at the same time, paradoxically, may serve to further reinforce business-as-usual as the journey is never-ending. According to Audebrand (2010) the war metaphor which still guides strategic management theory, research, and education and is used by sustainable development leaders, might actually suggest a heroic struggle with abstract ideas and underplay the role of the real 'enemy', which could be the very way corporate or sustainable leaders function. Aubebrand argues that sustainability subjects will not raise

environmental awareness if the root metaphors underlying strategic management education remain unchanged.

Many observers have noted that sustainable development discourse is replete with the metaphors of 'progress', 'modernity' and 'development' (Lewis, 2005). Through these metaphors, education may be complacent in creating 'monocultures of the mind' (Shiva, 1993) in which the new 'holy grail' of the dominant political elites, the consumerist culture, is perpetuated (Blaser et al, 2004; Kopnina, 2012c). Traditional and culturally specific ways of relating to each other as well as to plants and animals are undermined (Black, 2010; Efird, 2011; Baines and Zarger, 2012). In the case of Inuit societies, for example, indigenous knowledge systems, particularly cultural geographies and "memoryscapes" (Nuttall, 1992:10) are made meaningful through metaphors such as stories for relations among humans and between humans and other species. As ecological anthropologist McElroy (2013) argues, understanding these knowledge systems through metaphors encoded in traditional stories can help us explore the cognitive and symbolic processes through which the Inuit perceive and respond to environmental threats and pressures and contribute to the increased effectiveness of communication and problem-solving. Rather than metaphors of wars or journeys, native metaphors often speak of co-creation, co-habitation, connectedness, and interdependency between human and non-human species (McElroy, 2013).

It was the reflection on such types of metaphors in relation to sustainable development and nature that have led the authors of this article to conduct a case study as detailed below.

Methodology: a Case study

The case study involved a heterogeneous group of students as it was shown that the development of social cohesion among a diverse group of students seems conducive to better listening, creating empathy, and for "Gestaltswitching", mirroring, and Transformative Social Learning for education for sustainability (Wals and Blewitt, 2010). Unlike the case of a heterogeneous group of students of higher education in The Netherlands involved in the study of sustainability described by Wals (2010b), we have not assumed that just having a heterogeneous group of students will suffice in developing critical awareness.

This case study involved a sample of sixty-seven international students of higher education in the age category between 20 and 24 years old. The students were all participants of Sustainable Business minor during the period of September 2012 and September 2013 (spanning two semesters). This minor is currently offered to the second and third-year students of the International Business Management Studies (IBMS) Bachelor program at The Hague University for Applied Science (HHS) in The Netherlands. The largest proportion of students (40%) was Dutch, followed by other West European nationals (20%), East European nationals (10%), the Chinese (10%), the South Americans (5%), and the Africans (5%).

The students followed the twelve-week course titled 'Politics, Business and Environment' (PB&E) detailed in http://thehagueuniversity.academia.edu/HelenKopnina/Teaching-Documents. The course was targeted at developing students' awareness of the complexity and possible paradoxes of sustainable development, as well as awareness of the deep ecology perspective. One of the many aims of the course was to raise student awareness of the inherent paradoxes of sustainable development. The course is particularly targeted at the business student audience in order to help them develop both critical skills as well as the ability to recognize sustainability as a business opportunity, to strengthen not only their future career but also as an opportunity to actively participate in the transformation towards a more sustainable society (Kopnina and Blewitt, 2014).

As part of this objective, students were shown a documentary film *Schooling the World* directed by Carol Black (2010) which equates western-style education with neo-colonial practices. The film reflects on educational practices in a remote village in the Northern Himalayas, where development agencies and volunteers build schools, convinced that the Western style of education is the only way to a 'better' life for indigenous children.

The film-makers inquire into what happens when we replace a traditional culture's canon of knowledge with our idea of development linked to economic prosperity and commodification of nature. What does the spread of neoliberal industrial values mean for the people's traditional relationship with their environment? The film-makers, mostly anthropologists, examine the hidden assumption of cultural superiority behind education and development projects, which overtly aim to help children "escape" to a "better life" through preparing them for participating in the industrial economy. The film also questioned the very definitions of wealth and poverty, as it uncovered the role of schools in the destruction of traditional sustainable agricultural and ecological knowledge, and in the devaluation of ancient spiritual traditions.

The in-class discussions occurred with minimum guidance from the researcher (lecturer of the course) in order to stimulate students' own opinions. Discourse analysis and narrative analysis was used to analyze the reaction to the survey. Discourse analysis involves recording interaction; transcribing of recorded material; formulating claims about the conversational moves, structures, and strategies demonstrated in the interaction; and then building an argument with transcript excerpts that are analyzed (Tracy and Mirivel, 2009: 153). While conversations in the class were not recorded, the researcher used notes for ordering observations and segments of conversations which were analyzed by the basic qualitative ordering of sections into theses through coding of keywords or sentences.

Text analysis included analysis of writing assignments (Richardson, 2000). The resulting text summarizes the researcher's observations and segments of conversations as presented below.

The students were asked: What do you think about biodiversity (nature)? What do you think about (sustainable) development? What do you think is the relationship between biodiversity (nature) and sustainable development?

In-class discussions and writing assignments[2]

In regard to biodiversity and nature, the students came up with the terms that related nature to natural resources, ecosystem services, and natural capital. As one female student from St. Martin reflected on the concept of nature:

> 'I think this is about natural resources. How people can be sure… that they can protect nature… People need nature to survive, they need to worry about things like deforestation… I think the problem is how to feed the growing population. These questions are about how to help humans… and animals'.

Biodiversity was also discussed in non-anthropocentric terms, with students pondering whether biodiversity can be protected with the current rates of economic growth. A Dutch girl suggested that biodiversity needs to be 'preserved for future generations', and a Chinese female student agreed that she wants her children to see 'the same types of animals that live today'.

As for the discussion on (sustainable) development, the students were first asked to reflect upon the term 'development'. Many have named 'growth', 'progress', 'modernity' and 'ways forward', as well as 'evolution' in a more biological context.

When asked to reflect upon the term 'economic development', few students have shown awareness of the sponsorship of entities such as the World Bank or development agencies. Rather, they discussed development as 'good for the third world nations', as 'helping people to overcome poverty'. Students did name a few ways in which economic development can be achieved – through 'building roads', improving 'travel', 'helping to develop…. efficient agriculture', 'building hospitals', and introducing education or 'building schools'. Others named concrete provisions such as building clean water wells in developing countries. Most students, when asked about the relationship between economic development and nature, felt puzzled. The researcher could only get one clear answer from a Dutch female student:

> Well, development can put nature at risk. But I guess it's also true to say – I don't know – that er… development can like… help nature, I mean help solve some of the problems. Development can mean developing new things like… energy… clean energy… and maybe making people aware of… environmental problems.

Generally, the initial discussion showed that the students perceive 'nature' in mostly instrumental terms reflecting on the dominant Western perception which sees ecological interests as largely subservient to social and economic ones.

After the course

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[2] Original grammar of writing assignments is maintained here

After the twelve-week PB&E course involving subjects related to the critical analysis of political and ethical issues connected with sustainable business and sustainability in general, the students were again asked to reflect on the same questions.

Reflecting on the enterprise of development, particularly the film that the students had viewed, *Schooling the World*, seemed to have left a deep impression. The students felt ambiguous about the objectives of the development enterprise, have mentioned post-colonial regimes and the possibility that development may be 'imposed by rich nations upon others', as one student astutely put it. A Moroccan-Dutch female student wrote that she was disgusted by neo-colonial practices portrayed in the film:

> So this movie makes me disgusted with this world because of a few reasons. The first thing is that the west still tries to gain power and more territory through this so-called help aka education. … At first, they expected to rule those countries, but it backfired. Korea and Japan are great examples of how they used a few western technologies for their own benefit, keeping their Asian tradition alive. Too bad for the West, they couldn't keep the countries as a colony. Now, this history is gone, they still think that one size fits all, which is not the case. All people are different, even within one culture. So the fact that they force this western type of education upon traditional people that can easily provide for themselves and are probably happier than us here in the west, is disgusting. It is disgusting how people want to change others for their own sake. It is sad to see how people are so insecure about everything and so arrogant that they want everything their way. I sincerely hope that in the future, governments of these non-western countries come up with their own type of education in which their traditions and beliefs will not be forgotten, but instead will be cherished and respected always and forever. I think the west should mind its own business and leave the rest alone because no one is waiting for interference by western countries that have enough issues of their own and can't even keep their own people happy.

Reflecting on the dependency of traditional cultures on Western 'show case-model', a Bulgarian female student has reflected that local communities are being turned away from their own environment, unable to survive by traditional means:

> They [the film-makers] insist that the young generation loses the opportunity to gain the knowledge of its ancestors about land, soil, the climate in India, which was practically based and enabled them to survive and take care of their families. Now, after young people finish their education, they are unfamiliar with their nature and according to the opponents, they won't know how to survive in their world.

The students have reported that prior to watching the film, they were unaware of the negative effects of modernity. As an Indian-Dutch male student has reflected in his report:

> Ladakh was home to a self-sustaining community. They always had sufficient means to live their lives and the local economy was in balance. Families cultivated their own crops and had no worries about how to sustain their lives until the touch of development hit their lives. The first roads were built which provided access for

western products, and heavily subsidized goods. Along with that, the area was introduced to an image of the western life which had no similarity to their traditional way of life.… Development in this rural area and its traditions resulted in unemployment, community & family breakdowns as youngsters moved out to the bigger cities to study and of course, pollution. Due to this development and the appearance of modern schooling, traditional local knowledge of sustainable agriculture is diminishing. Their traditional ways of building, producing textile and means of water management is shrinking as well. Additionally, the most important of all the values and traditions of Tibetan Buddhism and even the Ladakhi language is threatening to be forgotten by the younger generations.

This documentary actually showed me that what was unknown to me, the disadvantages of global modernization. Even though the new generations are being prepared for a harsher and economy driven world, they lose highly valuable knowledge and traditions. Cultural values and knowledge should not be traded for anything, not even a modern way of life. Well intended programs such as the ones shown in the documentary actually result in negative outcomes, for instance, the loss of a language, the Ladakhi Language, or the loss of traditional local knowledge of sustainable agriculture. Traditional Tibetan Buddhism, such beauty of religion and lifestyle is vital in order to stay true to your roots and remember where one comes from. Once lost, such intellectual knowledge of lifestyle, religion, and culture will never find its way back to future generations yet to come. Overall it opened my eyes and eliminated the filter of modernization which I was viewing the world through, and I came to a better understanding of how global modernization has its positive and negative effects as it makes its way throughout the globe.

Students felt that the film sometimes provided more questions than answers, and expressed their doubt through thoughtful reflection, as this Dutch male student has reported:

The documentary has a point: Sometimes people don't want to be changed by education and sometimes education disrupts and destroys a balanced way of life. Culture is like an ecosystem. If you disrupt the balance in an ecosystem, it might lose it forever and the ecosystem falls apart. If you change a culture from the outside without considering the delicate balance that these people found in their daily routines and their customs, you might disrupt the balance so severely that the culture dies and the people are lost. …

So why do we want to educate these people? Is it for them or for us? Do we want them to comply with our system?

The local government often encourages these schools because it is good for the economy, which comes in first place for most governments. When you start putting the economy first instead of people, issues like this emerge. Schools are good for the economy and not for the children. It makes people richer, instead of happier. And sometimes it doesn't even make them rich, which causes them to be unhappy and poor,

unable to work on the farm and unable to work in the city. Also, you need brains to succeed in schools, and not everyone is smart enough. This creates a big gap between those that get a diploma and those that cannot, which makes finding a job for the latter an almost impossible objective.

It is a tragedy that people move from the country to the city when the country is poor but healthy and happy while the city is rich but unhealthy and unhappy. As Europeans, we now see how nice it is to have nature around you to dwell in with peace.

Students have also demonstrated a critical ability to see the inherent contradictions of the educational system, as well as the film-makers' own standpoints. The same Dutch male student quoted above has pointed out, it was somewhat ironic that the film-makers and those interviews were themselves educated in a Western system, which did not prevent them from being critical of it:

To be honest it is quite paradoxical that people who are educated by Western Society are suddenly speaking out against this education with intelligence and wisdom that clearly demonstrates the healthy effect of this education on their brains.

I think education should always respect and enhance the culture that the children represent. I believe that the world is a more beautiful place to be in when there is a diversity of cultures. We should all be allowed to develop in a way that we like. Teachers should always be local enough to respect the customs of the children and understand their real needs and values.

Another Dutch male student noted certain hypocrisy in the way the local people use Western products, such as clothes or materials for building their houses, and the way they are presented by the film-makers as 'sustainable':

This film seems to take a very biased view of Western culture and its influence on the world. First of all, the film takes the American culture as the main example and makes it seem as if all other Western cultures are exactly the same, which is obviously not true. Additionally, it makes it seem like the indigenous culture is so much better for the quality of life and the sustainability of nature, while at the same time you can see them using plenty of western products and services; this seems rather hypocritical.

There was also an alteration in the students' view (or at least in their perceived knowledge) of how nature relates to humans and how humans relate to nature. Metaphors of human 'inclusion' and 'connectedness' were used, as well as of 'superiority' and 'domination' of humans toward other species. Not all students agreed about the moral basis of inclusive or superior positions, but the discussion about the morality of this relationship was more mature than before the course. As an English-Pakistani male student has reflected, formal education and development tend to negatively affect 'ecological lives' of the local community, and take 'locals away from nature':

Throughout the documentary we see the panel highlight the environment and how the adaptation of a western consumer-based system has a negative effect on the ecological lives the majority of indigenous people live.

We see the film look closely at what western missionaries have aimed to throughout history and that is spread the word of the Bible into the indigenous culture without even trying to understand their culture and beliefs which over thousands of years have seen us slowly eradicate indigenous cultures, languages e.t.c. The panel highlights the fact that western education restricts the understanding of the indigenous people to pre-planned "subjects" and takes the locals away from nature by replacing it with book system controlled by people thousands of miles away essentially leading to what the film highlights as factories for children.

The student has further reflected that ´I believe it is unethical and immoral for western society to try and implement our way of life into cultures that are spiritually closer to nature and live in a more efficient and ecological manner than we do´.

Students' perception of biodiversity remained contextually related to their (or generally, human) perception of it, but moral and ethical aspects of the human relationship with nature (such as 'taking responsibility' or 'being justified' or 'feeling responsible') were evoked. Emotional attachment to nature was also emphasized as one of the reasons why 'humans should protect nature'. As a Chinese male student has pointed out: 'we should make sure that our children can still enjoy [nature]'. This statement was followed by the comment of a Dutch male who emphasized another reason for protection: 'But it's also important that all these animals… exist for their own sake'. In another discussion, an English student remarked that future generations referred to in the Brundtland report might – and should – also refer to non-humans, as they are 'also individuals'. The intrinsic value of nature was now explicitly addressed, and metaphors related to animals and plants as 'individuals', 'persons', 'beings' were evoked by students.

The students also felt that there were some essential problems in combining social, economic and ecological objectives. The terms they have used were much less optimistic than during the first weeks of their course, accentuating difficulties, paradoxes, problems and challenges associated with the protection of nature, rather than ideas of commensurability in which ecological and human interests are 'naturally' combined. In other words, while the discussions before the course indicated that students perceive 'nature' similar to the dominant Western perception which equates ecological and socio-economic interests, after the educational intervention, students were more aware of the contradictory relationship between human and ecological objectives.

Reflection

If we assume that metaphors involve both cognitive and emotional elements and comprise story-telling that tackle the students' 'tacit knowledge' in relation to their emotional understanding of nature, we may speculate that metaphors represent a kind of 'total

conscious states'. The change in metaphors can then indicate the change in the total conscious state or at least a temporary alteration in cognition.

Initially, the students tended to perceive 'nature' in mostly instrumental terms. Protection of nature was either seen as linked to natural resources or to the future generations of humans. Despite the heterogeneity of the group, students exhibited some individual differences in their perceptions, but not differences based on gender or country of origin.

Methodologically, an analysis of the use of metaphors to tackle student understands (cognitive) and emotional relationship to nature suggests that an additional element needs to be added namely moral development.

The students' discussions show that it may be hard to imagine that nature has its own value, without an additional moral development that involves a recognition of the deep ecology perspective. To recognize the intrinsic value of non-human subjects is not necessarily an issue of knowledge (i.e. a cognitive problem) but a question of moral development and the development of personality. Only if students are able to observe themselves and on that basis are able to make complex moral considerations, are they able to incorporate the deep ecology perspective.

After the critical course, the students are more aware of issues such as population growth and (over)consumption being related to threats to nature, and whenever questions of social and economic equality are evoked, students were able to critically reflect on the long-term effects of social priorities for ecological well-being.

Implications for environmental education

With research on education for sustainable development, scholars have emphasized Transformative Social Learning - "learning for being", alongside learning for knowing and learning for doing, requiring permeability between disciplines, the university and the wider community, and between cultures, along with the competence to integrate, connect, confront, and reconcile multiple ways of learning about and for sustainability (Jickling and Wals, 2008; Wals, 2007; 2010a and 2010b). Wals (2010b) identifies a multitude of "Gestalts" or mindsets and perspectives at play, including the temporal Gestalt (past, present, future, and intergenerational mindsets), the disciplinary Gestalt (a range of social science and natural science mindsets), the spatial gestalt (local, regional, global, and beyond global mindsets), and the cultural Gestalt (multiple cultural mindsets whereby culture is broadly understood). Lastly, the "trans-human" Gestalt is supportive of bio-centric mindsets entering our thinking and acting as well (Wals, 2010b: 387). Sustainability competence then refers to one's ability to respond to a sustainability challenge with all these Gestalts in mind and to consider the challenge from a range of vantage points, engaging open, democratic, pluralistic and social didactic strategies.

In line with Wals (2010b) and Stevenson et al (2013), the author would like to argue for social learning for sustainability by mirroring one's own ideas, views, values, and perspectives with those of others in ethnically heterogeneous and gender-mixed groups.

Following Sund and Öhman (2013) it needs to be emphasized that unmasking the political dimension, re-politicizing education, seeing beyond the relativist and objectivist divide and using passion as a moving force is essential for this purpose. Unlike Wals (2010a and 2010b) however, the author would like to emphasize that rather than the student's ability to switch between the various Gestalts, mindsets or lenses, it is the lecturer's responsibility to emphasize the more critical approaches to sustainability, if ecological justice and biodiversity loss as well as the general idea of 'respect for nature' is to be taken seriously. While transformative social learning towards sustainability as well as mirroring one's ideas off others requires the integrative switching back and forth between the various Gestalts, mindsets or lenses (Wals, 2010b), effective, ecologically engaged and critical learning may require a more fixed, committed and above all affirmative action approach. This affirmative action can be based on the ideas of Bonnett about nature learning that is broader than the scientific model and include knowledge *by acquaintance* (Bonnett, 2007:714), similar to the earlier forms of conservation learning through interaction with nature. Nature's 'epistemological mysteriousness' (Bonnett, 2004) offers itself to our senses in its infinitely faceted openness via our bodies, poetry, music, and art. Affirmative action would thus include a more inclusive approach to nature learning that involves students in active participation as well as emotional engagement, similar to that of 'traditional' societies.

Rather than presenting a mosaic of different perceptions and perspectives of sustainability and encouraging students to engage with all of them, the author would like to support the critique by Chet Bowers that addresses the root metaphors in our sustainability thinking: The key point here is that the root metaphor that equates change with progress frames the

> thinking of critical pedagogy theorists in a way that fails to reconcile the authority they place in the critical reflection of students with cultural traditions that are sources of individualized empowerment, community self-sufficiency, and social justice. Students may not be fully understood, appreciate, or even recognize these traditions when their experience is largely shaped by the media, teachers, and their peer group. A double bind created by the taken-for-granted status that the root metaphor has in the thinking of critical pedagogy theorists is that they are part of an anti-tradition tradition of thinking that goes back hundreds of years--and is an example of a tradition that needs to be reconstituted in light of the ecological crisis (Bowers, 2002: 24)...

Returning to the point discussed at the beginning of this article, Bateson (1982) and Bowers (2011) emphasized that a greater focus on the nature of metaphorical thinking would enable students to be more explicitly aware of other areas where the colonizing of the present with the analogs from the past could lead them to recognize that the analogs that frame the meaning of words also encode the moral values held at the earlier stages in a culture's development. In terms of understanding of the cultural roots of the ecological crisis, it was stressed that Western root metaphors exclude other vocabularies, such as metaphors from the mythopoetic narratives of indigenous cultures. The vocabularies

(metaphors) that support different ecologically problematic root metaphors (such as individualism, progress, economism, and evolution) support each other and are different from the root metaphors in non-western cultures. Any discussion of the metaphorical nature of language opens the door to a discussion of the connections between language and cultural colonization — which would have been done with the foreign students in the class. Consequent research could include a broader focus on language issues and could touch on how print undermines the exercise of ecological intelligence — which is what we should be moving toward.

In other words, as the initial discussion with students in this case shows, without the critical involvement of a mentor and the use of study materials such as literature and films geared toward development of planetary consciousness and awareness of the deep ecology perspective, students tend to reproduce the dominant anthropocentric discourse that has become increasingly global. French, Ghanaian and Chinese students spoke of natural resources as normative categories prior to the educational intervention, and while the group showed individual differences in their awareness or attitudes towards nature, the 'social learning' in in-class discussions without the clear objective of addressing the critical questions of ecological justice, did not move far beyond the mainstream conventional opinions reflective of the dominant paradigm.

In line with Bowers (2002, 2011), the author contends that more is required of an eco-justice pedagogy than the development of critical awareness of the root metaphors. One of the objectives of this PB&E course is to teach students about the Cradle to Cradle system of production which emphasizes dependency on nature, interconnection and natural cycles in which waste becomes food (applying the Cradle to Cradle system in educational practice is discussed in greater detail in Kopnina 2013a). While the scope of this article does not allow us to delve into this constructive part of the course, suffice it to say that development of critical awareness and leading students to think of better alternatives requires a mentor's critical and committed involvement as well as a realization of social and democratic learning.

Yet, social and democratic learning and a plurality of approaches may be insufficient to guarantee the development of planetary consciousness because most of the sustainability facets, despite their variability, remain anthropocentric. As far as didactic strategy is concerned, since non-human species are not represented in any plural, democratic, social, open or whatever student discussions, their representation may require a kind of 'affirmative action'. This 'affirmative action' should be similar to that of previously discriminated human groups – slaves, blacks and women. Unlike marginalized human groups, nature cannot speak for itself and thus this affirmative action needs to be continuous.

Consequent research could focus on the content of learning by examining language issues that are critical to making a shift towards an ecological and sustainable paradigm. The suggested direction this research would take could assess how many university faculties still subscribe to a conduit view of language, ignore the historical roots of metaphorical

thinking, and fail to help students understand the differences between print-based storage and communication and the oral traditions essential to revitalizing the non-monetized cultural commons. This consequent research might be able to inform environmental education scholars how the current faculty continues to perpetuate the mindset that is oriented to supporting economic development.

Conclusions

This article has argued that the earnest recognition of the value of education with its emphasis on traditional and ecological values rather than the economic framing of nature through the enterprise of development may lead to an integration of human interests. The "trans-human" Gestalt allows us to imagine the world from the perspective allowing more eco-centric and bio-centric mindsets to enter our thinking and acting as well (Wals, 2010b). This will require pedagogy that involves social learning, pluralism, and gestalt-switching.

In examining the case study of IBMS students' perceptions of development and nature, most students at the beginning of the critical course did not yet develop the critical ability to recognize complex moral paradoxes associated with nature. After completion of the course, most students developed a deeper appreciation of the moral dilemmas involved in both sustainable development and the human relationship to nature. The outcome of introducing students to the metaphorical nature of language and its connections with development or ecological thinking represents a positive gain in discussions about how language reframes our thinking and could provide a model for others.

In order to include a clear focus on the environment if the ecological needs of the planet are to be taken seriously, educators might also need to go beyond conventional teaching. The case study presented here, with a specific focus on the film *Schooling the World* and examination of the concepts of development and nature through metaphors, offers both a conceptual and methodological blueprint for how the programs can be developed. Such a program can raise critical awareness of students to a degree that transcends the anthropocentric bias inherent in education for sustainable development. If we assume that planetary consciousness, awareness of the deep ecology perspective, the importance of environmental justice along with – but not subordinate to! - issues of social importance can be learned, the way racial and gender equality or moral impermissibility of slavery, torture, discrimination, etc. can be learned, we can only conclude that teaching respect, love, and care of nature will require critical pedagogy that reaches beyond the current conventions of ESD. This pedagogy requires a mentoring that is committed to the recognition of the Western perspective as one of many (and perhaps not the best) possible perspectives. To further advance ecological interests, the teaching materials should be geared toward the development of critical awareness as well as social interactive learning that employs all possible didactic tools that enable the students to learn – and hopefully, integrate into their lives – the importance of recognizing the subjectivity of the Western industrialist view of nature.

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