Educational Ethics and the DESD: Considering Trade-offs

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Abstrak: Dekade Pendidikan untuk Pembangunan Berkelanjutan (*United Nation's Decade of Education for Sustainable Development*, DESD) dari adalah program PBB yang bertujuan mempersiapkan anak didik menghadapi parahnya persoalan ekonomi dan lingkungan. Dalam artikel ini, penulis membuktikan bahwa penekanan semata pada tujuan ambisius, yakni pembangunan berkelanjutan, memunculkan pertanyaan penting bagi etika pendidikan. Khususnya, penulis menyoal bahwa misi dan kurikulum DESD seringkali gagal memperhitungkan akibat bagi lingkungan, yang tak terelakkan adanya dalam setiap pengambilan keputusan. Lebih lanjut, tujuan DESD tidak secara memadai berfokus pada pembangunan skill pengambilan keputusan dan pembedayaan etis. Pada akhirnya, disimpulkan bahwa kurikulum DESD harus secara kritis dan konstruktif mengakui adanya akibat terhadap lingkungan. **Kata Kunci:** *Pendidikan untuk pembangunan berkelanjutan, etika pendidikan, kelestarian.*

Introduction

The united nation's decade of education for sustainable development (DESD) aims to address some of the most urgent and complex problems of our times: how to educate present and future generations to bring their standards of living to adequate levels and maintain or restore the environmental capacity to do so.[1] In the words of the United Nations Educational, Scientific and Cultural Organization (UNESCO), 'There can be few more pressing and critical goals for the future of humankind than to ensure steady improvement in the quality of life for this and future generations, in a way that respects our common heritage – the planet we live on'.[2] Some form of policy response to development and environmental problems is clearly important. Is education for sustainable development (ESD) an appropriate response and, if so, what role should it play in addressing these problems? The answer to this question depends in part upon the validity, coherence and usefulness of the concepts 'education', 'sustainable development' and their combination, 'education for sustainable development'. These concepts are both contextual and complex, and their long-term value depends upon the answers to a number of conceptual questions, some of which I will pose in this article. I will ask these open-ended questions from the perspective of educational ethics, the field of study that analyzes ethical issues in educational theory and practice. Since ESD is a self-described form of ethics education–it is education with the adoption of an ethical framework as its aim–I will focus on the implications of this aim, specifically in the context of trade-offs that might arise when negotiating the inevitable conflicts inherent in environmental and development dilemmas. My aim is to clarify the conceptual content of ESD in order to make more consistent decisions about actual ESD practices.

Argument

If any institutionalized response to environmental degradation and economic underdevelopment is to succeed, it must address the inevitable trade-offs, conflicts and compromises that will arise. Students will be inadequately prepared for important decision-making about uncertain, probabilistic and long-term consequences if they don't learn to understand and negotiate these tensions. In this article, I argue that ESD curricula must actively teach about trade-offs, conflicts, compromises and ethical foundations. This could be done in part by critically assessing the values it aims to inculcate, as well as developing students' abilities to think critically about ethical and uncertain issues. ESD does not seem to be consistently focused on these ends.

ESD aims at an elusive and conceptually unclear end, the acceptance or adoption of 'sustainable development' (SD) or sustainability, depending on the ESD document. By committing to a specific, contested moral end, it might (1) preclude consideration of alternatives, (2) discourage student creation of their own moral view, and (3) fail to educate for *understanding* (rather than adoption) of the moral aim.[3] An emphasis on clarifying and resolving inevitable trade-offs might better prepare students for the future. I will now detail some trade-offs in the contexts of education, the environment and development – both internal to each field and between them – and propose some educational approaches and practices that respond to this concern.

Trade-offs in Education

There are trade-offs between educational and larger societal aims, for instance between liberal learning and vocational training. These are often unavoidable and difficult, but they must be acknowledged in order for good educational practice to occur. The conflict between educational aims and social concerns has precedents. For example, the teaching of patriotism can function as a binding and motivating principle in a community, but can also diminish a student's freedom to choose their own commitments. Patriotism can conflict with the educational aim of student autonomy and considered choice. Educational theorists and applied ethicists take this conflict very seriously,[4] and its resolution is often case-sensitive and controversial. Clarifying the trade-offs is centrally important to understanding exactly how patriotism and autonomy might be balanced.

There are also trade-offs between education and sustainability or SD. Sustainability and SD are very similar to patriotism in that they involve contested ethical commitments often promoted through education. The imposition of a moral view that has not been fully considered by the student conflicts with their autonomy, whether or not that view is reasonable. Cultivating and encouraging a student's autonomy requires time, patience, sup-port, freedom to choose ethical beliefs, and acceptance of the possibility that they will not accept the intended outcome. In the case of ESD, acceptance of SD is the intended outcome. At a minimum, a tension exists between this acceptance as an aim and autonomy as an aim. To what degree this tension matters depends upon how critically SD is approached and how seriously autonomy is encouraged.

At the same time, there is a legitimate sense of urgency to the problems posed by climate change and population growth. In 2006, a leading climatologist stated that 'we have at most ten years – not ten years to decide upon action, but ten years to alter fundamentally the trajectory of global greenhouse emissions'.[5] The IPCC's 4th Assessment makes a similar claim.[6] How should an educational practice respond to the urgency of these problems without violating, diminishing or failing to fully develop a student's autonomy? While I propose tentative answers at the end of this article – an emphasis on cultivating reflective and critical thinking – I am most concerned with simply drawing attention to the trade-offs involved. Asking foundational questions in educational theory and ethics – e. g. to what extent is education intrinsically valuable, useful as a tool, or focused on habituation? – helps to clarify exactly what form ESD practices will take, and what the strengths and weakness of ESD might be.

Some of these tensions and trade-offs are inherent to the urgency and seriousness of our ethical dilemma, rather than being unique to ESD itself. The conflict between education as intrinsically valuable and instrumentally valuable is well-established, and should be treated as an active conflict to negotiate in light of relevant ethical commitments, context and student capabilities. My questions are not an indictment of ESD. They aim instead to clarify a central conceptual issue that ESD must address in order to be a robust, ethical educational practice.

Trade-Offs Regarding The Environment

Trade-offs between sustainability and development are unavoidable. While many aims of SD are noble and even individually justified, many cannot be simultaneously achieved. Examples of tensions between aims can be found on the list of aims in UNESCO's 'Vision & Definition of ESD': Education for sustainable development is about learning to:
- respect, value and preserve the achievements of the past;
- appreciate the wonders and the peoples of the Earth;
- live in a world where all people have sufficient food for a healthy and productive life;
- assess, care for and restore the state of our Planet;
- create and enjoy a better, safer, more just world;
- be caring citizens who exercise their rights and responsibilities locally, nationally and globally.[7]

'[A]ppreciat[ing] the wonders of the Earth' is an important goal, but what does one do when those wonders – forests, oceans, prairies, mountains – need to be used for farms, housing, logging or fishing? The activities I mention need not be terribly exploitative to make my point: simply farming, even in an environmentally responsible manner, violates many people's aesthetic and moral conception of how landscapes should be used. Another example, of wind farms in coastal regions, illustrates the tensions and trade-offs between appreciation, sustainability, self-interest, development and which values people hold strongest.[8]

Sustainability is only one of many conflicting values, and can be used to override values that might be more justifiable. What does one do when sus-tainability clashes with a cultural right to self-

determination[9] or retribution for past harms?[10] One example is the whaling of endangered and highly sen-tient humpback whales by Japan.[11] The defense, that 'Japan strongly supports the international protection of endangered whale species and advocates for the sustainable harvest of species' uses the concept of sustainability to defend the hunting of an endangered, highly sentient animal.[12] Whaling can be sustained, and is therefore in a sense sustainable, but still violates sentience-based ethics, the preservation of endangered species and most environmental values. Clearly, other values need to be considered in order to assess the ethical content of such a practice. But 'sustainability' does not provide us the necessary guidance to balance these values.

In the case of climate change, a dangerous shift in climate stability is occurring owing to the emission of greenhouse gasses. Industrialized countries contribute, both historically and presently, the largest share of these gasses. Agreements like the Kyoto Protocol allow less industrialized countries to continue to emit greenhouse gasses to compensate them for past inability to develop industrially. But the United States is not offering to pay restitution for its past harms. Exactly how much emission to allow, what level of risk to accept, and what restitution is required, are difficult issues, and involve countless trade-offs and compromises. Without a full acknowledgment of these trade-offs and an appropriate structuring of educational programming to respond to it, ESD will be unable to prepare students for our most serious environmental and ethical concerns.

What should we do when such values conflict and we need to make trade-offs? How do we choose between sustainability and appreciation, political majorities and deeply held values, fairness of resource distribution and irreversible loss of species? Sustainability and SD do not readily help us to assess such conflicts, as they could be used to justify differing positions. People have values that conflict, including ethical, religious, cultural, aesthetic and political values. Similarly, appreciation has various forms, and often comes at the expense of other values, such as using material resources. Any practical response to environmental problems must respond to these tensions and trade-offs. We will need an ethical and political framework that will offer us guidance on these issues. ESD should provide help in understanding, assessing and, where possible, overcoming these conflicts and trade-offs, or else it will become a vague slogan, minimally useful in times of conflict.

Trade-offs between development and sustainability

There are many conflicts, tensions and trade-offs between sustainability and development. These include creating space for both housing and agriculture as populations grow. Some have suggested that sustainable development is an oxymoron, as no more population growth can be sustained.[13] One of many trade-offs raised by SD is the use of land for increased population versus habitat for other animals. Other tensions include: how to . distribute environmental goods, including access to the atmosphere, fairly; addressing past economic inequality; the rights of children to a just world versus the interest in procreation; and what counts as 'good' development (cultivating capacities, GDP, life span, or something else).

Another ethical tension arises when people 'exercise their rights and responsibilities locally, nationally and globally'.[14] Especially in our globalized world, there are major conflicts between these scales of responsibilities and rights. Caring for one's child in the United States, including providing them with basic education and material needs, has great negative consequences for people in other parts of the world, including pollution, waste, unfair labor practices, and failure to share wealth.[15] Many of these problems are systemic rather than purely individual, but the affluent are nonetheless participating in practices that could be considered irresponsible or violating others' rights. There are significant conflicts and trade-offs inherent in these problems, and an assertion that we have rights and responsibilities does very little to clarify what these are and how to negotiate difficult ethical decisions.

Additionally, there are significant ethical questions about what scale is appropriate for ethics. Specifically, what do we owe others for past historical injustices, and how should money and resources be allocated amongst global citizens? It is perhaps a fact of a globalized, industrialized world that acting ethically on multiple scales is impossible. Acting ethically on one scale (e. g. caring for one's local community) and unethically on another (e. g. not spend-ing what is for wealthier global citizens a small amount of money to prevent famine) poses a very real and probably unavoidable ethical tension. To simply state that ESD concerns learning to act ethically on many scales does little to increase our understanding of these ethical problems. ESD should aim to clarify and articulate these conflicts, and help to cultivate the skills that will both increase understanding of them as well as teach students to reason critically about them.

Further, sustainability is a good relative to other goods, rather than a good that trumps all others (as human rights might). One central question is whether or not economic development is an inherent good (one that is worthwhile in its own right) or a derivative good (one that is valuable insofar as it contributes to human welfare).[16] Understanding this issue is fundamental to being able to navigate difficult questions that arise when we have to choose between allowing economic development or preventing environmental harm. Understanding which values matter more and why is essential to dealing with such inevitable questions.

On the same theme, Dale Jamieson argues that 'even if it is generally accepted that sustainability is a good thing, the question of how good a thing . cannot be avoided. Sustainability must sometimes be traded off against other goods, including the welfare of our poor contemporaries'.[17] We might (and do) allow poor countries to pollute to reach a basic level of economic growth. It might be morally justified to allow farming in ecologically sensitive areas if the need for food is sufficient. Cases such as these raise the question of whether or not UNESCO's definition of sustainable development – 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'[18] – is always possible. When it is not, what guiding ethical framework or skills should we use to make the best decisions? ESD could help establish these skills, if it was oriented towards considering trade-offs and understanding ethical frameworks rather than asserting them.

Does sustainability or SD provide us with clear, consistent and coherent guidance in cases with trade-offs? If, as I argue, it does not, then ESD's aim should be to assess and negotiate these difficult decisions, rather than simply affirm noble principles that are impractical to implement. We end up less pre-pared for difficult decisions if we are not fully aware of the underlying interests at hand, and the complex host of ethical values at hand.

There are also tensions between SD (DESD's explicit aim) and sustainability.[19] Given the world's population and history of development, it should not be assumed that more development is sustainably possible. Like many of the cases above, this tension could be the source of a rich conversation about the foundations and practicality of ESD.

Would development that can be sustained be permissible if it greatly diminished cultural survival, animal populations, aesthetic value, biodiversity and other human values such as flourishing? Such a form of development might be sustainable, yet it is obvious that many values other than sustainability and development must be considered. If ESD actively encourages the discussion of balancing such values, it could prepare students to confront these difficult decisions.

DESD'S Orientation and Aims

So far, I have argued that there are (largely unacknowledged) tensions and trade-offs between the goals of education, sustainability and development. These trade-offs should be discussed in order for ESD to be practical, effective and coherent. Despite arguing that many conflicts and trade-offs exist, I am not suggesting that ESD is hopeless. Rather, I think that the best resolution will come when a clear and informed conversation about the interests at stake and ethical principles at hand occurs. This means that a fundamental aim of ESD should be exposure to alternatives and criticisms of ESD and SD, as . well as analyses of its foundations.[20] As I will detail below, I believe that it is more effective to think of ESD, SD and sustainability as 'stepping stones' or conversations rather than concrete ends.

Educational Approaches

Which educational approaches are best-suited for confronting trade-offs, tensions and context-sensitive dilemmas? An emphasis on critical thinking, problem-solving, interdisciplinary understanding, conversation and specific cases would greatly increase the ability of students to both understand and respond to trade-offs. Further, there should be a stronger emphasis on the ethical dimensions of SD-related issues, specifically responsibilities in industrialized countries and large-scale ethical concerns like climate change. Finally, students must understand the foundations and arguments underlying SD, including justifications for it as well as its strengths and weaknesses. There is very little explicit conversation about these foundations and justifications in the ESD literature, which leaves students without the requisite reasons and arguments for accepting a view. Simply accepting SD, or even restricting understanding of a problem to the SD framework, limits how students are able to think about these problems.

The educational approach of many ESD documents already accepts sustainability or SD as legitimate ends. For example, one UNESCO document states one aim: 'Rethinking and revising education from nursery school through university to include a clear focus on the development of the knowledge, skills, perspectives and values related to sustainability is important to current and future societies'.[21]

Another states that ESD should 'integrate the principles, values, and practices of sustainable development into all aspects of education and learning', and 'integrate the values inherent in sustainable development into all aspects of learning to encourage changes in behavior that allow for a more sustainable and just society for all'.[22] Notably absent are: the acknowledgment that sustainability and SD are different, often contradictory concepts; an educational focus on understanding, rather than knowledge acquisition; an educational focus on developing student capacity or agency; encouragement of moral thinking; and the mention of values other than SD or sustainability.

In contrast, similar documents (sometimes even the same documents) call for 'skills for creative and critical thinking, oral and written communication, collaboration and cooperation, conflict management, decision-making, problem-solving and planning . . . and practical citizenship'.[23] It is unclear and unlikely that these aims are simultaneously achievable. Creative . and critical thinkers might very well not accept the integration of 'values inherent in sustainable development'. Problem-solving and decision-making cannot be adequately adaptable and practical if they are limited to a single, elusive conceptual framework: sustainability. Students must be encouraged to consider options other than SD and sustainability in order to adequately understand and respond to the various problems that they are expected to solve. In addition, a full consideration of the tensions between these educational, political and ethical aims would strengthen the ability of students to negotiate the difficult decisions concerning development that will inevitably arise. Although there are risks to overemphasizing tensions, trade-offs and disputes,[24] there is also a need to acknowledge these same tensions. In the class-room, this might include: assessing the tension between famine relief and long-term population control, cultural self-determination versus environmental damage, political sovereignty versus equal rights to development, or limits to the concepts of growth and development.

The ability to analyze underlying concepts is important to any ethical education. There are often hidden assumptions in ESD and in environmental education at large, such as a strong focus on technical, scientific and content knowledge. This can imply that many environmental issues are non-ethical, self-evident or uncontested. If the issues ESD aims to confront have major ethical content, but are treated as merely technical or scientific, then the problem is only partially understood. There must be a strong emphasis on the ethical and political assumptions and foundations in these problems, and a focus on specific cases, without the restraining framework of SD. The solution to problems does not hinge on acceptance of SD, nor will an SD-compliant solution always be ethically superior. Therefore, ethical analysis should be a central component of ESD.

In the interest of having students fully understand what they are being educated for, one *pedagogical* approach could be to treat ESD as a problem itself, as well as a potential solution to problems. Curriculum developers also might familiarize themselves with the arguments surrounding self-corrective ethics education. Democratic education, for instance, can aim to openly question its own foundations. Such a method could be quite useful in making ESD a more robust and critical thinking-oriented ethics education.[25] This is in con-trast to seeing ESD as a solution to be promoted, a common approach in DESD documents.[26] On the other hand, some ESD documents explicitly encourage critical thinking.[27] It is important to focus on the next step in the evolution of ideas that aims to confront our social and environmental ethical problems. The environmental educator Bob Jickling writes that 'We ignore these limitations at our peril; our critics will not. Sustainability, and discussions such as this, can however, lead to. new possibilities – provide a stepping stone for the evolution of our ideas'.[28] I believe that any educational practice aiming to address the same problems that ESD does should reflect this critical, constructive approach to ESD. This is not meant as a dismissal of ESD, but rather as an effort to help it respond better to a problem, while trying not to raise many new ethical problems in the process.
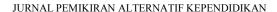
Three Concerns

My argument raises at least three concerns. I do not have more comprehen-sive responses to these concerns, but wish to acknowledge them and give preliminary responses to them.

First, my emphasis on trade-offs might suggest a sort of utilitarian or economic moral theory, or the related notion that values are incommensurable. I intend to make no commitment to any comprehensive moral theory, and believe that the argument stands on its own merits, but it is precisely these kinds of questions that are raised by difficult moral problems in SD. Trade-offs exist even where there are no commitments to utilitarianism, and my intent was to identify and recognize these problems, rather than suggest a particular moral theory to resolve them.

Second, any comprehensive educational theory needs to incorporate an aspirational or motivational element. My argument in this article does not, but I recognize and welcome this need. It has been argued that an emphasis on difficult problems can lead to disillusionment.[29] I am not only aware of this, but sympathetic to the argument. At the same time, there is a need to accurately represent the nature of the problems we aim to solve, which is the intent of this argument.

Third, ESD might very well be a form of *transformative* education, rather than something less ambitious, such as political or tactical education. By this I mean that it aims to transform one's worldview or moral disposition, rather than simply give one tools to succeed at a particular task. If this is the case, my criticism might seem off-target, as ESD curricula might never have aimed to provide students with the education required to navigate specific moral problems. If so, then my criticism can be seen as an attempt to spell out how ESD's aims might be implemented – with a strong recognition of the nature of environmental and ethical problems, acknowledgement of trade-offs, and an emphasis on adaptability, agency and decision-making skills.

Conclusion

Why place such an emphasis on concepts, arguments and foundations? With-out these, educational programs lack coherence, consistency, completeness and . clarity. This also means that educational programs might not be well-suited to address their intended target. Perhaps ESD's goals have to be modest in order to be most effective. Whether or not students accept SD, there will be progress in learning if they understand what the central trade-offs and concepts are:

'Some progress will have been made if people understand the choices and trade-offs they face and confront them directly, even if they disagree (at least initially) about how to respond'.[30] Progress might best be measured as a set of skills that students gain that increases their ability to live flourishing lives and respond to new and complex problems, instead of a focus on accepting a certain ethical framework.

If my arguments about the value and validity of SD, sustainability and ESD are correct, then ESD's aims must focus on ethical analysis, decision-making and trade-offs. Since there are some important conceptual questions about both SD's ethical completeness and coherence, and ESD's ethical and practical adequacy, we should continue a critical conversation about how ESD can meet the noble and urgent practical and ethical aims it needs to.

Endnote

[1] UNESCO (2007) 'Education for Sustainable Development'. Paris. Available at www. unesco. org/education/desd/(accessed 1 August 2007).

[2] UNESCO (2005a) 'UN Decade for Education for Sustainable Development (2005–2014)'. Paris. Available at http://portal. unesco. org/education/en/ev. php-URL_ID23279&URL_ DODO_TOPIC&URL_SECTION201. html (accessed 1 August 2007).

[3] See Elgin, 1998, for a discussion of the educational aim of advancing understanding).

[4] H. Brighouse, *On Education* (New York: Routledge, 2006); E. Callan, *Creating Citizens* (New York: Oxford University Press, 1997). A. Gutmann, *Democratic Education* (Princeton, NJ: Princeton University Press, 1987). O. O'Neill, *Autonomy and Trust in Bioethics* (Cambridge: Cambridge University Press, 2002).

[5] J. Hansen, 'The threat to the planet', *The New York Review of Books* 53(12), 2006.

[6] Intergovernmental Panel on Climate Change, 'Climate change 2007: Synthesis report'. Geneva. Available at http://www.ipcc.ch/ipccreports/ar4-syr.htm (accessed 5 December 2007).

[7] UNESCO (2005b) 'Visions & definitions of ESD'. Paris. Available at http://portal. unesco.org/education/en/ev.php-URL_ID27279&URLDODOTOPIC&URL_ SECTION201.html (accessed 20 July 2007).

[8] W. Williams, and R. Whitcomb, *Cape Wind, Money, Celebrity, Class, Politics, and the Battle for Our Energy Future on Nantucket Sound* (New York: Public Affairs, 2007).

[9] This is an issue with indigenous cultures in the US who allow nuclear waste storage or logging on their land.

[10] This is a major ethical concern with how to distribute the 'goods' of carbon emissions to developing countries that did not benefit from industrialized countries' past emissions.

[11] A. Shemper, '(Still) Big in Japan:Thought whaling was a thing of the past? Think again', *Mother Jones*, 1 March 2006.

[12] J. Okuyama, 'Japan and whaling' (letter), *New York Times*, 15 April 2007.

[13] A. Revkin, 'Updating prescriptions for avoiding worldwide catastrophe', *New York Times*, 12 September 2006.

[14] UNESCO (2005b) 'Visions & definitions of ESD'. Paris. Available at http://portal. unesco. org/education/en/ev. php-URL_ID27279&URLDODOTOPIC&URL_SECTION201. html (accessed 20 July 2007).

[15] On the ethics of having wealth in affluent societies, see Unger, *Living High and Letting Di*e (New York: Oxford University Press, 1996).

[16] R. Stevenson, 'Tensions and transitions in policy discourse', *Environmental Education Research*, 2006, p. 279-80.

[17] D. Jamieson, *Morality's Progres*s (New York: Clarendon/Oxford, 2003), p. 328.

[18] UNESCO (2007) 'Education for Sustainable Development'. Paris. Available at www. unesco. org/education/desd/(accessed 1 August 2007).

[19] 'Sustainability' is the Earth Charter's aim, advocated in DESD statements such as McKeown (2007) and UNESCO (2005c).

[20] Neither of these is mentioned in any detail in the DESD documents that I have come across.

[21] UNESCO (2005d) 'Reorienting programmes'. Paris. Available at http://portal. unesco. org/ education/en/ev. php-URL_ID27544& URL_DODO _TOPIC&URL_SECTION201. html (accessed 1 August 2007).

[22] UNESCO (2005e) 'Objectives and strategies'. Paris. Available at http://portal.unesco .org/education/en/ev.php-URL_ID23295&URL DODO_TOPIC&URL_SECTION201.html (accessed 1 August 2007).

[23] UNESCO (2005d) 'Reorienting programmes'. Paris. Available at http://portal. unesco. org/ education/en/ev. php-URL_ID27544& URL_DODO _TOPIC&URL_SECTION201. html (accessed 1 August 2007).

[24] For the argument that an overemphasis on intractable problems in ethics education can lead to confusion, see Baier (1985: 207). This concern is also mentionedbriefly in Jamieson (1993: 476).

[25] See Gutmann (1987) for a justification of education for democracy that relies heavily upon the fact that democratic education gives students the ability to assess the value of the education they receive. In another piece, she writes that 'Teaching [democratic] virtues also entails educating children to develop their capacities to assess these virtues, and therefore to accept, reject, or revise their understanding of them through the use of their reason' (Gutmann, 2003: 405).

[26] UNESCO (2005c) 'Guidelines and recommendations for reorienting teacher education to address sustainability', p. 50, 54. Paris. Available at http://unesdoc. unesco. org/images/0014/001433/143370E. pdf (accessed 24 April 2007).

[27] UNESCO (2005f) 'International implementation scheme'. Paris. Available at http://portal.unesco.org/education/en/ev.php-URL_ID23280&URLDODO_TOPIC&URL_ SECTION201.html (accessed 9 July 2007).

[28] B. Jickling, 'A future for sustainability?', *Water, Air, and Soil Pollution* 123 (1–4): 67–476, 2000, p. 474.

[29] Baier, A. 'Theory and reflective practice', in *Postures of the Mind: Essays on Mind and Moral Matter*s (Minneapolis, MN: University of Minnesota Press, 1985), p. 207.

[30] D. Jamieson, 'Method and moral theory', in P. Singer (Ed.), *Blackwell Companion to Ethics*, pp. 476–88.) Malden, MA: Blackwell, 1993), p. 330.

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