Johan Öhman (Ed)

Values and Democracy in Education for Sustainable Development

– Contributions from Swedish Research

Liber

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ISBN 978-91-47-08851-5

Redaktör: Peter Söderholm
Omslag och formgivning: Fredrik Elvander
Språkgranskning: Sue Glover Frykman

Upplaga 1:1

Tryckt på miljövänligt papper

Sättning: Gyllene Snittet AB, Helsingborg
Teckensnitt: Brödtext: Minion. Rubriker: Bell Gothic
Printed in Slovenia by
Korotan Ljubljana, Slovenien 2008

Liber AB, 205 10 Malmö
tfn 040-25 86 00, fax 040-97 05 50
www.liber.se
Kundtjänst tfn 08-690 93 30, fax 08-690 93 01

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Foreword

Finding the motivation to work with this book has not been difficult. Creating opportunities for a sustainable development is one of the most important tasks of our time, and especially so when education plays a key role. But the task is also very complex, particularly when it concerns values and when these values are highlighted in terms of education's democratic responsibility. The need for more knowledge about this subject is indeed great.

Twelve researchers – all part of the Swedish research network *Education & Sustainable Development* – have contributed to this knowledge by making new research work relating to values and democracy in education for sustainable development available. I would therefore first and foremost like to thank these co-authors for their tremendous enthusiasm and for the rewarding interactions that these different contributions have resulted in.

But this book would not have been possible if Harriet Axelsson and Per Wickenberg hadn't taken the initiative to create the Swedish research network in 2000. The importance of this network in terms of the development of this research field in Sweden cannot be overestimated. Thank you, Harriet and Per, for your commitment to keeping this network alive and kicking all these years.

Hearty thanks are also due to the Swedish Research Council for its six-year financial commitment to the network's activities and for providing the resources necessary for the realisation of this book.

Thanks, too, to all the other members of the network who have faithfully attended seminars and shared their valuable viewpoints and comments on the book's texts.

Finally, I would like to thank Sue Glover Frykman for her meticulous proofreading and linguistic synchronisation of the book's different texts.

It is my sincere hope that this book will not only stimulate new research efforts and lively policy discussions on the interface between education, democracy and values, but will also encourage the continued development of educational practices in the field of sustainable development.

Johan Öhman
Örebro, December 2007

Notes on Contributors

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Gunnar Jonsson has a PhD in the subject of Teaching and Learning at Luleå University of Technology's Department of Education. He was appointed Senior Lecturer in the Department of Chemical Engineering and Geosciences at the same university in July 2007. He teaches student teachers in environmental issues and sustainable development. The main focus of his research is how student teachers understand sustainable development and how their understanding is manifested in their teaching practice periods in schools.
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2001 he was guest scholar at the Centre for Environmental Philosophy, University of North Texas. His present, cross-disciplinary research project investigates environmental values in education for sustainable development in the research project "Encounters of Nature". David´s research interests include ecofeminism, environmental ethics, education for sustainable development and cross-disciplinary education and research on environment and development issues. His main publications are *Ecofeminism and Environmental Ethics: An Analysis of Ecofeminist Ethical Theory* (Uppsala University, 2003), and *Miljöetik i praktiken: åtta fall ur svensk miljö- och utvecklingshistoria* ("Environmental Ethics in Practice", Studentlitteratur, 2005).
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Iann Lundegård is a Lecturer and PhD student in Science Education at Stockholm Institute of Education and has been involved in educating student teachers in science education and methodology for the past 15 years. Before that he taught science at upper secondary school level. Iann is also experienced in the field of "outdoor education". He has written a number of textbooks on science and science education. Iann is an active member of the Centre of Education for Sustainable Development, located at the Stockholm Institute of Education. The centre is an important hub for issues associated with ESD in the Stockholm region. His research reflects a process-oriented perspective on learning for sustainable development based on a pragmatic framework mainly developed from Dewey and the later works of Wittgenstein. To date he has written four articles in which he explores how human conflicts of interest, values and plurality become significant components in processes where students constitute identity.
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Cecilia Lundholm was awarded her PhD. in September 2003. She is currently working as a researcher in the Department of Education at Stockholm University, where she is a member of the Conceptual Development Research Group (www.ped.su.se/rcd). Her research interest concerns students' learning in environmental education, and in particular the way in which values and emotions are part of the learning process. At present she is involved in writing a book about students' learning in environmental education together with Dr. Mark Rickinson and Dr. Nick Hopwood, entitled *Environmental Learning. Insights from Research into the Student Experience* (Springer). Cecilia is also theme leader at the Stockholm Resilience Centre (www.stockholmresilience.su.se), funded by MISTRA, with a research focus on communication and learning in social-ecological systems.
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Helena Pedersen received her PhD from the Department of Education at Göteborg University in 2007. Her research lies at the interface between education

science and human-animal studies, and she is co-founder of Nordic-HAS, a cross-disciplinary network of human-animal studies scholars in the Nordic countries. Primary research interests are species-inclusive critical pedagogies and intersectionality studies. With an MSc in International and Comparative Education from Stockholm University, Helena's background is as a teacher and administrator in post-secondary education. She has worked with animal ethics issues on both a professional and volunteer basis and was a member of the Board of the Swedish Fund for Research Without Animal Experiments between 2001-2007. Helena Pedersen is the author of *The School and the Animal Other. An Ethnography of Human-Animal Relations in Education,* and is also published in the fields of humane education, critical pedagogy and futures studies. She is the recipient of the American Sociological Association's 2006 Award for Distinguished Graduate Student Scholarship (the Animals and Society Section).
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Per Sund gained his Master of Scientific Subjects Education at Uppsala University and is now completing his PhD education at Mälardalen University, Eskilstuna. He teaches and develops courses on sustainable development in the teacher training programme, and participates in other higher education development projects. He has a background as a secondary and upper secondary teacher in Biology and Chemistry. He is a member of the Institute for Research in Education and Sustainable Development (IRESD). Per has studied and lectured internationally and is especially interested in global development issues. His research interest is education for sustainable development from a teacher's perspective.
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Mark Warner is currently teaching Biology, Science, and Environmental Studies at upper-secondary school level. Having received a BSc. (Hons) in Zoology from the University of Leeds, UK, he went on to work with a number of practical conservation projects in both the UK and Uganda. He later studied for his MSc. in Conservation Biology at Manchester Metropolitan University, UK, and conducted ecological field research in the Peruvian Amazon. He subsequently worked for a year and a half as a research and education coordinator for an environmental project based in the Nigerian rainforest; a project that addressed sustainable development and environmental education issues at grass-roots level. Since beginning work as a teacher in Sweden, his interest in effective ways of implementing education for sustainable development has grown. In his current Master's level studies in Education at Växjö University, Sweden, Mark's interest and experience is being put to good use.
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Johan Öhman is Senior Lecturer at the Department of Health Sciences at Örebro University, Sweden. He is one of the founders of IRESD (Institute for Research in Education and Sustainable Development) and is member of the research group SMED (Studies of Meaning-making in Educational Discourses). His area of research is in environmental ethics and democratic issues within the sphere of ESD, EE and outdoor education. In his research he uses a methodology based on sociocultural learning theory, Dewey's pragmatic philosophy and the later works of Wittgenstein. He has been responsible for the national evaluation

of EE and ESD in Swedish schools (commissioned by the Swedish National Agency of Education) and a major national project for developing ESD in practice (commissioned by the Swedish National Agency for School Improvement). He is the author of the textbook *Education for Sustainable Development – Nature, School and Democracy* (Sandell, Öhman & Östman, Studentlitteratur, 2005) and of several other textbooks and articles on the subjects of environmental and developmental education, both in Swedish and in English.
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Introduction

Johan Öhman

A recent report of the Intergovernmental Panel on Climate Change (IPCC) states that it is 90 percent certain that global warming is caused by human activity (see www.ipcc.ch). This report predicts that, at best, global temperatures will probably rise by 1° C in the next hundred years (if greenhouse gas emissions are maintained at their present levels), and at worst by 6.4° C. The likely consequence is that temperature extremes will become much more frequent, the sea level will rise by an average of 50 cm, and that hurricanes and typhoons will increase in both number and strength. These scientific conclusions naturally make climate change an issue of utmost concern when it comes to creating a sustainable future.

However, sustainable development is not only about facts and figures. The very concept of sustainable development originates from a moral concern for future generations. For example, the well-known quote from the Brundtland Commission declares that a sustainable development is a development that:

> …meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development, 1987, p. 43).

But the activities of the current generation have always had some degree of impact on the environment and conditions of future generations. We are thus forced into making compromises between present desires and coming needs. The question is which compromises do we regard as both reasonable and morally acceptable? While it would be difficult to imagine that anyone would be opposed to a sustainable future, sustainable issues often contain conflicts between different values, ideologies, priorities and strategies that are not possible to resolve by simply referring to scientific investigations. This means that although there might be agreement on certain facts and the assessment of these facts, ways of valuing the consequences of different measures may differ as a result of personal and contextual aspects.

One of the main challenges thus facing Education for Sustainable Development (ESD) is how we prepare coming generations to deal with value-related differences and make agreements, compromises and changes. When facing this

challenge in public education, the specific demands imposed on educational practice in terms of democratic responsibility are of essential concern. This means that an important aim of ESD is to enhance the student's competence to participate in debates, discussions and decisions on sustainable issues in a democratic manner, at a personal and everyday level, and also at a comprehensive societal level.

The purpose of this anthology is to contribute to this challenge with knowledge and perspectives derived from recent Swedish research. The contributing researchers belong to ten different universities, and although they mainly operate within the Educational Sciences, disciplines such as the Sociology of Law and Ethics are also represented. The papers therefore represent many different theoretical as well as methodological perspectives.

These researchers all have two things in common. First of all they belong to the Swedish research network, *Education & Sustainable Development*. This network was founded in 2000 on the initiative of Per Wickenberg and Harriet Axelsson, and today involves about thirty senior researchers and PhD students. Since 2001 the network has been supported by the Swedish Research Council. The purpose of the network is to create a coordinated field of research within ESD and to support national and international exchanges between researchers in this field. In addition to its many other roles, the network organises national seminars, PhD courses, and international conferences with other research networks. Over the years the network has organised regular exchanges between Danish and British researchers. Another aim of the network is to publish anthologies and thereby present Swedish ESD research contributions to an international audience – the first being the book entitled *Learning to Change our World? Swedish Research on Education & Sustainable Development* (Per Wickenberg et al., eds., 2004, Lund: Studentlitteratur).

The second thing that unites the authors of this book is that they all address issues relating to the intersection of values and democracy in ESD. Furthermore, there is a shared ambition to base their contributions to these policy related issues on *empirical* investigations. This ambition can also be said to be a characteristic feature of Swedish research in this particular field.

The book's content

In the book's introductory chapter, *Environmental ethics and democratic responsibility – a pluralistic approach to ESD*, Johan Öhman discusses the ethical dimension of sustainable development in relation to the democratic demands on public education. In the first section three different selective traditions of EE, a fact-based, a normative and a pluralistic tradition, are examined as starting points for the development of ESD. These traditions represent different ways of

relating facts and values, locate the democratic process to different arenas and highlight how these differences constitute the diverse roles of education in the development of a sustainable future. It is suggested that the pluralistic approach is the most appropriate for preparing students to deal with sustainable problems in a democratic manner. In the second section of the paper Öhman discusses the problem of relativism that is often connected with pluralism. With the aid of a didactic typology of the situations in which ethics and morals appear in educational practice, it is argued that relativism is rarely a practical problem. Finally, the pluralistic approach is qualified with the aid of John Dewey's notion that the connecting link between education and democracy is communication. An important consequence of this qualification is that the values of sustainable development are made the subject of constant and continuing discussion, and thereby turn education into one of the arenas in society in which these values are displayed, exchanged and deliberated.

The ethical dimension of ESD is deepened by David Kronlid's and Margareta Svennbeck's investigation of the possibilities of the subject of Religion in the context of ESD. The main aim of their chapter, *Environmental ethical reflection in Swedish upper secondary school* is to clarify the prerequisites for environmental ethical reflection in this particular subject. The empirical material consists of nine textbooks designed for use at Swedish upper secondary school level. The analysis is carried out in two sequential steps: an environmental didactic purpose-oriented analysis using the didactic typology presented in Öhman's chapter, and an environmental ethical analysis using a framework derived from ethical theory. In this way they are able to clarify the educational aims in relation to the environmental ethical content of the subject. On the basis of their investigations they conclude that the subject of Religion involves non-confessional descriptive didactical aims concerning (a) learning about environmental moral sentiments and attitudes, (b) learning about environmental moral rules of conduct, and (c) learning to reflect on environmental moral outlooks. Furthermore, they conclude that with regard to the environmental ethical content of the prerequisites for reflection, the subject offers fairly unsystematic grounds for reflection – even though the conditions for reflection are good and correspond to value-oriented as well as non-value-oriented environmental ethics.

The next three contributions focus on the role of the teacher, teaching methods and content in relation to ethics and democracy in the classroom. In his chapter, *Discerning the extras in ESD teaching – a democratic issue,* Per Sund stresses that the issue of content in ESD is not only a matter of which particular knowledge should be included, but also includes paying considerable attention to the values and world views that accompany the subject content, teaching methods and teachers' aims. In order to avoid ignorance of the impact of this socialisation content, with origins in e.g. power aspects, Sund stresses that it is vital – in a democratic sense – to make visible and study the companion meanings that are communicated by teachers in their teaching practices and actions.

By studying earlier research concerned with the content and conduct of environmental education, Sund suggests an analytical tool for researchers that could help to identify teachers' communicated socialisation. This tool consists of questions that facilitate the identification of the different messages that teachers communicate to students through speech and other actions. In this literature analysis five questions have crystallised that illuminate five essential aspects of EE and ESD. The suggested tool can be used by researchers to identify and observe socialisation content in different types of data, such as that gained from interviews, text materials or classroom observations.

Barbro Gustafsson's and Mark Warner's contribution, *Participatory learning and deliberative discussion within education for sustainable development,* presents an evaluation of an exercise called "The Assignment", which involves discussions about a multi-faceted dilemma concerning sustainable development. The exercise, based on the idea of deliberative discussions, was carried out in a class of natural science students at upper secondary level. The evaluation focuses on its ability to enable a democratic teaching situation with the active participation of all the involved students. The results of the study show that the idea of sustainability shines through the discussions and becomes much clearer in the students' thoughts as time goes by. Although discussion group members often arrived with reasonable ideas about sustainable development, the knowledge "backup" behind these ideas seemed to be limited. The method, with deliberative discussion at its core, really engaged the respondents in the study. They felt free to expose their standpoints, and it seems clear that (at least) some of the key features of successful deliberative discussion were fulfilled. One observation was that there were no real differences of opinion within the groups, which meant that agreement on a joint solution was (a bit too) easy to achieve. In the light of this it would seem important to find topics for discussion that contain 'real' conflicts and thus stimulate lively and controversial debate. The conclusion of the study is that teaching methods based on deliberative communication have the potential to tackle three sets of goals at once, namely, sustainable development goals, participatory learning goals and democracy goals, and can accordingly be an important resource in ESD.

Gunnar Jonsson's chapter, *An approach full of nuances*, focuses on a complex understanding of sustainable development: What it is, how can it be understood by student teachers, and what affects the complexity that is discernible among students taught by student teachers? Three different sub-studies – a survey study, an interview study and a video documentation – provided answers to these research questions. In the video documentation study the student teachers were given the task of teaching a complex issue relevant to sustainable development, namely, the world's water supply. With the aid of both phenomenographic analysis and intentional analysis, Jonsson describes the connections between the complexities of the staged learning object, how the student teachers conceived the water supply problem as a whole, and their ambitions to become good teach-

ers. In the final part of the chapter, the implications of the result are discussed in terms of consequences for learning and for fostering democratic thinking and behaviour in schools. In short, what all this boils down to is the advocacy of an approach that is full of different nuances.

The final four contributions take the perspectives of the learners and learning in relation to values and democracy in ESD. The ethical issues that relate to sustainable development do not only concern nature, however. Human ethics and children's living conditions are also important. In her contribution, *Discourse, cause and change – a study on economics students' conceptions of child labour*, Cecilia Lundholm explores business and economics students' conceptions of child labour, an issue of concern among companies working to present themselves as socially responsible. The study is part of a research project relating to business students' conceptions and learning about economics and sustainability issues. The findings show that the economy students in question are able to discuss this issue critically and from different angles. For example, although all the students were against child labour, they also discussed the positive aspects of children having both work and an income and therefore not being forced into a life of poverty and starvation on the street. The students also talked about child labour in terms of how this issue is often conceived or "simplified" by the public at large and which very often doesn't take the negative consequences for the children into consideration. The chapter ends with a discussion about the practical implications, as well as the quest for and necessity of deliberate communication/dialogue when considering the students' notions of the topic of child labour as contested and controversial.

The dialogic thread is taken up by Iann Lundegård in his philosophically innovative chapter, *Self, values and the world – young people in dialogue on sustainable development*. The chapter takes its departure from the discussion that has been underway for recent decades as to how enlightenment – and modernist theories – has taken root in the Western way of relating to nature. Some theorists claim that these traditions, which have also influenced our way of thinking about teaching and sustainable development, have contributed to separating people from their value-related and emotional affinity with the world. In his study Lundegård brings these theories back to empirical situations and, through a practical-epistemological action analysis, investigates the role that emotions and values play when two young people take part in an interview discussion on sustainable development. In contrast to the separating view of many theorists, the study illustrates that when discussing matters relating to sustainable development students constantly associate personal relations with phenomena in the world in a way that embraces values.

By taking a perspective on animal ethics that challenges the main-stream attitude, Helena Pedersen highlights how ethical, social and political dimensions of sustainable development intersect and problematise anthropocentric assumptions of sustainable development. Her chapter, "*We have to kill the animals so*

that they won't die!"– classroom discussions about hunting as a dimension of ESD, is based on a critical ethnographic investigation of education about hunting issues in three Swedish upper secondary schools. It analyses classroom interactions where three different forms of hunting are discussed, contested or negotiated, and indicates their implications for ESD. In this way, the study explores how value dimensions of ESD may be configured in educational practice. It shows how some forms of hunting are selectively justified in the classroom while others are not, e.g. by valorising certain dimensions of the hunt positively or negatively, and creating normative frameworks and subject positions that structure and delimit relations between humans and (wild) animals. Pedersen's chapter thereby highlights the factors that inhibit value pluralism in classroom practices and interactions.

In the final contribution we take a leap into the future with the help of Per Wickenberg's and Ellen Almer's study of young Swedes who, several years before the sustainability boom started in Sweden in autumn 2006, had already started searching for a life-style in line with their desire for long-term sustainable global development. In their contribution, *Breaking the norms – young norm breakers' stories of consumption actions for sustainable development,* they analyse these young adults' stories about their action patterns in the consumption of food, transport and clothing. The results show that these young adults share a common moral-ethical-ideological starting point in a distance moral commitment. By addressing questions like "What can we learn from the experiences of these precursors?" and "What conditions make it possible for them to break the existing social norms?" they are able to acquire essential in-depth knowledge for the continued development of ESD research and practice.

Environmental ethics and democratic responsibility

– A pluralistic approach to ESD

Johan Öhman

Introduction

> The ethical dimension is central to understanding sustainable development, as emphasised in several international documents. Thus questions of justice refer both to equity between generations – as underlined in the most common definitions of sustainable development – equity within the present generation, as well as relationships between man and nature especially taking into account respect for biological diversity (*Baltic 21E*, p. 12).[1]

This quote highlights some of the most critical questions in sustainable development, such as whom we ought to take into account in our strivings for a sustainable future and to what extent; whether we are only responsible for sustainable development in our part of the world or throughout the whole world; whether everybody has equal rights to the same welfare; whether future generations will have the right to the same welfare as we have; how many generations we should be concerned about; whether future generations should have the right to experience wilderness and biological diversity; whether sustainable development concerns other species; whether animals and plants have the right to a secure future; etc.

When dealing with such ethical questions in education for sustainable development (ESD) the democratic role of public education is of essential concern. This concern can be illustrated by quoting from the Swedish compulsory school system curriculum. In the introduction to this curriculum it is stated that "Democracy forms the basis of the national school system", while further in the text it is declared

1 *Baltic 21E* is a specific Agenda 21 for education for the countries in the Baltic Sea region. The ethical dimension of ESD is also emphasised in several other essential policy documents such as the basic *Agenda 21* (UNCED, 1992, chapter 36, p. 2) and more currently, in documents connected to the United Nations Decade of Education for Sustainable Development (see for instance UNESCO, 2005, annex I, p. 3).

that "It is not in itself sufficient that education imparts knowledge of fundamental democratic values. It must also be carried out using democratic working methods and prepare pupils for active participation in civic life", and that it is "incumbent on all who work in the school to work for democratic working structures" (The Swedish Agency for Education, 2006). Thus, the democratic responsibility of public education puts specific demands on educational practice.

The purpose of this paper is to discuss the ethical dimension of education for sustainable development (ESD) in relation to the democratic demands on public education.[2] I will suggest a pluralistic approach as a way of dealing with the practical consequences of this relationship and try to dissolve the problem of relativism that is often connected with pluralism. I will do this with the aid of a pragmatic perspective on education as a communicative activity and an understanding of ethical and moral learning inspired from the later works of Wittgenstein. The empirical basis for this discussion is the national evaluation of environmental and sustainable education in Swedish schools (Swedish National Agency of Education, 2001; see also Öhman, 2004) and earlier studies of classroom practices of EE and ESD in Swedish schools (Öhman, 2006a and b; Öhman & Östman, forthcoming).

Different traditions of environmental education

Traditionally, ethical questions similar to those outlined above have been included in environmental education (EE). It therefore seems reasonable to suggest that the progress of the practice of ESD should build on and develop these valuable experiences of EE.[3] In earlier studies (The Swedish National Agency of Education, 2001; Öhman, 2004; see also Sandell, Öhman & Östman, 2005) I have suggested that the variety of ways of teaching about environmental and developmental issues can be viewed as different *selective traditions*.[4] The selective tradi-

2 The relationship between democracy and education has concerned philosophers and educationalists ever since the idea of democracy saw the light of day in ancient Greece. A classical problem is the paradox between the double educational assignment to foster free, autonomous subjects and at the same time transfer foundational values and norms of a particular culture to future generations. The issue of democracy and education has been dealt with by modern democratic theorists like Rousseau, Mill and Dewey (1916/1980), and by present thinkers like Gutman (1987) and Giroux (1988).

3 This doesn't mean that ESD can be approached simply as an extension of EE. As many authors have pointed out, sustainable development is a complex term and many ambiguities and tensions exist within this notion, which also have consequences for ESD (see Bonnet, 1999 and Stables, 2001). My point here is that educational practices are continuous, and that the development of a practice can be seen as a process where prior experiences, habits and customs are involved and transformed.

4 The term 'selective tradition' was originally developed by Williams (1973) to underline that a certain approach towards knowledge and a certain educational praxis are always selected within the frame of a specific culture. The identification of selective traditions of environmental education are a result of historical textual analyses of textbooks and syllabuses in science education (Östman, 1995, 1999), which in the Swedish national evaluation of EE and ESD (see The Swedish National Agency of Education, 2001) was complemented with new analyses of different authoritative texts on environmental education.

tions represent different answers as to what constitutes good teaching in a subject, and includes different practices concerning the selection and organisation of the subject matter, as well as the selection of forms and teaching methods. In the studies referred to, three different selective traditions within environmental education were identified in Swedish schools: a *fact-based* tradition, a *normative* tradition and a *pluralistic* tradition. The question is, to what extent are these different traditions appropriate both as a starting point for the progress of ESD, and for the creation of an approach to the ethical and moral aspects of sustainable development that takes the democratic responsibility of education into account?

In the *fact-based* tradition, teachers primarily treat environmental issues as knowledge problems. This tradition is based on the idea that environmental problems can be dealt with by means of more research and information supplied to the public. The position taken is that only science can provide a reliable foundation for our knowledge about environmental issues and that scientific facts and models have sole importance in an educational context. The democratic role of education is to provide objective facts as a basis for the students' opinion-making. The democratic process is therefore something that comes *after* education. An objection that can be raised against the fact-based tradition as a basis for ESD is that the value dimension of sustainable development is omitted from the teaching agenda. The resulting action competence[5] is therefore rather poor, as the students do not gain any experience of participation in democratic discussions or how to transform their standpoints into action.

The formation of the *normative* tradition can be viewed as an answer to the fact-based tradition's shortcomings concerning value-related content. In this tradition, the important task of education is seen as supporting an environmentally friendly transformation of society. The answers to value-related issues are established through deliberative discussions among experts and politicians on the basis of scientific facts about the current ecological state of the world, and are presented in policy documents and syllabuses. The democratic process is thus something that comes *before* education. This also implies that it is possible to come up with universal solutions to environmental and developmental problems. Schools are then obliged to teach students the necessary environmentally friendly values and attitudes and, in this way, attempt to change the students' behaviour in the desired direction.

There are, however, several objections to a normative approach as a basis for the formation of a future ESD. The first is that the concept of sustainable development builds on the idea that treating environmental issues in isolation to the needs of development, such as poverty reduction, employment, equity between gender and improved health, serves neither the people nor the environment. When integrating environmental problems with economic and social (including

5 See Jensen & Schnack (1997).

cultural) aspects, the complexity of the problems tends to increase significantly and the correct solution to these problems thus becomes much more difficult to ascertain.

A second objection is that these issues contain conflicts between different values, ideologies, priorities and strategies that are not possible to solve by simply referring to scientific investigations. Although there might be an agreement on certain facts, the judgements of these facts and the way of valuing the consequences of different measures may differ as a consequence of personal or contextual aspects (for a discussion about environmental ethical contextualism, see Kronlid, 2003 and Bergmann, 2003).

The third objection concerns the possibility of finding functional relationships between sustainability and development, as it seems necessary to create such relationships in accordance with what is locally relevant and culturally appropriate. Something that is related to this principle is the request that ESD should integrate local indigenous knowledge (see UNESCO, 2005). If local circumstances are to be taken into consideration in the formation of ESD this will complicate the normative tradition's claim for universal solutions based on science. In the aftermath of the modernist – postmodernist discussion of the 1990s, it also seems philosophically doubtful to refer to science as a universal and neutral foundation which provides answers to questions about how people should live their lives and develop society (see Sauvé, 1999 and Stables, 2001, for a discussion about a post-foundational EE and ESD).

Finally, a normative approach runs the risk of turning education into a political tool to create a specific predetermined society. This means that there is a danger that education will lose its emancipatory potential and its democratic obligation will be violated; the result being that education then resembles indoctrination (see the warnings of Wals & Jickling, 2000 and Jickling, 2003).

In short, many objections can be raised against the normative approach. Accordingly, many authors have claimed that the democratic mission of an education that involves diverse interest groups, supports free opinion-making and enhances students' competence to act should be a significant feature of future EE and ESD (see Jensen & Schnack, 1997; Jickling & Spork, 1998; Breiting & Mogensen, 1999; Elliott, 1999; Wals & Jickling, 2000; Lijmbach et al., 2002; Rauch, 2002; Stables & Scott, 2002). To a great extent, such claims are in line with the *pluralistic* tradition of EE.

The pluralistic tradition is characterised by a striving to promote different perspectives, views and values when dealing with various questions and problems concerning the future of our world. The way of finding common answers to value-related issues, or recognising and accepting our different standpoints, is seen as being accomplished by deliberative discussions. Such discussions are an essential part of education in the pluralistic tradition, and the democratic process is accordingly situated *in* education itself. One could say that an aim of

pluralistic education is to enhance the student's competence to act in a conscious way and to participate in debates, discussions and decisions in these issues at a private everyday level as well as at a comprehensive societal level. This pluralistic approach thus seems to have many advantages as it takes the democratic role of public education into account and recognises the value dimension of sustainable development. At the same time, it strives to avoid the risks of indoctrination by promoting students' critical thinking and their competence to act.

But here we encounter other problems often associated with the term *relativism*: if one strives to illuminate different opinions about an ethical issue in educational practice, could this be interpreted as all alternative actions being equally right and all values equally good? And if everything is equally good and right – that anything goes – how might commitment to important issues be encouraged?

Table 1. From EE to ESD: possible options and problems.

EE-tradition	**Fact-Value relation**	**Democratic process**	**Problem**
Fact-based	Is	After	Omitting the value dimension
Normative	Is → Ought	Before	Indoctrination
Pluralistic	↕ Is ↔ Ought ↕	In	Relativism

A pragmatic understanding of pluralism

Objections to relativism, such as those pointed to above, are generally intimately associated with a traditional realist philosophical framework and the presumption that we are stuck with two incommensurable options concerning our attitudes to the right and the good, namely *objectivism* – that it is possible to anchor moral beliefs in an external and eternal foundation, or *relativism* – that no such foundations exist and that all opinions about the right and the good are merely arbitrary constructions relative to a specific paradigm, theoretical framework, culture or form of life (Bernstein, 1983).

An alternative way of understanding pluralism is provided by the pragmatic

philosophical tradition. Pragmatists like Rorty (1980, 1982/2003) have pointed to the difficulty of theoretically deciding whether certain moral beliefs correspond to any permanent foundation or not. From what sort of position could such a decision be possible? It seems that this would require access to an unclouded picture of both our own beliefs and the eternal referent, or, in other words, occupy a position outside our language, culture and life (see also Öhman, 2004 and 2006b). Due to this difficulty, pragmatists focus on different human *practices* where human beings communicate their attitudes and opinions about the right and the good. Thus, by taking departure in a pragmatic perspective the question is not to theoretically determine whether a pluralistic approach *does* (or does not) imply relativism. From this perspective the issue is rather to clarify what it *practically* means to deal with the ethical dimension of sustainable development in a way that is in line with the democratic responsibilities of public education. The first research question that then calls for attention is what it means to learn to communicate ethics and morals, and secondly, in what kinds of situations this learning can take place.

Communicating the right and the good

In earlier studies I have analysed video-taped recordings of lessons, excursions, group discussions, etc., taking place in diverse educational settings in order to clarify the ethical dimension of ESD in practice (see Öhman, 2006a and b; Öhman & Östman, forthcoming). In the following section I use the results of these studies to attempt to dissolve the "anything-goes"-problem connected to a pluralistic approach and as a basis for suggesting principles for dealing with the ethical dimension of ESD in relation to the democratic responsibility of public education.

In the referred studies, the point of departure was the later works of Ludwig Wittgenstein (1953/1997 and 1969/1997). The ambition was to follow Wittgenstein's recommendations in order to avoid metaphysical assumptions made *a priori* to human practice. One of the main reasons for this rejection of metaphysics is that the social life of human beings is regarded as being much too complex and varied to be captured in generalised models that are designed to present universal explanations of "the way things really are" (see Pleasants, 1999). Accordingly, ethics and morals were not treated as theoretically demarcated concepts and no preconceived model for learning connected to these concepts was used. Instead, ethics and morals were approached as a feature of human thinking and behaviour – which was termed *the ethical tendency*[6] – in order to facilitate

6 This term is developed in Öhman (2006a) with inspiration from Wittgenstein's *A Lecture on Ethics* in which he talks about ethics as "a document of a tendency in the human mind" (Wittgenstein, 1993, p. 44).

investigations into the *various* ways that ethics and morals can appear in practice.

Another important starting point of these studies derived from Wittgenstein's work was the observation that, in the act of communication, we do not usually differentiate between the words we use, the meaning of the words and reality.[7] This first person perspective implies that the ethical tendency is not necessarily hidden in the minds of human beings, but is often clearly visible in our everyday activities. This point had crucial methodological implications, namely that *in situ* examples can be used as clarifying reminders of how ethical and moral judgements appear in educational practice.

The findings of these analyses indicate that we learn to communicate the right and the good by participating in various situations where other people express what they find to be fair, unfair, self-sacrificing, insulting, selfish, unselfish, greedy, generous, honest, dishonest, just, unjust, etc.[8] In these situations we tend to express our ethical and moral attitudes as *absolute value judgements*[9], that is, we communicate our beliefs in terms of *universally* good values and correct ways of acting. These expressions are not connected to the use of specific words, but it is rather the case that words, facial expressions, gestures, etc., acquire this meaning in relation to the certain circumstances of specific events. Thus, when learning to communicate the ethical tendency, we learn the meanings of different expressions in situations where ethical and moral issues are at stake. In this way we can learn that even a frown can mean "don't do that, your behaviour is unjust!"

The analyses also show that in education the ethical tendency appears in many different ways and in various kinds of situations. In order to highlight the differences between these situations concerning the different conditions of learning that prevail, a didactic typology can be created. This typology makes distinctions between three different kinds of ways in which attitudes to the right and the good are communicated: *moral reactions*, *norms for correct behaviour* and *ethical reflections*.[10]

The term *moral reaction* is used as a reminder of those situations when we, without any previous considerations or reflections, take spontaneous responsibility for another being. For instance, this can happen when we see someone or something being treated badly, or when we spontaneously act in order to save someone or something that is in need (one can, for example, think of the way we

7 Therefore, when clarifying the meaning of words, Wittgenstein advises us to ask questions like: "How did we *learn* this word ('good' for instance)? From what sort of examples? In what language-games? Then it will be easier for you to see that the word must have a family of meanings" (Wittgenstein, 1953/1997, § 77).

8 This position is similar to the claims of sociocultural researchers such as Bhatia (2000), Buzzelli (1996, 1997), Crawford (2001), Tappan (1997, 1998, 2006) and Walker (2000).

9 See Wittgenstein (1993).

10 For a more thorough illumination and examples of these situations, see Öhman (2006a and b) and Öhman & Östman (forthcoming).

might react if we saw someone kicking a puppy). One can say that these are the situations when we are *personally* affected, and experience a feeling of care that reaches deep within us.

A second way in which we experience opinions about the right and wrong way of acting is through *norms for correct behaviour*.[11] One example concerns the norms connected with school biology excursions: not picking more plants than are necessary for the studies; putting the water bugs back into the pond after they have been examined; not harming shrubs and trees; not disturbing nesting birds, etc. These are the situations in which the ethical tendency appears as *social* rules that are communicated to us by the way both authorities and peers actively respond to our present or future actions by encouraging, condemning, neglecting, answering, questioning, making gestures, etc. These rules indicate a common opinion on how we *should* act.

A third kind of situation in which values make an appearance in education is when we *ethically reflect* upon the good values and the right way of acting. In these situations we often try to find systematic and rational arguments for how to handle certain moral issues. When we communicate and discuss such reflections, we are usually not in an immediate situation where we need to decide how to act. These ethical discussions therefore normally concern the *general ethical principles* that human beings *ought* to follow. In educational contexts, ethical reflections often appear as different forms of exercises, where the students are expected to take a stand on a particular ethical issue and explain and defend their standpoints.

By recalling these different kinds of situations we can remind ourselves of how we deal with situations where the ethical tendency appears in social life. It is admittedly a common observation that opinions vary between different human beings, and also that human beings change their opinions. But when people live through a *specific* situation, they react morally and in a specific way when they are personally touched by someone or something being treated unfairly, in need, insulted, etc. People participating in common activities do orient their actions towards certain norms of correct behaviour that prevail in that activity – either they follow or break the rules or they act in relation to them in a specific way. And when people are faced with different ethical principles in a discussion, they don't regard two opposite principles as equally good if issues that really concern them are discussed.[12] Thus, the 'anything-goes-problem' is generally not a practical problem but a theoretical one that has its origin and meaning in relation to the presumption of the realist philosophical tradition. Once we take another

11 See Almers and Wickenberg, this volume.

12 These observations can be said to be in line with Rorty's conclusion that "one cannot find anybody who says that two incompatible opinions on an important topic are equally good" (Rorty, 1982/2003, p. 166). He also comments that, in practice, the question of whether a theory is philosophically grounded is generally not something we really give much thought to, although we *do* care about "the various concrete advantages and disadvantages it has". (Rorty, 1982/2003, p. 168)

point of departure – the way we live through the ethical tendency – the problem tends to dissolve.[13]

The ethical tendency and democratic responsibility

If it is reasonable to say that we learn to communicate the ethical tendency by participation in situations where the right and the good are at stake, then this has several important implications for how to take the democratic responsibility of public education into account when dealing with the ethical dimension of ESD in educational practice.

First of all it appears to be important that students encounter a *variety* of situations where different expressions can be connected to the specific circumstances of these events. In this way, opportunities are created for students to articulate their moral reactions and ethical opinions and beliefs, and students are thereby allowed to increase their sensitivity to the subtle nuances of language when it comes to communicating ethics and morals. Increasing the communicative ability in this way does not mean that ethical differences are eliminated. We learn to understand other people's value judgements because we have had *similar* experiences in *similar* situations, although this does not necessarily mean that we have had to make the *same* value judgement. Hence, it is important to differentiate between a shared usage of language and the opinions that different people hold (see Wittgenstein, 1953/1997, § 241).

In order to make further conclusions about the practical integration of the ethical tendency and the democratic responsibility in ESD we can use the didactic typology suggested above.

When it comes to *moral reactions,* it appears to be important to make it possible for students to *express* and *share* their experiences of moral reactions, and allow them to learn to respect the deeply personal, moral emotions that people show in different situations, even though these emotions may not always be possible to explain or defend by rational argument. Thus, moral reactions to concern are a way of recognising that human actions are not entirely based on rational decision-making. Ignoring students' moral reactions or systematically trying to inculcate a certain way of reacting would, on the other hand, intrude upon the personal sphere of the ethical tendency and expose ESD to the dangers of indoctrination.

It is often a requirement for activities and groups that different opinions about right and wrong are coordinated in common *norms*. A straightforward transference of norms can, however, be regarded as a form of indoctrination.

13 This reasoning is related to Wittgenstein's philosophical method of dissolving philosophical problems by reminding how the phenomenon concerned appears in different situations of human practice rather than solving problems with the help of explanations and philosophical theories (see Fann, 1969; Monk 1991; and Peters & Marshall, 1999).

From a democratic perspective it is therefore essential that the norms are discussed and the motives for the norms presented, and also that students are given an opportunity to critically reflect upon and influence those norms. It is important to bear in mind, though, that learning to act in accordance with a norm does not necessarily mean that one is personally affected. This learning can rather be seen as the acquiring of a social knowledge about how to behave in order to be an accepted member of a group. Another aspect of norms is that they are generally connected to a particular activity and community. It is therefore an open question as to whether norms learnt in school will influence the individual students' behaviour in their life outside its confines.

It also possible to conclude that exercises containing *ethical reflections,* where students evaluate different alternatives, formulate valid arguments for their standpoints, consider other people's arguments, learn more about their own and others' emotional reactions, etc., are very much in line with the democratic responsibilities of education. It is reasonable to assume that in such exercises students come to experience different forms of ethical reasoning and learn to relate critically both to their own behaviour and to the norms they experience in school activities and in society in general. An important aspect of ethical discussions is also that ethical theory can be introduced, which can function as a way of transforming the moral issues from the private to the public. A recurrent integration of ethical reflections in educational practice can accordingly be seen as an important way of strengthening students' ability to participate in democratic conversations. On the other hand, if in our teaching practice we stressed that there are *certain* ethical principles that in themselves (by reference to a foundation beyond human practice) are more sustainable than others, we would then limit the ethical diversity and ESD would narrow rather than broaden future possibilities.

Summary

Authors like Jensen & Schnack (1997), Jickling & Spork (1998), Breiting & Mogensen (1999), Elliott (1999), Wals & Jickling (2000), Lijmbach et al. (2002), Rauch (2002), and Stables & Scott (2002) have, albeit in different ways, claimed that the democratic mission of education involving diverse interest groups, free opinion-making and action competence should be a significant feature of future EE and ESD. In this paper I have developed this claim further by focusing on how to integrate the *ethical dimension* of sustainable development with the *democratic responsibility* of public education in educational practice.

I have suggested that this issue can be understood in relation to three different selective traditions in EE: a *fact-based* tradition, a *normative* tradition and a *pluralistic* tradition. In a critical evaluation of these traditions as a basis

for the future development of ESD, it was found that the *fact-based* tradition can be disqualified as it doesn't deal with the value aspects of environmental and developmental problems. The *normative* tradition was found to be democratically problematic as the democratic conversation is not included in the learning process. It is also philosophically questionable as it relies on science as an objective foundation for value judgements. The remaining alternative was the *pluralistic* tradition, which has the advantage that it takes the value dimension into account but avoids indoctrination by highlighting the different conflicting perspectives and opinions on environmental and developmental issues. But here another objection emerged: doesn't pluralism imply a (anything-goes-) relativism?

With the aid of a pragmatic perspective it was argued that a pluralistic educational practice can only be considered as relativistic if one believes that the idea of foundations for our ethical principles and moral attitudes outside human practice makes sense. As pragmatists cannot see what it means for something to be 'founded', focus is rather put on the different human activities where values are established. By using a didactic typology emerging from studies of educational activities, the ethical dimension of ESD could be specified to three different kinds of situations: *moral reactions*, *norms for correct behaviour* and *ethical reflections*. In this way, a more specific discussion becomes possible as to how to, in practical terms, stimulate ethical and moral learning without promoting a specific set of values.

Discussion: ESD as a communicative practice and democratic arena

The suggested pluralistic approach can be understood as an admission that enhancing students' communicative capability concerning ethical and moral issues is important. This communicative focus relates the pluralistic approach to the democratic conception of education as developed in the pragmatic tradition. In his influential work, *Democracy and Education,* Dewey (1916/1980) clarifies the relationship between democracy and education by pointing to communication as the carrying connection between the two. The view that Dewey took was on the one hand that:

> democracy was not primarily a mode of management and control, but more an expression of a society imprinted by mutual communication, and consequently a pluralist life-form (Englund, 2006, p. 508).

On the other hand, he understood education as a forum where people can communicate different experiences and accordingly continuously reconstruct their

experiences through common meaning-making processes.[14] In this perspective, the ideal of democracy is not a situation where people relate to each other by declaring and defending their preconceived standpoints, but rather a situation where people create new possibilities by influencing each other. In this way Dewey underlined that education:

> represents not only a development of children and youth but also of the future society of which they will become the constituents (Dewey, 1916/1980, p. 85).

A practical educational consequence of this understanding of democracy, as a form of life and as an attitude, is that learning democracy means to learn by participating *in* different kinds of situations of democratic communication where diverse experiences, opinions, arguments and views are openly exchanged (and not a learning *about* the rules of a certain predetermined procedure that prepares students for future democratic actions and discussions). In order to create such learning situations it is required that young people are recognised as social and moral agents and are received as already democratic citizens. That is, that citizenship is not seen as something that is acquired by young people through acting in any particular way, but as a *practice* that everyone in the society is involved in from cradle to grave (Lawy & Biesta, 2006). Thus, a pluralistic approach is an approach that opposes conformism and, moreover, that views the practice, values and attitudes of democratic citizenship as constantly changing rather than permanent.

If it is to be at all meaningful to young people, it is also essential that the democratic dialogue takes its departure in the experiences of young people, the issues that they find significant and that relate to the particular social and cultural milieu of their day-to-day lives. It is a well known fact that the differences between the milieus of different people are rapidly increasing in contemporary society. However, difference is also the very condition for communication and it is by experiencing difference that we can learn something new. The meaning of communication:

> is therefore neither the transmission of an objective world, nor the exchange of subjective worlds. It is the creative co-construction of an *intersubjective* world (Säfström & Biesta, 2001, p. 67).

The challenge for both democracy and education is accordingly not to create unity and consensus, but rather to make plurality and diversity possible in a shared, local and global community. Striving for sameness and conformity would

14 Based on a pragmatic view on education several authors have suggested models for a democratic dialogue and learning in school inspired by Habermas' idea of deliberative communication (see Gutmann, 1987; Englund, 2000, 2006; and Gustafsson's contribution in this volume).

not only exclude those who do not fit the standards of normality, but would also reduce the number of possible solutions to future problems. Difference can even be seen, Säfström and Biesta (2001) claim, as the quality that distinguishes education from indoctrination.

This understanding of democracy and education has important implications for the overall reception of ESD. Firstly, it amounts to making ESD an education in democracy, where school is viewed as one of the arenas in society where value judgements concerning our common future can be displayed, deliberated on, exchanged and sometimes agreed upon in open democratic discussions. Secondly, it means that the values of sustainable development are made the subject of constant discussion, where ideas pertaining to sustainability are continuously reconsidered, rather than a promotion of a preconceived idea of what constitutes a sustainable society. Instead of being a fixed goal, sustainable development then appears as a compass needle pointing the way to future development. In this way we might apply a similar attitude to sustainable development as Dewey's to democracy:

> The very idea of democracy, the meaning of democracy, must be continually explored afresh; it has to be constantly discovered, and rediscovered, remade and reorganised (Dewey, 1937/1987, p. 182).

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Conditions for environmental ethical reflection in the subject of Religion

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Introduction

We are all aware of the fact that science and technology dominate the field of sustainable development. One probable reason for this is that sustainable development is such a complex discourse. Sustainable development issues are often reduced to environmental or ecological aspects; and the environmental arena is, as we know, the playground of technology and science.

In this chapter we address the value-dimension of sustainable development and ask; what about the contribution of the humanities to education for sustainable development (ESD) and to research in education and sustainable development? More specifically, what about the potential for the subject of Religion as a core-field within ESD?

The main aim of the chapter is to clarify conditions for environmental ethical reflection in the subject of Religion in the context of ESD. In order to achieve this aim, teaching materials, i.e. nine textbooks used within the subject of Religion in Swedish upper secondary schools, are analysed. The analysis provides knowledge of the content and form regarding the conditions for the environmental ethical reflection in the subject of Religion. The article also illustrates how an interdisciplinary environmental ethical ESD-analysis can be carried out.

1 We are grateful for valuable comments from the editor and from Jenny Berglund, Petra Hansson, and Leif Östman at the Department for Curriculum Studies, Uppsala University. Also, we would like to thank our colleagues in the research project *Encounters with nature and environmental moral learning. A multidisciplinary study of educational practices for sustainable development in the perspectives of environmental education, ethics and history* (2005-2007), sponsored by the Swedish Research Council, for never-ending inputs on ESD, ethics and nature.

Environmental ethical reflections in education

This chapter focuses on the environmental ethical dimension of ESD. As Öhman argues in this volume, ethics is a central question within ESD. Öhman discusses the dimension of values in ESD according to the typology labelled "ethical[2] tendency" and he highlights three aspects of this tendency, i.e. ways in which ethical/moral phenomena appear (and thus can be studied) in e.g. school: (a) moral reactions, (b) norms for correct behaviour and (c) ethical reflection. Öhman's typology is the result of various empirical analyses of how moral and ethical aspects actually appear in various situations in educational practices. Here, we use the typology as a theoretical analytical typology.

According to Öhman, the typology is useful in studies of the practical integration of the ethical tendency and democratic responsibility in ESD. He argues that moral reactions in schools should facilitate the students' ability to express and share their moral reactions (and their experiences thereof). This includes increasing the students' understanding of different expressions of deep moral sentiments, even when such reactions cannot be explained or justified by moral reasoning and "rational" arguing. Furthermore, Öhman holds that it is important that students are given various opportunities to discuss and reflect on moral contextual norms. Finally, Öhman argues that developing ethical reflective skills can help to develop the students' ability to critically assess different action alternatives, to formulate arguments for their own standpoints etc. Thus, Öhman emphasises the importance of highlighting these three aspects of the ethical tendency within ESD research and education.[3]

We agree with Öhman that his empirical typology is useful in studies of the ethical tendency in ESD and are using it as an analytic typology in the pragmatic purpose-oriented analysis. Further, our vantage point is that the main aim of education in ethics is that students should learn how to systematically, critically and constructively assess and discuss their own and other people's moral outlooks[4]. Thus, our starting point is that education in environmental ethics should not have a normative purpose, i.e. its objective should not be to teach the correct answers to moral questions. Instead, environmental ethical education should aim at developing students' understanding and skills concerning environmental ethical reasoning i.e. the capabilities to critically reflect upon various aspects of the environmental ethical tendency. Thus, our main focus throughout the second part of this chapter is on ethical reflection.

2 Here, Öhman is using "ethical" in two different meanings of which the former does not follow our distinction between "moral" and "ethical" according to which "moral" means people's moral outlooks, while "ethics" means the systematic study of moral outlooks.

3 Öhman (2006, pp. 195-215) on ethical tendency. Öhman's typology is the result of various empirical analyses of how moral and ethical aspects appear in various situations in educational practices.

4 See Taylor (1986/1989, pp. 44-45) for a discussion on biocentric moral outlook. Basically, a moral outlook is a philosophical or religious worldview (which, we would add, includes the way this worldview is being acted upon) "concerning the order of nature and the place of humans within it" (44). A person's moral outlook can, at least tentatively, include the ethical tendency discussed in this chapter.

Environmental ethical reflection in the subject of religion

The subject of Religion has a unique responsibility regarding the teaching of moral questions within the Swedish school system. This makes the analysis of the conditions for environmental ethical reflection in the teaching materials used within the subject of Religion particularly relevant.

The reason why an analysis of the conditions for environmental ethical reflection within the subject of Religion in Swedish upper secondary school is called for is the subject's interesting history. Historically, the subject had a strong focus on Christianity.[5] However, in 1962, the Swedish compulsory school reform caused a neutralisation regarding Christian worldviews.[6] As a consequence, the name of the subject changed from Christianity (sv: kristendom) to religion (sv: religionskunskap) in 1969.

Currently, although under great influence from Christianity and so-called Christian values, the Swedish school mainly includes non-confessional religious education.[7] Today, the neutral profile from 1962 is apparent in our schools; one of the main aims of the subject today is to "[provide] knowledge of the contents and traditions of belief in different religions and other outlooks on life" (citation from the syllabus).

Furthermore, ethical reflection is emphasised:

> The subject of Religion aims at providing opportunities to reflect over existential and ethical issues from different perspectives, as well as provide a better understanding that others may come to interpretations that differ from their own.
>
> The subject aims at providing a knowledge of the contents and traditions of beliefs in different religions and other outlooks on life, and creates an awareness that concepts, knowledge and analytical tools are needed to be able to evaluate and form a standpoint. (http://www3.skolverket.se)

In addition, another aim is to ensure that students "deepen their ability to reflect over and reason on existential questions concerning beliefs, ethics and outlooks of life". Finally, the structure and nature of the subject is described in the following way:

> Training in reflecting and critical thinking has a prominent place in the subject, and this covers ethical issues, the surrounding world and survival, the need for a universally accepted international system of values, as well

5 A comparative international analysis of the subject would be of interest. However, there is neither time nor space to pursue such an endeavour here.

6 Skogar (2000, p. 29).

7 According to Willaime (2007, p. 60) "European schools can be grouped into the following three categories: 1) *no religious instruction in schools*; 2) *confessional religious instruction*; 3) *non-confessional religious education*."

> as how religion and outlooks on life are related to culture and society. Both well-known traditions and modern phenomena, such as youth culture and workplace culture, which are not immediately perceived as being related to religious belief, other outlooks on life views, are studied within the subject. In such analyses the development of concepts plays an important role, both concepts which give prominence to religious and philosophical dimensions, and those dealing with existential approaches. (http://www3.skolverket.se)

Thus, although not made explicit in the syllabus, environmental ethical themes and ESD themes are clearly within the scope of the subject of Religion in the Swedish upper secondary school. Furthermore, the syllabus states that both ethical content and ethical skills are part of the general aims of the subject.

Starting points and design of the analysis

Terminology

Throughout this chapter the terms "nature" and "animal" are used in the sense of *non-human* nature and animal. From an evolutionary perspective humans are also animals and as such part of nature. Thus, using a distinction that deviates from a strict scientific worldview could be interpreted as implicit anthropocentrism. However, a critical discussion on these matters is not within the scope of this work.

The term "moral" is used to mean people's actual moral outlooks: emotions, outbursts, arguments, attitudes, actions, talk, gestures, etc. (or the systems thereof). For the most part we refer to individual moral outlooks. Accordingly, we use "ethics" in the sense of the (systematic) study or reflection of morals.

"Reflection" and "to reflect" have become more and more popular within educational discussions and ESD is no exception. Furthermore, whatever is meant by reflection, reflective skills have always been a central part of ethical and philosophical reasoning, theorising and meaning-making. Jan Bengtsson claims:

> Although there can be big disagreements concerning the nature of philosophy, I think that most philosophers can agree about the vital importance of reflection. Mostly, "reflection" is then intended as thinking. In philosophy, however, thinking is of course not a loose wondering or a gloomy pondering, but a rigorous, systematic, principal and argued activity (Bengtsson, 2003, p. 297)

What, then, do we mean by environmental ethical reflection? Although much can be said regarding the meaning of reflection in general, here environmental ethical reflection means the activity of systematically thinking about environmental moral dilemmas and challenges in relation to the form and content of the teaching materials and environmental ethical theory.[8]

The term "environmental" is tricky. The common meaning of environmental ethics is something like "the study of the value dimension of the relationship between humans and non-human nature", which would imply a "nature ethics" rather than an "environmental ethics". However, it is our intention to use environmental and environmental ethics in a wider sense. In this chapter the term captures various forms of moral outlooks not only regarding the relationships between humans and non-human nature (nature ethics), but also regarding the relationships between humans and non-human animals (animal ethics), and interhuman relationships (social ethics). Thus, in this sense, environmental ethics, refers to various practices of systematic/non-systematic reflections on moral issues which are brought to the fore regarding the environmental- and development crisis in all its relational, local and global manifestations.[9]

Aims and questions

One aim of the analysis is to clarify the conditions for environmental ethical reflection in the subject of Religion. A second aim is to provide a basis for discussions regarding what the value dimension of sustainable development is and how it can be dealt with within the subject of Religion. The third aim is to illustrate how environmental ethical theory can be used in cross-disciplinary ESD analyses of the value dimension in school. Following these aims, our analysis is based on the following two questions:

- What aims regarding ESD can be found in the subject of Religion in the Swedish upper secondary school?
- What environmental ethical content is included in the subject of Religion in the Swedish upper secondary school?

Material and methodology

The main material consists of nine textbooks in the subject of Religion for Swedish upper secondary schools.[10] One reason for our choice of material is that we

8 It is also possible to distinguish between reflection and meta-reflection. The latter means being able to reflect upon one's own environmental moral outlooks and moral and ethical reasoning.

9 See Kronlid (2005) for a more detailed discussion on the concept of environmental ethics.

10 These textbooks are all written on the basis of the present syllabus for the subject. We have not included all the textbooks that meet this criterion, but with these nine we have a reasonable qualitative variation on which to base our discussion. See bibliography for a list of the textbooks.

believe that these textbooks give a coherent picture of the subject of Religion. Our investigation is carried out through analyses of these textbooks based on the assumption that such analyses can provide information about the traditions in the subject, i.e. *what* content is included and *how* this content is dealt with in the subject in question. Furthermore, another reason for our choice of methodology is that textbook analyses can clarify to what extent the subject of Religion includes conditions for dealing with the ethical tendency. That is, textbook analyses cannot provide information about what is happening in a specific classroom at a given moment. However, textbook analyses can provide knowledge of the teaching traditions, i.e. the conditions for teaching within a given subject. Thus, our assumption is that our analyses will provide knowledge of relevant conditions for the teaching of the environmental ethical tendency in general and environmental ethical reflection in particular in the subject of Religion.

This cross-disciplinary[11] analysis consists of two parts. *The first part* deals with the purposes regarding the ethical tendency in the subject of Religion (Säfström & Östman, 1999). *The second part* focuses on the environmental ethical content of the subject.

Environmental purpose-oriented analysis

Pragmatic purpose-oriented text analyses take (a) a specific problem as the starting point for the analysis – for example the problem of whether or not non-human nature holds intrinsic value – and (b) leave all aspects that are not related to this problem unnoticed. Accordingly, in our analysis only those parts of the textbooks in which "nature"[12] and "environment" are explicitly mentioned are analysed. Accordingly, a *clarifying* purpose-oriented analysis aims to clarify what is said/written in a given educational practice in order to explain what *could* be said/written (Säfström & Östman, 1999), or, in our case, what could be reflected upon.[13]

The purpose-oriented analysis is based on the previously mentioned concept of ethical tendency, namely, moral reactions, norms, and ethical reflection:

11 We are conducting an interdisciplinary analysis (rather than a mono-, multi- or transdisciplinary analysis) based on an integrated pragmatic purpose-oriented and ethical analytic conceptual framework. This framework is the result of three years of research in the research project *Encounters with nature*.

12 Here, "nature" is used as an umbrella term for "animals" and other more specific labels for non-human organisms, individual entities, species, systems and places.

13 A clarifying purpose-oriented analysis is based on notions of elaborated conceptions of what is possible to say and/or write in a given educational practice. Such elaborated conceptions are found through comparative analysis with similar practices as the one studied (here the subject of Religion). Here, our notion of elaborated conceptions of what is possible to say or write in a given educational practice is based on comparative text analyses within the research project *Encounter with nature*.

- *Moral reactions*: is the notion "students should develop specific environmental moral sentiments[14] and attitudes" a purpose of the subject of Religion?
- *Norms for morally correct behaviour*: is the notion "students should learn specific environmental moral rules of conduct" a purpose of the subject of Religion?
- *Ethical reflection*: is the notion "students should learn to reflect on environmental moral outlooks" a purpose of the subject of Religion?

Moral reactions – learning about environmental moral sentiments and attitudes

We can conclude that in accordance with Swedish school policy, the subject of Religion has a non-confessional descriptive aim. E.g. the aim is *not* that students should develop any specific moral sentiments or attitudes vis-à-vis nature. Thus, there is a displacement regarding the category corresponding to "moral reactions". Accordingly, the subject of Religion contains *descriptions* of attitudes towards nature in different religions and worldviews. Thus, in accordance with the category "moral reactions" it is relevant to address the question which attitudes towards nature are presented and whether these presentations involve attitudes of love and care for nature.[15]

The analysis shows few obvious expressions of caring attitudes towards nature. For example Mattsson et al. (2000) elaborates how Buddha's golden middle-way "contains love for everything alive" (p. 119, our translation). Furthermore, Rundblom & Berg (2002) write that the "Japanese love and revere nature" (p. 385, our translation). In addition, the stewardship attitude of human's taking care of creation is mentioned in connection with discussions on Christianity in several textbooks.

We have noticed expressions meaning respect for animals/nature that can be associated with the category of moral reaction; mostly in connection to descriptions of Hinduism, Buddhism, animal ethics, and ecosophy. Furthermore, the word "care" occurs in a citation from the Australian moral philosopher Peter Singer: "What is needed is that we include even the non-human animals in our circle for moral care" (Arlebrand et al., 1998, p. 169[16]). However, taken in context, such care-oriented formulations most often occur in connection to discussions

14 The reason for choosing the term "sentiment" here is that attitudes of love and care are in focus and that there is an affinity between such moral attitudes and the work of the philosopher David Hume, well-known as the defender of morality as a matter of "sentiments" rather than merely as a matter of "reason".

15 The main reason why we focus on the attitudes of love and care, etc., for nature is that such sentimental or emotive aspects of moral life have not been given the same amount of attention in ethical theory as the so-called rational side of moral life.

16 Arlebrand refers to a Swedish translation of Singer's *The Liberation of Animals*, without page reference; hence this passage is our own translation back to English.

about the intrinsic value and rights of animals. Hence, because intrinsic value and rights-oriented discussions are associated with moral principles rather than with moral sentiments and caring attitudes, there are reasons to believe that these care-oriented discussions are closer connected to the categories below concerning ethics and norms rather than to the category of moral reactions.[17]

Norms for correct behaviour: learning about environmental moral rules of conduct

In correspondence to the category "norms for correct behaviour", our analysis shows that there is a displacement of this category in the subject of Religion, i.e. we can conclude that the aim of the textbooks is not that the students should learn to act in accordance with religious moral rules. Rather, we can conclude that the aim is that students should learn about various religious and spiritual moral rules of conduct. Thus, the aim is not normative but descriptive.

When dealing with human – nature relationships the subject involves the following religions, spiritual and philosophical worldviews: Christianity, Judaism, Islam, Hinduism, Buddhism, Jainism, Shintoism, nature religions, New Age, mysticism, private religion, naturalism, ecosophy, bioethics and animal right ethics.

The discussions about the great religions follow traditional divisions between on the one hand Hinduism and Buddhism and on the other hand Christianity, Judaism and Islam. Furthermore, the Japanese religions and nature religions are often discussed together.

Ethical reflection: learning to reflect on environmental moral outlooks

As already mentioned, the analysis focuses on those sections in the textbooks where "nature" or "environment" is explicitly mentioned. Accordingly, our analysis shows that the aim is fairly unambiguous concerning the category ethical reflection; requests for ethical reflection, i.e. reflections on environmental moral issues, are made in all of the analysed textbooks.

We can conclude that one purpose of the subject of Religion is to include *environmental* ethical reflection as one of several aspects of ethical reflection. For example, Alm (1997) suggests that "nature" can be one of several themes in which moral issues may be discussed. Further, Mattsson et al. (2000) emphasise letting students discuss current moral questions in groups. For example, the

17 Peter Singer's animal ethic is often criticised from the perspective of care-oriented ecofeminist environmental ethics. One of the authors of this article for example attended the conference, *Environmental Justice for the 21st Century* in Melbourne 1997, in which one of the most well-known ecofeminist philosophers Karen J. Warren alongside with her colleague Chris Cuomo criticised Peter Singer in plenum for not taking care-oriented issues into account in his research. Warren and Cuomo argued that this was a flaw in his work because it left out morally and ethically relevant sentiment aspects. See also Svennbeck (2004) for similar critique within the context of science education.

authors suggest that getting the students to discuss whether or not animals and human beings have the same value and if gene modification of human beings and animals is acceptable, and if so for what purposes, is an important aspect of this.

Summary and continuation

From the results of the purpose-oriented analysis we can conclude that all the three aspects of the ethical tendency are included in the subject of Religion. Further, it is our conclusion that the main purpose is *Ethical reflection: learning to reflect on environmental moral outlooks*, i.e. that the students' should learn to reflect ethically upon the moral aspects of the human/nature relationship.

In relation to different religions and worldviews, we can conclude that various moral rules of conduct about how to treat nature are described. This means that the aim *Norms for correct behaviour: learning about environmental moral rules of conduct* is included in the textbooks. Further, we have found few examples of the importance of attitudes towards nature in terms of the moral sentiments of care, love, etc. This implies that the aim of *Moral reactions – learning about moral environmental sentiments and attitudes* is mostly absent.

The following analysis focuses primarily on the *content* of the aim *Ethical reflection: learning to reflect on environmental moral outlooks*. Accordingly, the following section aims to, from the perspective of environmental ethical theory, clarify the environmental moral issues that are in focus (content) and how these issues are presented (form) in the textbooks. The latter question deals with whether the presentation of the environmental moral issues is systematic or not and to what extent the reflection draws on environmental ethical theory.

Environmental ethical analysis

The environmental ethical analysis focuses on the findings of the purpose-oriented analysis. The main aim is to, on the basis on an environmental ethical typology, clarify the environmental ethical content and focus in the textbooks. Thus, the purpose-oriented analysis is deepened concerning:

- Which environmental moral questions are being addressed (content)?
- In what ethical terms are these environmental moral issues discussed (form)?

In order to answer these questions the environmental ethical analysis takes as vantage point two separate and influential strings within environmental ethical

theory referred to as: (a) value-oriented environmental ethics and (b) non value-oriented environmental ethics.

Academic environmental ethics was born in the early 1970s (Zimmerman, 1993). Since that time, "intrinsic value" has been the central concept. Thus, the field of environmental ethics has developed focusing on the question of whether there is good reason to assume that non-human nature has *intrinsic* and not merely *instrumental* value.[18]

Anthropocentric ethicists defend the idea that non-human nature only has instrumental value, i.e. anthropocentric ethics is a human centred position. Non-anthropocentrism on the other hand argues that it is not only humans who have intrinsic value (Norton, 1987).

Following this, here the environmental ethical typology, which is presented in table number one below, regards (a) the question of whether nature can be said to hold intrinsic value or not, (b) if such values primarily concern individuals or also groups, and (c) if the *non*-anthropocentric positions involve other than humans and animals: plants, species or places.

Various environmental ethicists have been critical toward value-oriented environmental ethics. This critique is based on the idea that value-oriented environmental ethics is too focused on the reliability of philosophical arguments for or against the intrinsic value of nature. Thus, disregarding moral aspects of the environmental crisis associated with psychological, gender, institutional, religious, spiritual, etc., phenomena. Hence, the analytic typology also involves different positions on the moral aspects of the environmental crisis, which do not focus on the intrinsic value question. The non value-oriented analytic typology is presented in Table 2 below.[19]

Value-oriented analysis

In this section the results from the value-oriented analysis is presented. First however, our analytic typology is presented in Table 1.

18 See Norton (1987), Callicott (1989, 1999), Kronlid (2003), Stenmark (2002) and Zimmerman (1993). The metaethical debate concerning the nature and meaning of "intrinsic value" within environmental ethics is vast. Here, we are using the term "intrinsic" rather than e.g. "inherent" and "value" rather than e.g. "worth".

19 Please note that several of the terms that are used in the typologies are not mentioned in the material. Thus, our analysis is based on whether or not such moral or ethical *themes* that are significant for each non value-oriented perspective are being mentioned or implicated in the material. The purpose is to use the value-oriented and non value-oriented typologies as analytic "patterns" in order to clarify the environmental ethical content.

Table 1. Value-oriented environmental ethical typology[1]

	Anthropocentric theories		**Non-anthropocentric theories**				
			Individual oriented theories			**Group oriented theories**	
Environmental ethical theoretical position	*Intra-generational anthropocentrism*	*Inter-generational anthropocentrism*	*Sentientism*	*Animal rights*	*Biocentrism*	*Ecocentrism*	*Land Ethics*
Moral object, i.e. holder of intrinsic value	Present human generations. Nature has demand- and or other kinds of instrumental value	Present and future human generations. Nature has demand- and or other kinds of instrumental value	Most humans and some non-human animals	Humans and some non-human animals	All living individual organisms including humans, non-human animals, and plants	Ecosystems, species	Places, landscapes
Criteria for intrinsic value	Member of Homo Sapiens[2]	Member and potential member of Homo Sapiens[2]	The capability to experience pain and/or suffering	The capability of a sense of a self	To be alive, hence to strive to flourish	To produce and sustain the processes of life	The integrity, stability, and beauty of the biotic community
			Animal ethical theories				

1 The sources for Table 1 are e.g. *the Journal of Environmental Ethics*, Zimmerman (1993), Van DeVeer & Pierce (1998), Singer, (1975/1992), Regan (1980/1993), Taylor (1986/1989), Norton (1987), Stenmark (2002).

2 Anthropocentric criteria for human intrinsic value vary in the literature and are both philosophical and theological. E.g. such criteria regard the capacity of language, love, social relations, being created in the image of God, etc.

One observation of overriding importance is the clear focus on the question of animal and nature "value":

> …humanism [regards] the human being to be the only creature that has intrinsic value, rather Naturalism tries to balance human's value with other values in nature (Alm, 2000b, p. 110, regarding Naturalism).

> Thus, there is great respect for other living creatures. However, one hardly suggests that humans and animals have equal value (Alm, 2000a, p. 78, regarding the value of humans in Hinduism and Buddhism).
>
> The philosophical argument is that each creature that is a subject has intrinsic value (Arlebrand et al., 1998, p. 169 on animal rights).
>
> A second thought is that the diversity of nature and culture has intrinsic value (Björlin, 1996, p. 66, on ecosophy).[20]

The question of whether or not animals and nature have intrinsic value (rather than merely instrumental value) dominates the content of the subject. Accordingly, "intrinsic value" is a precedent concept where various environmental moral issues are described, clarified and reflected upon in relation to various religious and philosophical worldviews.

Anthropocentric environmental ethics

One interesting observation regards the fact that the value-oriented discussion does not include anthropocentrism, i.e. value-oriented reflections on anthropocentric environmental moral outlooks[21] with no space given to anthropocentric positions on animal and nature's value. Accordingly, although a value-terminology is used within the discussions of human responsibility for non-human animals and nature, these discussions only take the question of non-human intrinsic value into account.[22]

Anthropocentric positions arguing against the intrinsic value of animals and nature are not presented in the textbooks, i.e. there are no explicit discussions concerning different kinds of anthropocentric instrumental value, such as for example demand and transformative value (Norton, 1987). In addition, we have found that although intergenerational anthropocentric issues are touched upon, no explicit references to the terminology of inter- and intragenerational anthropocentrism are found (Stenmark, 2002).

In cases where anthropocentric *ideas* rather than anthropocentric environmental ethical theoretical *positions* are discussed, these discussions concern ecotheological themes such as human "dominance" and "stewardship" of non-

20 See also Mattsson et al. (2003, p. 61), Ring (2000, p. 11), Rodhe & Nylund (2003, p. 272) and Rundholm & Berg (2002, p. 272) for other illustrative examples.

21 See Norton (1987) and Marietta (1995) for anthropocentric environmental ethics.

22 Human oriented discussions of value involve terms of human dignity that are more often associated with social ethics than environmental ethics. The term "human dignity" is a translation from the Swedish term "människovärde". We use it here in a theoretically speaking neutral sense, i.e. the term does not connote a specific kind of ethical theory such as for example Kantianism. Furthermore, traditionally, social ethics, i.e. philosophical and theological reflections on justice, equity, etc., only include reflections on relationships between moral agents, i.e. humans. In addition, a certain weight is given to the question if it can be argued that *non*-anthropocentric positions will result in a degrading of human dignity.

human nature.[23] One example of this is the Jewish rules of conduct concerning relationships with non-human animals (Björlin, 1996, p. 204) mentioned in the purpose-oriented analysis above. Thus, anthropocentrism comes across as a cluster of religious and philosophical ideas or attitudes whereas various non-anthropocentric positions are represented and thus can be associated with value-oriented positions.[24]

Non-anthropocentric environmental ethics

Regarding non-anthropocentric aspects, "value" is given a relatively large amount of space. Thus, the critical discussion concerning the concept of animals' and nature's intrinsic value seems rather well informed. However, it is our impression that the presentation of non-anthropocentrism is rather unsystematic.[25]

Animal ethics

The discussion of animals is dominated by comparative reflections on the intrinsic value of humans vs. animals:

> Regarding rights however, there are great differences between humans and animals (Arlebrand, et al., 1998, p. 168).
>
> He [Peter Singer] suggests that any creature that … can experience lust and pain is entitled to respect (Arlebrand, et al., 1998, p. 169).
>
> It is an absolute duty to respect every creature's [which can be regarded as a subject] intrinsic value (Arlebrand, et al., 1998, p. 170).
>
> They [ecosophy] claim that human rights should also apply to animals (Mattsson et al., 2000, p. 306).
>
> Vegans highlight that humans and animals are individuals with the same kind of value and equal right to freedom (Ring, 2000, p. 11).

Although these discussions sometimes refer to animal *rights*, the main impression is that the presentation is dominated by references to *sentientism*. This conclusion is strengthened by the observation that the Australian philosopher Peter Singer is the only ethicist referred to by name (e.g. Arlebrand et al., 1998, pp. 168-169 and Rodhe & Nylund, 2003, p. 273). Further, we have noticed presentations of various non-human animal ethical ideas associated with Hinduism,

23 In ecotheology, the concept of human dominance over non-human nature refers to the idea that humans have a God-given right and/or duty to use non-human nature as a resource. Further, the stewardship idea might imply that although humans have the God-given right to use non-human nature as recourse, nature has intrinsic value to God.

24 Alm (2003, p. 73), Björlin (1996, p. 21), Mattsson et al. (2000, p. 306), Rodhe & Nylund (2003, pp. 197, 272, 198), Rundblom & Berg (2002, p. 31), Thulin & Elm (2001/2005, p. 178).

25 However, one might consider whether the concept of value is a main ingredient in what can be seen as an environmental ethical meaning-making process, and, what the didactical consequences for ESD of this fact might be.

Jainism, and Judaism, such as the idea of the holy cow and certain no-harm principles (e.g. Alm, 1997, p. 21, Arlebrand et al., 1998, p. 96, Björlin, 1996, pp. 160, 177, and Ring, 2000). Finally, various ideas on the relationship between humans and other animals in so called nature religions are discussed, as for example kinship between human and non-human animals (Mattsson et al., 2000, pp. 70–71).

Biocentric, ecocentric and land ethical perspectives

We have noticed several references to biocentric[26] and ecocentric views[27], i.e. regarding the latter, references to the rights of species and to the question of the moral relevance of ecological interaction:[28]

> According to ecosophy, all living creatures have the same kind of value and rights (Alm, 2003, p. 69).
>
> All that is alive has a role [in the ecocycle]; hence all that is alive has a value (Thulin & Elm, 2001/2005, p. 145).
>
> This respect for the rights of other species is the essential principle in the ethics of ecosophy (Alm, 1997, p. 110.)

In addition, we have noticed frequent references to land ethical ideas, often associated with indigenous people's worldviews and religions.[29]

> This is sometimes called animism (the faith that natural phenomena possess a soul). This could be *one* early form (among other) of religious belief. The Sámi people's reverence for certain places in the mountains has a character of animism (Björlin, 1996, p. 76).
>
> Humans, animals, plants, mountains and rivers have their roots in the beginning of creation. Hence, the land is sacred and the Aborigine people celebrate the earth as the original mother (Mattsson et al., 2000, p. 70).
>
> Visitors may stop for a while and bow in order to show their respect to a sacred tree, a creek, or a small temple (Rundblom & Berg, 2002, p. 385).

26 Biocentrism is an individual oriented position, which holds that all living creatures have intrinsic value or worth (Taylor, 1986/1989).

27 Ecocentrism is a group oriented non-anthropocentric position, which holds that groups and systems such as species, ecosystems, etc., all have intrinsic value (see Callicott, 1989, 1999 and Cuomo, 1998).

28 Furthermore, we have noticed that the term "bioethics" is being presented as a moral perspective on *species* (Arlebrand et al., 1998, p. 130) and that the idea of *both* natural and cultural variety as intrinsically valuable is raised (Björlin, 1996, pp. 66-67).

29 On several occasions, discussions about what is referred to as Sámi, Aborigine, and Japanese attitudes towards the land and landscapes are initiated. Furthermore, on one occasion the focus is on ecosophic ideas on nature as norm (Thulin & Elm, 2001/2005).

Table 2. Non value-oriented environmental ethical typology[1]

	Partnership perspectives[2]				
	Radical perspectives				
Theory	*Social ecology*	*Deep ecology*	*Eco-feminism*	*Reverence for life*	*Ecotheology*
Problem formulation	Claims that the environmental crisis has social (institutional, ideological, psychological, and cultural) origins and a critique towards social hierarchical and dualistic power structures and ideologies, which one argues is the essence of human dominance over non-human nature.	Claims that the environmental crisis is caused by "shallow" anthropocentric philosophies of life and self and argues that a "deeper" ecology, which acknowledges the connections between the self, other species and the land is what is needed in order to solve the crisis.	Claims that the environmental crisis is caused by the fact that *andro*centrism and *anthropo*centrism share the same basic values and rationality	Claims that the environmental crisis is a problem of evil: "It is good to maintain and cherish life; it is *evil* do destroy and to check life"	Claims that religious and theological perspectives are pertinent for understanding the roots of our ecological crisis. Includes various theological environmental ethical perspectives.
Vantage points	Takes as vantage point that humanity is nature knowing itself; nature become self-aware.	Takes as vantage point a relational view of humanity/nature in which relationships with i.e. "free" nature and identifications with non-humans is accentuated.	Takes often a care-ethical perspective as vantage point in which experiences of empathy and love toward non-humans are accentuated.	Takes as vantage point the idea that: "I am life which wills to live, and I exist in the midst of life which wills to live."	Takes as vantage point various environmental ethical ideas in religions and worldviews.
		Relational perspectives			

1 The sources for Table 2 are e.g. various articles in *the Journal of Environmental Ethics,* Zimmerman (1993, Van DeVeer & Pierce (1998), Warren (1996) and Gotlieb (1996).

2 The term "partnership perspective" is inspired by Carolyn Merchant's idea of an environmental "partnership ethic". Here "partnership perspectives" mean that these environmental ethical perspectives have in common the notion that nature and humanity should be regarded as equal partners in all processes of human life.

Non value-oriented analysis

In the following section we will present the result of the non value-oriented analysis, based on the typology presented in Table 2.

Radical perspectives

The category "radical perspectives" refers to environmental ethical positions where the analysis is based on the presumption that only a radical shift in social structures, worldviews and gendered power relations can solve the moral dilemmas associated with sustainable development.

We have only noticed reference to one radical perspective; deep ecology. There are no explicit references to moral issues that are significant for either social ecology or ecofeminism.[30] However, the term ecosophy (which is closely associated to deep ecology) is mentioned repeatedly in the material.

Our analysis shows several references to ideas of anthropocentric stewardship and anti-anthropocentrism in relation to deep ecology and ecosophy:

> According to ecosophy, we need to go back to an original way of life, only if this is accomplished is it possible to restore the necessary balance [of nature] […] humanity does not have a higher value compared to other forms of life (Thulin & Elm, 2001/2005, p. 145).[31]

> There are reasons to fear our belief in science and technology that holds mankind as the lord of nature. We should show moderation through a respect for harmony and balance. However, humanity still has intrinsic value, which makes us unique among other life forms (Thulin & Elm, 2001/2005, p. 209).[32]

Further, we have noticed references to ecosophy on the matter of the significance[33] of human and non-human value (Mattsson et al., p. 305). In addition, as highlighted above, ecosophy is sometimes associated with biocentrism in discussions on individual rights and value (Alm, 2003, p. 69). Finally, we have noticed discussions on ecosophy and on whether all living beings have intrinsic value (Alm, 1997, p. 110, Björlin, 1996, p. 67 and Thulin & Elm, 2001/2005, p. 145).

30 One exception is in Rodhe & Nylund (2003, pp. 238-239) where there are some references to the Goddess and Wicca.

31 See also Mattsson et al. (2000, p. 306).

32 The references to harmony and balance in this quote could also be interpreted as a land ethical view.

33 The question of the significance of value is equivalent to the question of the *weight* of value, which relates to the practical question of priority in times of conflicts. See Kenneth Goodpaster's classic essay from 1978 on this topic.

Relational perspectives

The category "relational perspectives" refers to environmental ethical positions in which emotional, psychological and spiritual individual relationships and experiences are highlighted as central for environmental ethical reflection. In the following, since deep ecology is discussed above and our analysis gives no evidence of any ecofeminist content, we focus on the categories Reverence for life and Ecotheology.

Reverence for life

The reverence for life perspective dates back to Albert Schweitzer's work. [34] Our analysis shows several references to the main idea of reverence for life and all that is alive, often in relation to cultural perspectives such as the Japanese or Sámi reverence for nature, landscapes and places:

> The Sámi people's reverence for certain places in the mountains has a character of animism (Björlin, 1996, p. 76).
>
> Also, Theravada Buddhism has deep respect for life (Alm 2003, p. 75–78).
>
> Still today there are people who live in a close relationship to nature. Small groups of Indians in the shrinking rain forest, or Inuits (Eskimos) on the North American tundra, are such people […] The Sámi people worshipped many gods, as the gods of the moon, the wind and the hunt. However, the most important gods were those of the sun and thunder. Worshipping thunder was nothing strange, as thunder is particularly loud in the mountains (Ring, 2000, pp. 109, 116).

Ecotheology

As noted in the previous purpose-oriented analysis, the text books include various ecotheological[35] references to both Christian and Islamic stewardship and dominion anthropocentrism:

> Our parts of the world are dominated by the idea that humanity has a unique value […] However, humankind is not allowed to behave randomly towards God's creation. She (humankind) is a steward and caretaker; not the owner of creation (Alm, 2003, p. 73).

34 Reverence for life is an environmental ethical position associated with Albert Schweitzer's work (Schweitzer, 1936). Here, this position is included as an analytic category for two main reasons. First, it is an influential position in environmental ethics and in spiritual environmental ethics. Second, although reverence for life is sometimes described as a version of deep ecology (Gottlieb, 1996), we use it is a position that combines the biocentric idea of respect for life with the ecocentric idea of respect for groups or ecological wholes.

35 Ecotheology is a well-established research field within the humanities focusing on theological aspects of environmental and development issues. The question here is whether the subject of Religion gives opportunity to reflect upon the environmental ethical content of various religions from a theological perspective.

> According to the Christian faith we are given the task of administering His creation. However, we have often misused creation and thereby we threaten to destroy creation (Thulin & Elm, 2001/2005, p. 178).
>
> The creation story in the Bible gives humans a unique position in relation to everything else created. Humankind is given the task of advising animals, nature and all that is created by God. Humankind is at the centre and everything that is in the world exists for the benefit of humankind. This view of man is shared by Jews, Christians and Muslims (Rundblom & Berg, 2002, p. 31).[36]

Furthermore, there are several references to the Hindu idea of reverence for the Cow (Alm, p. 1997, p. 21, Arlebrand et al., 1998, p. 96, Björlin, 1996, p. 160, Ring, 2000, p. 154) and to the Jainistic no-kill principle (Björlin, 1996, p. 177). In addition there are references to Jewish and nature religious moral codes of conduct vis-à-vis animals and totem animals (Björlin, 1996, p. 204, Mattsson et al., 2000, pp. 70–71).

Summary: conditions for environmental ethical reflections

The aim of this section is to discuss the conditions for environmental ethical reflection in the subject of Religion. Table 3 summarises our results, i.e. the left column consists of the three categories of the ethical tendency, the second column consists of the results of the purpose-oriented and environmental ethical analysis and the third column consists of the possibility for various kinds of environmental ethical reflections.

First, we can conclude that out of moral reactions, norms, and ethical reflection, environmental ethical reflection seems to be the main purpose in the subject of Religion. However, there is little evidence that the conditions for such reflections are based on environmental ethical theory. From this follows that even though there are conditions for environmental ethical reflections, our general impression is that the subject will most likely invite the students to reflect without explicit references to environmental ethical theory.

Second, there is almost a complete lack of relevant references to social ecological and ecofeminist research and theory. Consequently, reflections based on aspects of social, ecological and economic life become hard if not impossible. In addition, there is a higher degree of explicit theoretical feedback regarding ecotheology. For example, the students are given opportunities to systematically reflect upon environmental moral dilemmas and rules of conduct related to several of the great religions and philosophical worldviews.

36 See also Rodhe & Nylund (2003, p. 198), Mattsson et al. (2000, p. 274).

Table 3. Conditions for environmental ethical reflections

Ethical tendency	**Aims and environmental ethical content**	**Conditions for environmental ethical reflections**
Environmental moral reactions	*Descriptive* aim to present various religious and philosophical environmental attitudes. A few references to the attitudes of loving and caring for nature associated with Buddhism, the Japanese culture and Christian Stewardship idea. Generally low degree of references, which would facilitate including the students' moral sentiments of care, love and compassion.	Descriptive unsystematic presentations of various religious and philosophical worldviews
Environmental moral rules of conduct	*Descriptive* aim to present various religious and philosophical environmental moral rules of conduct. Specifically with reference to Asian religions, ecosophic and animal rights outlooks on the treatment of animals and living beings. Generally a high degree of references to ecotheological animal ethical content.	Descriptive unsystematic ecotheological discussions
Environmental ethical reflection	Requests for reflections on environmental moral issues are made in all the analysed textbooks. A *descriptive* aim to present various positions on non-anthropocentric ethical positions concerning nature's intrinsic value. Generally a lack of anthropocentric ethical positions on nature's intrinsic value. Generally a low degree of references to radical non value-oriented positions. Generally a high degree of references to ecotheological ideas.	Descriptive unsystematic presentations of central environmental ethical themes except value-oriented anthropocentric views on nature

Third, we can conclude that the conditions for a *systematic* environmental ethical reflection can be considered weak. The subject of Religion seems to cover all major environmental ethical themes with the important exception of anthropocentric environmental ethics with its well-developed analysis of the concept of nature's instrumental value. However, the presentation of various environmental moral challenges is, from the point of view of environmental ethical research, rather scattered.

Fourth, we have observed conditions for *descriptive* ethical reflections. That is, providing final answers to normative questions like: What is a just society? What does is mean to act in a morally correct way towards fellow men, animals

and nature? What does it mean to be a good person? does not seem to be part of the purpose. Rather, the students are given opportunities to reflect upon *various* answers to such questions in the context of environmental ethics.

Fifth, on the basis of our results we can conclude that there is a lack of *explicit* invitations to the students to include their own moral emotive reactions in their environmental ethical reflections. Rather, sentiments such as love, care and compassions are not in focus and the students' emotive involvement regarding the treatment of animals, plants and landscapes are not challenged. From this it follows that actual and central questions that can be expected to engage the students, such as questions regarding the treatment of animals etc., are generally treated in terms of moral principles rather than in terms of moral sentiments such as care, love and compassion. For example, we have found no references to ecofeminist theory in which care ethical positions are central, while there are several references to Peter Singer's principle based animal ethical position.

Sixth, regarding conditions for reflections on moral rules of conduct, the students are given opportunities to reflect upon various environmental moral religious and philosophical norms. However, these environmental norms are often presented as facts rather than as starting points for further critical reflections.

Finally, our main conclusion is that although the subject of Religion has a purpose that clearly corresponds with the category of ethical reflection, we find almost no evidence of explicit conditions for systematic environmental ethical reflections in which environmental moral norms and rules of conduct are clarified and in which environmental moral reactions are focused.

Discussion

In the introduction we highlighted the importance of including all the three aspects of the ethical tendency within ESD. However, our analysis shows a lack of conditions for environmental ethical reflections in which environmental moral norms are systematically clarified and in which environmental moral reactions are systematically dealt with. Following this, we will also discuss how the value dimension in religious/theological education for sustainable development may be developed to include environmental moral reactions and moral rules of conduct.

First, by increasing students' opportunities to engage in systematic reflections based on environmental ethical theory the subject will provide increased opportunities for comparative reflections on various value-oriented and non value-oriented environmental ethical positions. One advantage of such reflections is that they can illuminate the heterogeneity of anthropocentric vs. non-anthropocentric environmental moral outlooks, and of value-oriented vs. non value-oriented environmental ethics. Thus, the students would be given increased opportunities to reflect upon their own and others' religious and philosophical en-

vironmental moral outlooks (meta-reflection) and about environmental ethical theory in general.

Second, a systematic presentation of environmental moral rules of conduct and norms which moves beyond a description of these norms as facts[37] would increase the students' possibilities to understand and critically asses how and why such norms are based on religious and philosophical worldviews. Here, ecotheological theory would be of great help since ecotheological theory clarifies (on the basis of current research) the connections between environmental norms and rules of conduct on the one hand and religious worldviews on the other hand.[38] For example, it would be relevant with a systematic reflection concerning the relationships between specific environmental norms and views of God (e.g. theism, pantheism, panentheism, etc) and/or different creation theologies (McFague, 1993; Linzey, 1998). Furthermore, an ecotheological reflection could also be the foundation for a critical discussion concerning the classic question of the impact and role of religions in the exploitation of nature and people.[39]

Third, regarding moral reactions, if ecofeminist and deep ecological theories could be given a larger amount of space, it would strongly confirm the possibility to take the students' emotive moral reactions into consideration in the subject of Religion. One reason for this is that deep ecology and ecofeminism strongly emphasise personal and emotive aspects of environmental moral outlooks. For example, based on personal experiences, deep ecology emphasises how identifications with nature as a whole may function as the essence of moral outlooks rather than moral principles. Deep ecology does not focus on whether or not nature has intrinsic value, but rather emphasises that the individual needs to have increased knowledge about how relationships with nature deepen when humans identify with animals and nature (Van DeVeer & Pierce, 1994). In addition, ecofeminist theory typically emphasises ethical concepts of care, sympathy, compassion, gratitude and friendship.

Our suggestion is that systematic environmental ethical texts, which take the students' environmental moral reactions on environmental moral issues and dilemmas into consideration, will fortify ethical knowledge in such matters in a way that is meaningful for the students. Further, such systematic reflections based on environmental ethical theory create a common environmental ethical conceptual framework: an environmental ethical space of reflection. The con-

37 We have noticed one important exception regarding this; Alm (1997) clarifies environmental moral norms and thus provides prerequisites for a systematic theological reflection on these rules of conduct.

38 See also Dzintra Ilisko's paper on ecofeminism and the reshaping of religious education. Ilisko (2006, p. 128) argues from a Latvian post-communist perspective that ecofeminism can become "a basis for building a sustainable model of religious education" regarding e.g. developing an ecological self and building inclusive communities of diverse individuals".

39 This discussion originates from Lynn White Jnr's classic essay "The Roots of Our Ecological Crisis" (1967/1998).

struction of such a space will in itself stimulate the students' capabilities to reflect on environmental moral reactions, norms and ethical theories.

ESD highlights the interconnections between social, ecological and economic aspects of "development", i.e. one thing that distinguishes ESD from other environmental learning traditions is the ambition to fuse these three aspects of development into an educational approach to the environmental crisis. In other words, what is traditionally seen as classical environmental issues and classical development issues are now brought together in the classroom.

However, our analysis shows a lack of such inter-sectored perspectives in the subject of Religion. For example, the lack of references to anthropocentric value-oriented environmental ethical theory decreases the students' opportunities to make sense of how aspects of anthropocentric and non-anthropocentric moral outlooks coexist in everyday practice.

In addition, our analysis shows a lack of references to radical environmental ethical perspectives in the subject of Religion, which also reduces the students' opportunities to reflect upon inter-sectored perspectives. The reason for this is that radical environmental ethical perspectives, like ESD, take the vantage point that it is seldom meaningful to analyse environment and development issues separately.

In sum, we celebrate the fact that central environmental moral issues are highlighted in the subject of Religion in accordance with environmental ethical theory. However, the students' opportunities to engage in critical reflections would increase if the environmental ethical language was systematic, i.e. linked to environmental ethical theory. If so, this could make the subject of Religion into a core-field in ESD, which would highlight the relevance of ESD-studies in the humanities and illuminate the significance of environmental moral reactions, rules of conducts and ethical reflections for a sustainable future.

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Discerning the *extras* in ESD teaching: A democratic issue

Per Sund

Introduction

There is an ongoing debate in contemporary research of education for sustainable development as to how good environmental education ought to be conducted and which goals should be accomplished (Fien, 1993, 2004; Hart, 2003; Huckle & Sterling, 1996; Jensen, Schnack, & Simovska, 2000; Kyburz-Graber, Hofer, & Wolfensberger, 2006; Sund & Wickman, submitted; Tillbury & Turner, 1997). The educational content is rarely commented on, however, except to note that the often dominating ecological subject content should be extended to include content from areas such as economics and the social sciences. According to Sterling (2004) and Bonnett (2003a) this is not enough: education itself also needs to be changed. A transformed education is an important aspect of sustainable development and not just an instrumental tool by which society might reach sustainability. From a democratic perspective, it is essential to make the current tendency of change from environmental education (EE) to education for sustainable development (ESD) much more visible. In other words, the aim should be to turn the globally discussed change of a school subject into a lifelong learning perspective (Breiting, 2000). Doyle (1992) thinks that the dichotomy between subject content and the conduct of teaching is created. Schnack (2000) emphasises that the actual creation of teaching is to be regarded as a teaching content: "The central curricular question is no longer simply concerning the *process* of education, but must itself form part of the content" (p. 123). If it is as Schnack (2000) and Doyle (1992) describe, then educational researchers need to grasp the content issues in a much more holistic way and study subject content, teaching methods, and perhaps also teachers' aims, simultaneously. Munby and Roberts (1998) point to the importance of studying the educational context that arises through teachers' different messages to students and is communicated through speech and other actions during the actual practice of teaching. The con-

clusion of this introductory discussion is that there is a need for an analytical tool with which to put together and offer an overview of educational context. The context in which subject content is taught is here called the socialisation content (Östman, 1995).

One important point of departure for this study is that the learning of subject content and socialisation content occurs simultaneously, and together they constitute the educational content. This study focuses on the socialisation content, which is studied through describing teachers' different starting points for their messages to students. These might be different messages *about* the subject content, different messages *in the teaching process*, or whether the students are allowed to become more involved in the experience of education.

There are several arguments for studying the educational content of schools in a more overarching way. One important reason is to create conditions for more open and democratic discussions. In a democratic country the school's educational content should be subject to a common critical investigation, where the nature of the content and its extent are as apparent as the motives. The extended subject content in ESD is often easy to present, while the socialisation content is hardly known or noticed. The subject matter and its pedagogy are especially important in ESD, given its value-related nature (Corney & Reid, 2007) (see Lundegård, this volume). The starting points for teachers' value-related and often hidden choices of socialisation content are of common political interest. These therefore need to be made visible, rather than implied or insinuated as a kind of tacit background (Bonnett, 1999). This has its origins in teachers' choices in a number of different fundamental educational aspects, which could be fruitful in terms of illustrating and understanding the relation between EE and ESD.

The aim of this study is to contribute to a better developed knowledge of content in environmental education and education for sustainable development. This study analyses the socialisation content in EE and ESD and its points of departure in central aspects of education. The socialisation content is the educational context in which a subject matter is communicated. By studying earlier research concerned with the content and conduct of environmental education, the purpose is thus to develop an analytical tool for researchers that could help to make teachers' communicated socialisation content much more visible. In other words, by formulating specific questions about different aspects of education, these questions could be regarded as an analytical tool that not only facilitates the identification of the different messages that teachers communicate to students through speech and other actions, but also makes them more visible.

In this way I would like to contribute to the development of opportunities for researchers and teachers to talk about content issues in ways other than the more usual subject-related approach. Moreover, the results allow all the educational stakeholders to challenge and critically examine the content and value-related starting points presented in EE and ESD.

Theoretical starting point

In the section that follows I describe a way of studying socialisation content more closely by developing a tool that facilitates a systematic encounter with teachers' different messages during the conduct of education. The tool has been developed in an attempt to describe and make such messages visible, and at the same time account for their starting points in fundamental aspects of teaching.

Teachers have a profound impact on students' learning (see Jonsson, this volume): "Teachers *author* curriculum events to achieve one or more effects on students" (Doyle, 1992, italics in the original text). Teachers can be said to direct their teaching, and often invite students to take part in a mutual creation of education. In this direction teachers do not only explicitly communicate a certain intended content, but through speech and other actions also communicate a number of other unintended, implicit messages. These tell the students what is to be regarded as important, what is being aimed at, or how the content might be related to the world at large. These messages help students to understand the context in which the content should be understood, and socialise them in a specific educational context. Content and socialisation content can provide *meaning* for students (Östman, 1995). A differentiation is often made between learning and socialisation (ibid), but rational facts are not value neutral (Bonnett, 1999).The learning of scientific meaning is accompanied by others e.g. the teachers' view of nature. These *companion meanings* (Roberts, 1998) can be seen as offering students different meanings (Englund, 1990), even though it is not at all certain that all these offerings will be developed into something that has meaning for them. Östman and Roberts (1994) express this uncertainty about which offerings might be expected to become meanings as: "Our point is that some meanings are more likely to develop than others, according to what is available to the learners". In this sense, companion meanings can be regarded as a socialisation content that consists of different offerings to the students and where together with subject content these can be developed into deeper meanings and understandings.

In previous educational research socialisation content has traditionally been understood as a deliberate fostering content in order to, for example, maintain specific societal norms (Östman, 1995). Like Östman (1995), this study does not regard the socialisation content as necessarily fostering. This study does not make any distinction between those parts of socialisation content that could be fostering and those that are not. In addition, the study does not make any distinction as to whether the teacher consciously (intended) or unconsciously (unintended) communicates socialisation content, or whether its origin in relation to other central educational aspects is consciously reflected upon or routinely selected by teachers. The study departs from the fact that subject matter is always communicated in a specific educational context. From a learning perspective, Scott and Gough (2003) describe this as "learning always take place within a pre-

existing but often dynamic context of power relations, rules, expectations, historical narratives and perceptions of group and individual interests, which affect not only what learners learn but what they think is important to learn and why". Companion meanings are consequences of how teachers themselves relate to different questions about important educational aspects, which together form a dynamic teaching context.

In an earlier study I emphasised that teachers' teaching purposes were closely related to their conduct of teaching (Sund & Wickman, submitted). In similar fashion, Hart (2003) argues that "they [teachers] appear to me to articulate this environmental/ecological consciousness *practically* through their consciences and their actions as teaching professionals with social responsibilities " (italics in original). It would thus appear that teachers' practical teaching activities support their ideas about good education; something that could certainly be regarded as obvious. Although the subject matter in different environmental educators' teaching is often relatively similar in character (Sund & Wickman, submitted), it is possible to identify differences in their teaching by examining the socialisation content. Roberts and Östman (1998) have pointed out that content other than just subject content is communicated in teaching:

> Science textbooks, teachers, and classrooms teach a lot more than scientific meaning of concepts, principles, laws and theories. Most of the extras are taught implicitly, often by what is *not* stated. Students are taught about power and authority, for example. They are taught what knowledge, and what kind of knowledge is worth knowing and whether they can master it. They are taught how to regard themselves in relation to both natural and technologically devised objects and events, and with what demeanour to regard those very objects and events. All of these extras we call "companion meanings".
> (p. ix, emphasis as the original)

These extras that Roberts and Östman (1998) illuminate here are generally concerned with companion meanings *about* the subject. This study takes into account that the dichotomy between *what* and *how* can be regarded as being created (Doyle, 1992) and seeks to show that companion meanings are communicated through different kinds of actions. It is also important to create opportunities to illustrate those companion meanings that are not directly related to the subject but to *how* the teaching is actually carried out (Munby & Roberts, 1998). It thus becomes important to show that teachers, through their teaching activities, continuously connect with and make decisions about different aspects of teaching. My understanding is that Hart (2003), in his descriptions of teaching practice that align with other teachers' descriptions of their practices (Sund & Wickman, submitted), has observed that teachers' purposes and value-based choices come to expression during the actual process of teaching. These companion

meanings, expressed as the teaching is actually *lived through*, constitute a socialisation content that occurs in the interplay between *how* and *what* and that needs to be made more visible in order to facilitate democratic insight into the teaching content. Teachers make different choices in their teaching, and their standpoints can often be concealed in a variety of teaching habits (Wickman, 2004). Each teaching situation is preceded by different choices that include the selection of specific values and can together be regarded as a kind of ideology or worldview (Östman, 1995). In the actual practice of their teaching teachers also make habitual choices, which mean that points of departure and socialisation content are often hidden, or perhaps even forgotten in these teaching habits. From a democratic perspective, Östman and Roberts (1994) maintain that it is essential that all the content that is communicated in school is made visible and presented to all the stakeholders:

> The informed involvement of teachers and other stakeholders, based on a thorough understanding of the choices being made – choices of both subject matter content and companion meanings – is vital to the conduct of education in democratic countries. The selection process has a moral character in that some consequences for students are being privileged over others, and the moral responsibility for making the choices is shared among all stakeholders in the curriculum development process. Hence the need for all stakeholders to understand. (p. 3)

It is important that the points of departure for teachers' choices are visible when they are expressed as socialisation content in the practice of teaching; something which may also have consequences in terms of the students' futures. In a democratic society these value-related starting points are of great common interest and should therefore be made known and visible for critical examination. The starting points for teachers' choices can be sought in important aspects of teaching. These are often intertwined together like a web (Bonnet, 2003a). This study is thus not aimed at dividing teachers' teaching into smaller separate parts, but instead attempts to make more of its content more visible. In other words, the analysis tool outlined here could help researchers and other stakeholders to unfurl and make visible those parts of teachers' teaching content that are often concealed in teachers' habitual choices in the actual conduct of their teaching.

Development of the analytical tool

The following section describes how the analytical tool's questions are identified by focusing on essential aspects of teaching. The word "aspect" is used here to point out that the points of departure for companion meanings are very varied and include e.g. ethical dimensions as well as more overarching relations or di-

mensions of educational content. This section begins with a short discussion as to why questions on aspects of teaching are meaningful. Different examples from previous research are then studied, which help to illustrate why these aspects are regarded as essential in the teaching of environmental issues.

The literature analysis uses earlier research as data, and points to a number of examples that can be referred to or equated with discussions about different kinds of companion meanings. Those examples that touch upon similar aspects in environmental education are brought together to form a foundational question. In connection with this formulation I add a few personal comments based on my own experience of working with teachers' long-term teaching purposes (Sund & Wickman, submitted). Finally, a foundational question relating to a specific and important aspect of EE and ESD teaching is formulated.

Although the selection of research literature is varied, it does not attempt to provide a comprehensive description of the research discussion on content. The intention is rather to show examples of different areas of EE and ESD research. The examples have been selected from policy debates, research on student participation, the differences between EE and ESD, and critical research. The purpose of the selected literature is to highlight different and important aspects that can together illuminate the origins of socialisation content in a more fruitful and holistic way. A summary of all the formulated questions is provided in Table 1. These questions should be regarded as foundational questions that can be reformulated in order to best serve different research data.

One way of discerning socialisation content, *the extras*, and its points of departure is to formulate questions. Researchers like Wals and Jickling (2000) have formulated questions about e.g. the starting point of the learning process: "Does the learning process depart from the learners own ideas, interests, values, etc?" The answer to this question communicates companion meanings about the teachers' view of the students' roles and significance for the current teaching situation. The companion meanings can be described and systematised and together highlight the socialisation content's starting points; a central educational aspect which in this case is constituted by teachers' approach to power relations between teacher and students.

Important educational content aspects in the connection of what and how

The relationship between man and nature is a central aspect in EE, which often derives its main subject content from the natural sciences (Bonnett, 2003b; Östman, 1995). In actual teaching, companion meanings are communicated about e.g. whether man can be regarded as part of nature or whether man is outside nature and merely administers it in the best interests of mankind (see Kronlid and Svennbeck, this volume). Teachers' views of man's relation to nature can be communicated through different companion meanings as to why environmental issues are important (Sund & Wickman, submitted). If the teacher considers

man as part of nature it follows that a threat to nature is also a threat to mankind, which means that in education environmental issues are often regarded as urgent questions of survival. But if teachers consider man to be more a manager of nature's resources, companion meanings are often communicated as to how technical advancements and more ecologically-friendly lifestyles reduce man's impact in a relatively controlled way. Teachers' answers to questions of *why environmental issues are important* take their departure in teachers' value-related choices or attitudes to the relationship between man and nature, and communicate companion meanings to the students of nature as an object to administer or as a common subject to be rescued.

Teachers' more general views about the purpose of education can be called an educational philosophy, which is an important point of departure in teachers' conduct of teaching (Sandell, Öhman & Östman, 2005). Two main purposes can be formulated: students should be developed into independent individuals or developed to participate in the collective work of society. All education has an inbuilt tension that teachers have, in one way or another, to deal with: that of educating autonomous, critical individuals or democratic citizens who are expected to learn and abide by the different norms of society (Bonnet, 2003a; Bonnett, 1999; Öhman, 2004). Teachers can develop the individual by teaching them more scientific facts and supporting them in their personal development of more environmentally-friendly values. The collective can be developed by practising democratic abilities such as critical thinking, argumentation and presentation (Nikel, 2005; Sund & Wickman, submitted). This educational aspect, which concerns the individual or collective emphasis of teaching, is also made visible through the ways in which teachers organise their teaching and educational settings. Teaching can be product-oriented or focus more on the teaching and educational process, in which content is created in different ways and for common mutual purposes. Teachers can choose whether to communicate facts and actively participate in the students' work and challenge them to rethink their values, or invite students to participate through group discussions and student-planned actions (Jensen & Schnack, 1997). Companion meanings that have their origin in aspects of teaching that connect with the overall purpose of education can be made visible by asking, *what is the teaching aiming to change?* Teachers' different approaches to knowledge also communicate companion meanings as to what is essential for the students to master and how this can be developed in their education so that they can successfully and fruitfully participate in environmental and sustainable development work.

According to many researchers the content of an integrative environmental education or education for sustainable development should be in some way related to a more general context of humanity (Fien, 2004; Huckle & Sterling, 1996; McKeown & Hopkins, 2003; Nikel, 2005; Sterling & Cooper, 1992; Sund & Wickman, submitted).The discussions have also considered whether different "adjectivals", such as peace education, human rights education and development edu-

cation can be included in ESD in a natural and genuine way (Sterling & Cooper, 1992). An education that regularly illumines different inter-human and intergenerational aspects, with time and space dimensions, should have the qualities necessary to include such adjectivals. Molander (1996) describes how teachers communicate knowledge that students do not directly need to learn. He argues that such knowledge should rather be regarded as different connecting points for students and teachers in a larger educational context and that point to something beyond themselves and their contemporary educational situation. Molander (1996) refers to this type of knowledge as orientation knowledge. This concept describes knowledge that justifies teachers' and students' choices of goals as well as the different alternatives selected in the conduct of education. Orientation knowledge could be regarded as a kind of overall social directional compass for the entire educational content. This concept also facilitates the inclusion of a more human ethical content in EE discussions, thus enriching the hitherto traditional environmental ethics content. In other words, it aids a moving away from an emphasis on an empathy-with-nature approach towards more a explicit focus on an empathy with other people living now and with generations to come (Breiting, 2000). I recognise this latter empathy as one that is concerned with inter-human relations. Making use of the concept orientation knowledge can be a fruitful way of connecting the often normative policy levels of the world community and its instrumental view on the role of education to teachers' operational levels, where the aim is often towards a more open and less normative approach to education. Sterling and Cooper (1992) explain that EE has an inner, more human dimension, and the human ethical reflection that has been described here could be apprehended as an inner dimension. With a starting point in an ethical dimension that consists of differing degrees of inclusion of human ethics, teachers communicate companion meanings about solidarity, justice and other expressions that reflect education's more overarching role in human development. Teachers' value-related choices in terms of the ethical dimension are made visible by companion meanings in response to the question: *Which different inter-human relations are established?*

Several researchers have stressed the importance of offering students opportunities to work in more outward-oriented ways for society and the world (Bonnet, 2003a; Bonnett, 2003b; Fien, 2004; Huckle, 1996; Jensen, 2000; Jensen & Schnack, 1997). Through an intimate cooperation between education and the surrounding society it is possible to develop students' personal abilities so that they can actively, and in a qualified way, participate in society's common work of change. Jensen and Schnack (1997) have developed the concept of *action competence*, which describes how students can be encouraged to develop both personal and collective abilities and achieve an action competence. By allowing and supporting students' own planning of different actions in society, companion meanings are communicated in the teaching process about the existence of environmental and developmental issues in students' lives. The mutual interests of

school and community thus correspond. Teaching that is mainly conducted in the classroom can contribute to making students understand that environmental issues are something relevant and important mainly in school, i.e. as a topic or an occasional feature in their education. Students working with other classes, or communicating with other schools nationally or internationally, are communicated companion meanings that inform them that environmental issues are common concerns for many people all over the world (Fien, 2004). Students using authentic information material that has been produced by e.g. the UN can develop a sense of being important participants in work on global issues. (Sund & Wickman, submitted). Teachers' attitudes to the relation between school and society can be made visible by studying companion meanings that describe where and how students can work with environmental issues. Companion meanings are communicated about different outward-oriented contacts where the school and the surrounding world communicate. The space within which students can be active in society and the community can be made visible by asking: *How useful is school knowledge in environmental and development issues*?

Munby and Roberts (1998) think that students have the right to comprehensive information in their education and regard this as a power aspect between teachers and students, where teachers can offer students full democratic influence. This influence gives students possibilities to create a democratic space that I call students' *action space*. Wals and Jickling (2000) also framed questions as to how students might be allowed and encouraged to be active participants in education: "Does the learning process allow for active participation, democratic process, ownership and empowerment to emerge?" This is about students' possibilities of participation and shared responsibility. Öhman (see this volume) discusses this in terms of democracy and citizenship constantly permeating the common activities, i.e. being included *in* the education. Some kind of action space should thus exist from the very start; an action space that gives students opportunities to develop as active participants in their own education. Democracy in education should not come *before* nor *after* education, but *in* it (ibid). Jensen (2000) argues that it is the teacher who creates the possibilities for students' democratic space: "the challenge facing the adult (i.e. the teacher) is therefore to create space in which the pupils can demonstrate this [action] competence". Teachers' value-related approaches in power relations between themselves and their students are expressed in companion meanings about teachers' views of their students' citizenship, whether they should claim and exercise this, or whether they already have an action-space. In the conduct of their teaching teachers communicate companion meanings about students' roles and responsibilities for their own education and the common work of society. These companion meanings of power relations can be made visible by asking: *What role do students play in education and environmental issues?*

Result

In the above literature analysis five questions have crystallised that illuminate five essential aspects of education in environmental education and education for sustainable development. These questions are explained in more detail below. Teachers communicate companion meanings in different ways and these can be used to describe how teachers approach these different value-related aspects of education. The questions in the analytical tool have been developed in order to make teachers' companion meanings visible. In the following section, examples are presented as to how researchers can identify and observe companion meanings in different types of data, such as that from interviews, text materials or classroom observations.

Teachers companion meanings – the extras

1) Why are environmental issues important?
This question spotlights companion meanings concerned with teachers' attitudes to relations between man and nature. The companion meanings communicate for whom or what the environmental issues appear to be important. Teachers with an anthropocentric view might discuss the necessity of learning more *about* nature in order to take care of and manage it in the best possible way. Nature thus appears as a teaching object that is separate from mankind. This view can be common in the fact-based tradition (see Öhman, this volume). An anthropocentric approach can also emphasise the political aspects of environmental issues and discuss them as common societal questions. This view ought to be common within the pluralistic tradition, where nature can be described as an object of political interest. Teachers with a more biocentric view of man's relation to nature often teach students *in* nature – outdoors – in an effort to awaken feelings of belonging to or of being at one with nature. In education, nature and man can be presented as a kind of common, mutual *subject* to be defended (see Almers and Wickenberg, this volume); a view that can be common in the normative tradition of environmental education. The *importance of environmental issues* communicates a socialisation content that relates to how nature is described and used in education, as an object, subject or controversial societal issue.

2) What is the teaching aiming to change?
Teachers' ways of teaching and describing knowledge and abilities take their point of departure in the aspect of teaching that deals with individual or collective solutions as the overarching purpose of education. The teaching can be product-oriented, or more oriented towards the teaching process. Product-orientation often aims at developing individual subject knowledge and personal values, while process-orientation aims at actively developing democratic competencies through group work and various student actions. Process-orientation can denote

an environmental education that is more pluralistic in nature and where students work with specific self planned assignments (see Öhman, this volume). The *teachers' project of change* alerts researchers to the teachers' socialisation content, with its departure in teachers' approaches to the overarching purpose of education, such as which knowledge students should develop. This knowledge could be referred to as students' *tools of change* in environmental and developmental issues.

3) What kind of inter-human relations are established?
Inter-human relations can be understood as expressions of a possible increased inclusion of human ethics in the environmental education content. Education might quite simply lack messages about human ethics because the content is devoid of inter-human social orientation relations and values. Such education can be understood as being firmly rooted in subject matter perspectives. Education can thus have its starting point in a nature ethic in which the used subject content is mainly scientific, which means that the social orientation of the subject content towards a more human ethical orientation, i.e. between man and man, might be very limited. Teachers who communicate *social orientation knowledge* regularly include inter-generational or other historical perspectives in their teaching. Apart from the global perspective of environmental issues, global perspectives also include inter-human issues such as mutual interdependence, an equitable distribution of global resources and solidarity. By studying companion meanings of the education's social orientation, researchers can form an understanding of the shift in teachers' educational content towards a more human ethical starting point, which is indicted by different expressions of inter-human relations.

4) How useful is school knowledge in environmental and development issues?
This question makes teachers' companion meanings that have their origin in the educational aspect concerning the relation between school and society visible. In teaching, society can be portrayed as a study object or something that the school is an indispensable part of. Teachers who show confidence in the usefulness of school content or knowledge can offer students a greater participation in and communication with society. The question also reveals teachers' attitudes in the relation between school content and the content in informal education that is offered by different non-governmental organisations and authorities. Educational content can be a content that occurs in the actual conduct of teaching in interplay with society, which contributes to making the content *authentic*. Companion meanings communicate messages about where the content is applicable in solving and working with environmental issues in students' everyday lives. Teachers who mainly work in their classrooms and use materials that are adapted to the school environment communicate that environmental issues are limited to the sphere of the school. Teachers who allow their students to work with

current environmental issues in society communicate messages that the basis of their work is within society as a whole. Through international school collaborations and authentic materials from international organisations it is possible to extend students' action spaces to also encompass international arenas. Socialisation content communicates to students where environmental issues and the material necessary to work with them are to be found in their everyday lives. Through this question, researchers can develop an understanding of teachers' attitudes and approaches to this aspect with regard to the relation between the school and the surrounding world.

5) What role do students play in education and environmental work?
This question highlights teachers' companion meanings about the importance of students' participation in education and for overall societal work with environmental issues, which have a common departure in the aspect that relates to power relations between teachers and students. Companion meanings are communicated through the way in which teaching is directed. In a teacher-controlled education, companion meanings about students not having yet managed to claim full citizenship are communicated. They have to be educated before they can actively participate in their own education. Teachers who activate students in group discussions communicate companion meanings which confirm that their opinions are valuable and can be developed in conversations with peers. Students can be perceived by teachers as some kind of educational raw material, or as fully-fledged citizens with responsibilities and valuable personal resources. Democratic aspects like participation and influence in the planning of their education communicate that students are competent enough to participate in the development of their own education. Socialisation content communicates how important students are in education and in society's common work. Through this question, the researcher identifies companion meanings relating to students' action spaces and makes them visible.

Table 1 illustrates the five analytical questions relating to essential aspects of environmental education that help to make teachers' socialisation content visible. Teachers' ways of answering these questions highlight the companion meanings that teachers communicate to students in their teaching. The companion meanings can in turn point to teachers' approaches to the different value-related aspects of teaching.

Discussion

The questions developed in this study can be regarded as foundational questions that are central to environmental education and education for sustainable development. They have primarily been developed to illuminate important value-related teaching aspects and facilitate their study. The questions can be reformu-

Tabell 1. Five analytical questions.

Analytical questions	**Companion meanings**	**Aspects**	**Examples of answers**
1) Why are environmental issues important?	Views of nature as an object or subject	Relation to nature: Man – nature	Resource management – Survival – The intrinsic value of nature
2) What is the teaching aiming to change?	Views of knowledge and the development of students' tools of change	Purpose of the education: Individual – collective	Facts, values – Communicative democratic abilities
3) What different inter-human relations are established?	Views of intergenerational and human solidarity	Ethical historical dimension: Environment, here, now – Humans, there, then	Insignificant – social and cultural orientation in the world
4) How useful is school knowledge in environmental and development issues?	Views of where environmental issues exist in the students' lives	Teaching relation: School – society	Classroom – communicative knowledge with the surrounding world
5) What role do students play in education and environmental work?	Views of students' democratic citizenship	Power relation: Teacher – student	Limited – active co-creators and citizens

lated or deepened by means of various follow-up questions. They can be adapted for use in analyses of different kinds of research data from interviews, classroom observations, text analyses, curriculum material or in the development of questionnaires.

The analytical tool can also be used to deepen and expand earlier educational research. Öhman (see this volume) has studied teachers' environmental education in Sweden and found that they mainly teach within three selective traditions. Öhman (ibid) explains that the descriptions of the categories are somewhat simplified in order to make them clearer, which can mean, for example, that parts of a teacher's teaching can fall into two different categories. The analytical tool can be used to examine the delimitation between two categories more closely. It can be particularly interesting to study similarities and differences in the socialisation content between the normative and pluralistic traditions, where questions of *students' action space* can be especially fruitful. Teachers' views on students' citizenship could be an important educational aspect to study in com-

parisons between EE and ESD. The questions could also be useful in studies of environmental education traditions without dividing teachers up into different categories, i.e. studying them as all-pervading development perspectives of different educational aspects in the socialisation content. It might also be interesting – and valuable – to study *the extras* and their origins in the whole scale of environmental teaching, from a teacher-controlled and science focused EE to more subject and student-integrated teaching that presents a more transformative EE/ESD. The questions are also useful in the assessment of schools in relation to e.g. the implementation of ESD in connection with changes in the national curriculum. The *good examples* highlighted in these national evaluations can then be studied in more detail to discern their different educational aspects and what it is that makes them *good* examples of ESD. The questions can thus be used to develop an educational research tool that is based on schools' "best practices" and can, if so wished, support a more reflected development of the socialisation content of environmental education towards ESD.

Better conditions for a democratic discussion of socialisation content

The questions developed in this study are not intended to make teaching more value-based, but rather contribute to making some of the choice situations that students and teachers continuously encounter and relate to much more visible.

So, while we need frameworks which can enhance our ability to debate and critique the curriculum and associated goals within context, we must recognise the ethical/moral underpinnings of those arguments within the context of their modernist origins and provide the scope (within such frameworks) for alternate ethical discourses which might supersede them (Hart, 2004, p. 230).

It would perhaps be difficult, or even impossible, to find a commonly accepted moral starting point to suggest other ethical discourses for environmental education. The human ethical element highlighted in this study could provide a structured way of changing the ethical emphasis of the content to some extent. On the other hand, in a democratic perspective it seems important to realise that, like other educational aspects, ethical aspects are part and parcel of teachers' teaching practices. Teachers' value-related choices and attitudes are significant for the formation and content of teaching. Teachers' value-based interests should not dominate their teaching, however. There are teachers who teach according to the normative tradition (see Öhman, this volume) and who risk being counterproductive. For example, in one breath they might say how important it is for students to get involved in environmental issues, while in their actual teaching practices they prevent students from participating in meaningful ways (Sund & Wickman, submitted). Teachers' strong personal ambitions may well undermine students' possibilities to actively participate and take responsibility for their own education and societal work as democratic citizens.

It does not matter that the authoritarianism is not deliberate. Whenever there

is a massive socialisation toward intellectual dependence, how do students suddenly become thoughtful, responsible citizens who habitually question and exercise their reasoning powers with respect to knowledge claims, explanations and decisions? It is in giving serious consideration to that kind of question that the manner of teaching can be seen as a potential link between the here-and-now of the science classroom and the long term value that democratic societies accord to responsible citizenship (Munby & Roberts, 1998, p. 114).

In order to avoid ignorance of the impact of socialisation content, with origins in e.g. power aspects as indicated in the above example, it is vital to make visible and study the companion meanings that are communicated by teachers in their teaching practices and actions. This study has suggested and outlined a tool that could facilitate and further such research. *Orientation knowledge* could be a link between the classroom and a responsible citizenship which could also be extended to a kind of global citizenship. Together with a well-integrated subject content in education for sustainable development, the socialisation content should be central to a continuous, general reflection of inter-human ethics, and also be subject to a critical examination of central concepts like democracy and equality. Environmental education is political (Östman, 1995), which means that the starting points for teachers' choices of socialisation content need to be made visible. The results of this study will hopefully contribute to deepening and extending a continued fruitful debate as to how ESD can be developed in different cultural contexts. Different interpretations of the concept of democracy make it necessary to clarify the origins of socialisation content so that its political and cultural undertones can be brought to light. More generally, in a global ESD discussion questions still remain as to who has the preferential right of interpretation for concepts like democracy, equality and freedom of speech. A western cultural view of democracy and equality spreads across the world at the same time as ESD is very sensitive to differences in the cultural contexts of different countries (Nyberg & Sund, 2007). In these international discussions about education for sustainable development, socialisation content and its value-related starting points are of central importance. An understanding of these aspects will hopefully lead to better conditions for creating a basis for open democratic discussions that in the future will be necessary to the success of global work for change in environmental and developmental issues – work that often starts in school and which this study has tried to illuminate by unwrapping aspects of the value-based content that teachers communicate to their students and exposing it to a critical democratic public.

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Participatory learning and deliberative discussion within education for sustainable development

Barbro Gustafsson and Mark Warner

Introduction

Education for sustainable development (ESD) requires a broad, multi-faceted approach addressing the ecological, social, cultural and economic factors relevant to sustainable development issues. ESD not only requires a whole variety of aspects to be included (i.e. multi-disciplinary learning), it should also embrace a democratic way of looking at problems. ESD has its roots firmly within environmental education (EE), which used to be a much more fact-based education that emphasised the science behind environmental problems but did not address the social and economic factors involved. However, as this area's historical background still has a strong influence on teaching approaches and methods today, it is worth mentioning the reviews and descriptions provided by Björneloo (2004), Öhman, (2004) and Sandell, Öhman and Östman (2005). These works describe a clear development process involving steady change over the past few decades in terms of focus, teaching style and material.

Björneloo is among those who highlight the changes that are occurring. This is reflected in the title of her research survey, "From straight answers to complex questions", in which "straight answers" can be interpreted as scientific-fact-based environmental education (focusing on ecological aspects) through to "complex questions", in which the true complexity and inter-relatedness of the world is taken into account. The latter includes relevant social, cultural and economic perspectives as well as ecological (science based) aspects. (For an illustration of the complexity of sustainable development, see Jonsson's contribution in this anthology).

In our contribution to this anthology, we investigate and analyse an educational sequence with participatory and deliberative goals, our ambition being to

shed light on effective ways to deliver ESD. In this sense, the potential role of participatory learning and deliberative discussion in terms of understanding sustainable development (SD) is addressed in the current study.

Education for democracy and ESD

As observed by Öhman (this anthology), the Swedish curriculum states that in education, it is not sufficient to impart knowledge of democratic values and skills. Instead, education must also be carried out using democratic working methods. In this matter, parallels can be drawn between the problems faced by democracy in education and those faced by ESD. This would mean that developing more effective ways to achieve democracy in education might also be useful in ESD. The connection between ESD and democracy is discussed by, for example, Jensen & Schnack (1997), Scott & Oulton (1998), Breiting & Mogensen (1999), Fritzén and Gustafsson (2004) and Öhman (2006). They mean it is inevitable that ethical and moral issues must be addressed in ESD as well as in democratisation. In both cases, the discussion and debate need to reach beyond our own personal needs and interests, and in some way embrace everyone who is affected by our decisions. Dealing with democracy and SD issues also places particular demands on education. Teaching is not about transmitting ready-made solutions; it is more about offering learning processes characterised by mutual respect, exchanging viewpoints, and consideration for different arguments. Furthermore, sustainable development cannot be learnt as democratic knowledge until classrooms can create the necessary conditions for democratic action.

This contribution takes its theoretical standpoint in deliberative democracy[1], a view in which deliberative communication[2] has a central place in how society should practice democracy. Deliberative democracy is described by Englund (2006) as "one or other formal democratic decision-making process". However, he clarifies that formal decision settings are not a requirement for deliberative discussions in a broad sense. This means that deliberative discussions can occur even in informal contexts. Furthermore, even though an understanding of citizens as equals is fundamental to the idea of deliberative democracy, deliberative communication can be carried out in situations characterised by differences in authority, for example in education (p. 506). A deliberative approach to educational practice involves having students delve deeply into certain areas relevant to the curricular aims, and having them test how well their own arguments hold up when seen from different perspectives. According to Englund (2006), delib-

1 Representatives of deliberative democracy include Jürgen Habermas, Amy Gutmann and Seyla Benhabib.

2 In this text, deliberative *discussion* and deliberative *communication* are considered similar expressions that refer to the same phenomenon.

erative discussions in education (as part of deliberative democracy) can be characterised as communication in which:

a) different views are confronted with one another and arguments for these different views are given time and space to be articulated and presented (Habermas, 1987, 1996; Gutmann and Thompson, 1996);

b) there is tolerance and respect for the concrete other and participants learn to listen to the other person's argument (Habermas, 1987, 1996; Benhabib, 1992);

c) elements of collective will-formation are present, i.e. an endeavour to reach consensus or at least temporary agreements or to draw attention to differences (Habermas, 1987, 1996; Gutmann and Thompson, 1996);

d) authorities or traditional views (represented, for example, by parents and tradition) can be questioned, and there are opportunities to challenge one's own tradition (Gutmann 1987; Nussbaum, 1997); and

e) there is scope for students to communicate and deliberate without teacher control, i.e. for argumentative discussions between students with the aim of solving problems or shedding light on them from different points of view (Hoel, 2001). (p. 512)[3]

If educators can create conditions that allow discussions embodying these characteristics to take place, then many democratic goals can be met. Examples of this include tolerance and respect for others' opinions and coming to conclusions and solutions to a problem through creative dialogue. In theory, sustainable development would suit this well, as there are many influencing factors and no clearly defined "correct answers", which provides great capacity for debates involving differing opinions. This means that deliberative discussions could be a way to ensure that the important democracy aspect is included in ESD. Still, an important key to a successful deliberative discussion lies in the subject matter of the discussion[4]. In this sense, ESD can give rise to a great variety of possible topics. Closely linked to the democracy goals of sustainable development is the

3 Englund refers to following publications:
Benhabib, Seyla (1992) *Situating the self: gender, community and postmodernism in contemporary ethics* (Cambridge, Polity Press).
Gutmann, Amy & Thompson, Dennis. F. (1996) *Democracy and disagreement: why moral conflict cannot be avoided in politics, and what should be done about it* (Cambridge, MA, Belknap Press).
Habermas, Jürgen (1987) *The theory of communicative action. Vol 2. Lifeworld and system.* (Cambridge, Polity Press). Habermas, Jürgen (1996) *Between facts and norms. Contributions to a discourse theory of law and democracy*, (Cambridge, MA, The MIT Press).
Hoel, Torlaug Løkensgard (2001) *Skriva och samtala: Lärande genom responsgrupper* [*Writing and conversing: learning through response groups*] (Lund, Studentlitteratur).
Nussbaum, Martha Craven (1997) *Cultivating humanity: a classical defense of reform in liberal education* (Cambridge, MA, Harvard University Press).

4 The importance of content and subject matter in ESD is also discussed by Sund (this anthology).

goal to create an open discussion forum. For this to provide effective ESD, Jensen (2003) as well as Sandell, Öhman and Östman (2005) mean that active participation is a requirement. The use of participatory learning, as opposed to traditional lecture-based learning, is by these authors believed to promote engagement and enhance students' understanding of problems relevant to sustainable development, for example, environmental problems. Through having to participate actively in problem solving, students can develop essential skills in how to obtain accurate information and how to handle and discuss information in a critical way; this is vital knowledge for an active citizen.

In theory, it is easy to incorporate deliberative discussion as a tool within a participatory learning "package", as deliberative discussion certainly requires active participation. Englund (2006) points out that teachers may well be required to step back and take a much less active role if deliberative discussions are to be effective. If teachers take a less active, "hands-off" approach, this should encourage more students to participate actively in the discussions. As Englund also points out, within deliberative discussion an environment should be created that enables participants to question traditional, authoritative values. Participants in a deliberative discussion should feel that they are willing and able to put forward points of view that deviate from the "traditional". This may more easily be achieved if the teacher withdraws to the sidelines and allows the students to be more "in control". This is surely a situation to strive for in participatory learning.

This argumentation suggests that engaging students in deliberative discussions about complex questions while upholding the values of democracy (such as respecting others opinions, freedom of speech, etc) could be a suitable way to deliver ESD. In order to evaluate this assumption, an empirical study was carried out.

The study

The aim of this study is to evaluate a teaching sequence inspired by deliberative democracy, focusing on its ability to enable ESD in a democratic teaching context with the active participation of all students involved. The evaluation of this task focuses on three main aspects:

a) Sustainable development learning (individual learning outcome in terms of SD-knowledge).

b) Deliberative democracy (ability to create/stimulate deliberative discussions).

c) Participatory learning (ability to promote interest and willingness to participate)

It is hoped that the knowledge gained through this study will be helpful in identifying strategies for a form of ESD in which *all* students actively participate and in which democratic skills are developed simultaneously.

"The mission" – a discussion task sequence for students

In order to carry out this study, a task sequence that encourages active participatory learning and discussion of sustainable development topics had to be found. It was decided early on that it would be best to use an established task rather than attempting to develop one especially for this study, as to do so would be a major undertaking in itself. For this purpose, *the mission*, a task often used in EE, was chosen in accordance with the description in Brunner[5] (1996, pp 11–28). The motivations for this choice are many, but its universality and reported efficacy in stimulating active dialogue are central. Universality here means that the subject matter is general enough to have a wide appeal rather than being limited to a specific interest group. In this way, the task can be used with different classes with different interests, and should not need adapting for use with a specific group. Another reason for this choice is the task's flexibility with respect to timing. No specific length of time is required for this case, which means that it may be adapted to suit the reigning circumstances.

Overview of "the mission"

The mission involves giving students the following task: to equip a huge spaceship with everything required for its 100 passengers to successfully complete a 6000-year journey. The students are not required to design the spaceship's exterior or propulsion system, as these factors (for example, the ship ran on solar power) are taken as given. The students are then instructed to develop a solution that takes into account the following key issues: what they will take with them and how they will ensure the long-term functionality (6000 years) of the various items.

In Brunner's (1996) description, this task encourages discussions about the foundations of ecology and society, the meaning of life, as well as how to design long-term sustainable systems. Such discussions comply well with sustainable development ideals, thus providing further motivation for the use of *the mission* in the current study. The potential for *the mission* to encourage participatory learning is clear. Its openness for varied interpretation along with its general-interest theme and lack of definitive "correct" or "incorrect" answers certainly encourage, almost require, students to play an active role in their learning.

5 This case, *the mission*, is not originally constructed by Brunner, but he has developed and described it further in his book (1996).

Study group

All students at the upper-secondary level in Sweden are required to study the core subject of *Nature and Environment A*[6] [Naturkunskap A]. As this course is studied by all students and its curriculum provides clear goals regarding sustainable development, it provided a suitable forum for the current study. To enable a more in-depth study of the effects on individual students, only one class was chosen from amongst those reading Nature and Environment A at the focus school.

The focus school is an upper secondary school in Sweden. Its catchment area includes three small industrial towns and their surrounding rural areas. The focus group at this school is a class of 20 second-year students (of which 13 were present at the first session and therefore included in the study) enrolled on the Business and Administration Programme [*Handels- och administrationsprogrammet*]. One of the aims of the current study was to provide a task that could arouse the interest of *all* students, not just those who are already greatly interested in the subject matter. Therefore, the Business and Administration class was chosen because it was decided that it would be better to study a class from a programme other than the Science Programme, as it could be assumed that students within the Science Programme might very well be more intrinsically interested in the subject matter to begin with than the business students.

The students worked individually first, after which they formed four groups (one group of four students and three groups of three students). Post-task interviews were conducted with four students. The rationale behind this was to choose the interview subjects in order to provide as wide a spread as possible from within the class in terms of the way they initially thought about *the mission*. However, since we decided that participation in the post-task interviews should be voluntary, some of the chosen students were unwilling to be interviewed. Therefore, although as much variance as possible between students was taken in terms of interview subjects, the "choosing from first thoughts"- aspect had to be reduced, and instead greater focus was placed on studying the students' responses in general. The four interview subjects were one 18-year-old boy, "Andreas" and three girls: "Britta" 18, "Camilla" 17 and "Denise" 20. All names have been changed to maintain confidentiality.

In order to limit the quantity of data to be analysed, it was decided that once the interview subjects were determined, these would then be the focus for the whole study. Along with the interviews themselves, the only data included in the results is the four students' *first thoughts* texts and the pre-presentation notes of the groups that contained one or more of these students.

6 This is a 45h compulsory subject for all students at upper secondary school. The course focuses mainly on environmental issues, but also touches upon ecology and the use of energy and natural resources.

Research methods

In order to fulfil the research aims of the current study in terms of evaluating aspects concerning sustainability knowledge, participation and deliberation, *the mission* task was adjusted accordingly. Three weekly one-and-a-half hour teaching periods were used for the teaching method itself during the current study. The first period included an initial session of 10–15 minutes in which the students, having received the task and its written instructions, were instructed to think of solutions individually (*first thoughts*), without consulting the other students. The students were then instructed to write down these first thoughts and hand them in to the researcher.

The next stage involved working in groups of three or four students to discuss and "solve" the problem *the mission*. The students formed their own groups. They were then given the remainder of the first teaching period and half of the second (approximately two hours in total) to think about, discuss and prepare an oral presentation of their group's solution. Following Englund's suggestions regarding deliberative discussion, the researcher and the teacher took a "hands-off" approach at this point and intentionally maintained a low profile.

Towards the end of the second teaching period, each group presented their solution to the class. Each presentation was followed by a brief question-and-answer period. The session ended with a teacher-led class discussion about *the mission* and the various solutions. The pre-presentation notes of each group were handed in to the researcher at the end of session two for inclusion in the analyses.

The whole-class group presentations made it possible to create conditions that encourage deliberative democracy. Before each group could present their solution to the problem, they first had to reach an agreement about the solution within the group. Ideally, this would involve deliberative democratic discussion within the group, in which the pros and cons of various ideas would be discussed until all members of the group agreed upon and accepted a particular solution.

The four interviews were carried out during the third teaching period. This delay prior to the follow-up interviews was deliberate. It was thought that having time to reflect would help the participants provide a more objective opinion of the experience as a whole, rather than focusing on the outcome of the group discussions.

The third teaching period started with a 15-minute lesson on sustainable development that included a brief summary of the history behind it and a clear definition of the term. This was followed by a brief class discussion about the connection between the actual task and sustainable development. The short lesson on sustainable development prior to the post-task interviews was included for two reasons: to help the students make the connection between the task and sustainable development, particularly in terms of what they could learn from the case study, and to enable more thorough questioning of the interview subjects

regarding sustainable development. During the remainder of this period, the rest of the class continued working with their teacher on other tasks while the researcher interviewed the four student volunteers. All the interviews were carried out in Swedish. The taped conversations were later accurately transcribed. The transcriptions were then translated to English and analysed. A qualitative semi-structured interview approach (Banister et al., 1994; Bryman, 2004) was chosen as the main research tool for its ability to enable in-depth scrutiny of responses at the individual level.

Interview design

The interviews had certain goals in terms of the information to be gleaned from the respondents. These goals overlap to a certain degree, but can be grouped into the three general areas of interest: sustainable development learning aspects, deliberative democracy aspects and participatory learning aspects. From these three areas a set of questions was formulated to provide a foundation for the interviews and to ensure that everything would be taken up during each interview. Some examples of the questions included in the interviews are presented below.

Sustainable development learning aspects – Did you at any point become aware of the main goal of the task? Did the task affect your way of looking at the world? Has it increased your awareness of the interconnectedness and complexity of the world? Did the task increase your awareness of the need for sustainability? Did your knowledge about sustainable development evolve during this task?

Deliberative democracy aspects – What did you think of the method as a whole? Did you have the chance to voice your opinions? Did everyone get the chance to voice their opinions? Did the conversation/discussion flow? How were differences of opinion treated within the group? Was respect shown for other opinions/ways of looking at the world? Was the group able to reach a solution together despite any eventual differences? Were you pleased with the group's solution? Do you feel that the way the group worked together was democratic?

Participatory learning aspects – Did you feel that the method enabled you and all members in your group to learn about sustainable development in an active way? What was the group's participation like? Were all group members active? Did the subject matter promote interest and willingness to participate and learn? If you were not satisfied with the method, how would you prefer to work with learning for sustainable development?

Methods of analysis

The results mainly focus on the post-task interviews, as these provide the deepest insight into the students' ways of thinking about the chosen task. However, it is also of interest to examine their *first thoughts* texts and the *group pre-presentation notes*, as these may show the thought-development process in a way that is difficult to capture through interviews alone. Of interest here is to assess how well the task was able to meet sustainable development learning goals. The students' *first thoughts* (written down at the beginning of the first teaching period) were therefore categorised according to whether they contained ideas about four different aspects of sustainable development (ecological, social, cultural and economic). This was intended to give an indication of the ability of the task to encourage thoughts about these different aspects of relevance to sustainable development and to assess its suitability for the multi disciplinary approach required in ESD. The same type of categorisation was carried out for the pre-presentation notes in order to examine how the students' initial ideas and thoughts may have developed throughout the course of the assignment.

The interview analyses began with dividing the respondents' answers into the three previously described areas of interest: sustainable development learning, deliberative democracy, and participatory learning. Patterns in the students' answers were highlighted in order to form a picture of the focus students' various views on the task itself and sustainable development as a whole. These answers were analysed in order to gain insight into how well the task worked in terms of meeting sustainable development, deliberative democracy and participatory learning goals.

Results

Students' "first thoughts"

The inclusion of the *first thoughts* stage provided an opportunity for the students to think and write on their own at the outset of the task. This stage is not a part of the original process presented in Brunner (1996). It was mainly included as a means to follow the development of the students' thoughts throughout the process. However, it has also been shown to have other major benefits of relevance to the overall success of the task. Its importance became clear during the post-task interviews. Of their own accord, the respondents talked about the *first thoughts* stage in a positive light; they were not directly asked about this stage.

Being "forced" to take time in the beginning to formulate their own thoughts on the subject appeared to improve the quality of the group work. It appeared to stimulate active participation, possibly because having invested time and effort in coming up with ideas, each individual may be more likely to want to put his

or her opinion forward in the group and to argue for them. Without this personal investment at the *first thoughts* stage, it is possible that some participants would have been much less active and content to just sit back and let others do the thinking. The success of both participatory learning and deliberative discussion lies in high levels of activity from all parties involved; if a fruitful discussion is to occur, deliberative discussion requires the presentation of different opinions. It is therefore recommended that *first thoughts* should be an important introductory stage when using similar teaching methods for ESD.

Categorisation of the four students' *first thoughts* yielded the following results:

Ecological. In their texts, all four students expressed thoughts related to ecology. To various degrees, they all took up the need to grow plants for food and to keep animals for food.

Social. All four students expressed thoughts related to social aspects. These were mainly related to housing, but Britta placed greatest emphasis on social aspects in her text. Employment opportunities and access to schools are important to her. She also believes that everyone should have the same rights and responsibilities. Andreas offered a specific suggestion for population control: when a boy is born, the oldest man should be killed, and vice versa.

Cultural. This aspect was less clear in the four students' texts. One could argue that Denise provided some rudimentary thoughts within this category, mentioning the need for gyms, discos and TVs.

Economic. None of the students explicitly referred to anything that can be specifically categorised as economic. However, Britta's view that everyone should have working opportunities can be viewed as having certain economic aspects. The often-mentioned agricultural production could also be interpreted in economic terms.

Other comments. Some of the students' ideas can be placed into two of the above categories. For example, Britta's idea about having equal numbers of men and women from different countries can be seen from both a social and a cultural point of view.

Pre-presentation group notes

There is a clear development in the students' thinking when we compare their *first thoughts* with the pre-presentation group notes. The group work gave the students the opportunity to discuss their ideas and therefore build upon their existing ones. Other group members clearly provided input, but the original *first thoughts* ideas were still present in the pre-presentation notes. The difference was that the ideas appeared to have been thought through more carefully, and included more details about how the ideas might work in reality.

In general, there is variation between the three groups included in the study, but all groups had built upon their *first thoughts*, expanding their ideas and adding more detail.

Ecological. Compared to the first thoughts, all groups had provided more details about what foodstuffs should be grown and which animals should be kept. Additionally, all three groups had highlighted the need for a water treatment works. Denise's group mentions "oxygen/rainforest" and "earth toilet", which is evidence of further ecological thinking. Britta and Camilla's group states, "We have compost and a recycling centre. Our idea is that everything cycles around". Andreas's group also mentions such issues in list form: "compost, worms, soil".

Social. Britta and Camilla's group starts with "Our basic idea is to build up a community on the spaceship. Everyone has the same rights and duties. Everyone has the same value, and there are no ideals." This is the group that places the greatest focus on social issues, going on to describe a system of "occupations" instead of "work", which will still be sufficient to meet all the needs of the system. They also mention government and democracy within their plans.

Andreas's group continues with the radical idea of population control already described in *first thoughts*; they also mention different occupations and locations such as prison cells, schools, libraries and factories, which could be categorised as social factors. Denise's group also describes the different occupations that are required: "People with different jobs (doctor, farmer, veterinarian, seamstress, craftsman, blacksmith, librarian, inventor)".

Family planning is mentioned by all groups to varying degrees. For example, Andreas's group mentions "condoms", and Denise's group takes up the idea of "frozen sperm for humans and animals". However, Britta and Camilla's group goes into more depth, writing, "Children are carefully planned and can be produced in test tubes or through sex. There are abortion pills and all different types of contraceptives".

Cultural. Britta and Camilla's group included a church in their plans. Denise's group takes up music and discotheques, and both Denise's group and Andreas's group mention the need for a library, Denise's group even suggests bringing a printer so that people can write books.

Britta and Camilla's group wishes for an environment "as on Earth, with summer (flowers, grass, trees) and winter (snow)". From the notes it is not clear if this is for purely ecological reasons, but it is likely that cultural benefits related to the seasons weigh in here as well.

Economic. As with first thoughts, there was no direct reference to economics in the pre-presentation notes. However, all groups mention the need for people to

work with different jobs for life on the spaceship to function properly, which shows some connection to the economic sphere. For example, Britta and Camilla's group states that they "have different industries where everything needed is manufactured. Everything from beds to food". It is not clear from this, however, whether they have thought of the economic implications of this statement.

Other comments. It is worth highlighting the following general comment written by Britta and Camilla's group: "Everything works as on Earth". The equipment lists written by both Andreas's group and Denise's group can also be noted. These lists include diverse equipment that the group considers useful, including beds, washing machines, recipes, paper and pens, cameras, bicycles, tractors and washing powder.

There are certainly differences between groups (evident in the pre-presentation group notes) and individuals (evident in the *first thoughts*) in terms of focus areas. Both Andreas's group and Denise's group provided solutions that were less well developed than those of Britta and Camilla's group. However, Britta and Camilla's group focused much more on the social aspects and less on the ecological, whereas an ecological focus was more apparent in Andreas's group. To enable the multi-disciplinary nature of sustainable development to emerge fully, it could be preferable to create groups containing individuals who focus on each of these diverse aspects. This is, however, impossible to do before the particular interests of each student are known. One possible way to improve the chances for multi-disciplinary aspects to emerge during *the mission* task is for the teacher to begin with *first thoughts* stage, and then continue the exercise as a group activity.

Post-task interviews

Here follows a summary of the most important results of the interview analyses. Transcriptions of the research interviewers' words are shown in italics.

Sustainable development learning aspects. In terms of learning about sustainable development, the following was gleaned from the interviews. None of the respondents felt that they had gained more specific knowledge while working with the mission. However, the task had certainly increased their awareness of and insight into the inherent complexity and interconnectedness of the issue. Nevertheless, development in their awareness was noticed over the three-week study period.

After the short lesson in session three, which included definition of the term *sustainable development* and which took place directly before the interviews, all students stated that they clearly saw the connection between the subject matter they had been working on and sustainable development. All students except Andreas said that they had heard of the term "sustainable development" before. Those who had heard of it before (with the exception of Britta) had not really understood its meaning; they had just heard it mentioned in the mass media.

However, now they more clearly understood what it involves. They also stated that they now realise that they had been working with sustainable development throughout, without knowing that there was a specific term for it.

Through carrying out *the mission* with a large number of groups, Brunner (1996) observed that students' thoughts tend to go through different stages. He stresses that this is by no means the case for all students, but is still sufficient to see a pattern. Brunner notes the following stages:

> **Stage 1** Thinking fast and short-sightedly.
>
> **Stage 2** Afterthought – being overwhelmed by how much is involved.
>
> **Stage 3** Building up from the ground level – for example awareness of the need for bringing hens instead of TV-games.

The results of the current study could certainly be interpreted in terms of these thinking patterns. For example, consider this excerpt from the interview with Camilla:

> *Does it feel that now, after we've been talking about sustainable development and stuff, that the people in your group or that you yourself had already thought that it must be sustainable in the long run, when working with it last week and the week before last?*
> Camilla: Yeah, we thought of it then [...] Or in the beginning it was more like, 'We must have TVs, We must have computers and stuff like that. But then we realised that we'd have to grow stuff , so we'd need to get hold of soil. And then when we buried the dead we'd get soil and could use it for this kind of stuff.

It could be said that the idea of sustainability was developed during the task, becoming clearer in the students' minds as time goes by.

Brunner states that working with this specific case often leads to "a-ha moments" for students when they realise that the giant spaceship they are equipping is like a miniature world that can be compared to Earth. In the present study, there was some variation in terms of when the students saw this connection. Andreas did not make the connection until the group presentations, whereas Britta claimed to have seen the connection nearly straight away. This variation may be explained by the students' varying levels of pre-existing knowledge.

When asked whether *the mission* had influenced their ways of viewing the Earth and humans' effect on it, none of the students said that the task had had any major effect. When asked whether the task had increased their understanding of how interconnected everything is, their answers were more positive; yet even here the effect was not considered great. It was also clear that at least Britta was aware of the main goals of the task (ESD).

In their evaluation of the usability of the task within ESD, all students stated that it was a good way of working with sustainable development in the current course. There were also some suggestions that it was better than the alternatives, such as working from textbooks.

Deliberative democracy aspects. One question asked in the interviews was whether all group members got the chance to voice their opinions during group work. All four students responded that they thought all group members were given – and took – opportunities to voice their opinions. The benefits of working in groups and discussing ideas together were clearly appreciated by the students. This can be illustrated by Andreas's answer:

> *Did you think that it was good to work in a group with this?*
> Andreas: Yeah, otherwise it probably wouldn't have worked. If you'd just done it on your own, you'd get, like, stuck. [...] With some things everyone offered ideas about what would work in the long run.

When asked about the flow of discussion in their groups, all the interviewees said that the conversations flowed well during the task. In other words, it was not a problem to keep the discussions going within the groups. All the interviewees also claimed that respect was shown for differing opinions within the group. This is illustrated by the following clip from Camilla's interview:

> *Maybe it was the case that, due to the fact that you are different people, that you had different ideas sometimes. Did you have respect for people's different ways of looking at things within the group?*
> Camilla: Yeah, yeah. We all had slightly different ideas and we would, like, listen to each other.
> *Mm.*
> Camilla: But there was no one who suggested any bad ideas really, I wouldn't say that.

One aspect to note is that there was very little difference in opinions within the groups. With no obvious differences of opinion to create potential conflict, the conflict-resolving elements of the deliberative discussion model could not be properly assessed here. It can therefore be said that this aspect of deliberative discussions was not really "put on trial" as such during the current study. A possible reason for the lack of conflicting views in the current study is the students' relatively low level of experience and knowledge. It is much easier to argue a point of view if it is rooted in experience, skills, or knowledge. Naturally, upper secondary school students are not as experienced, skilled or knowledgeable as adults.

Despite the relatively low level of conflict, some of the students' comments

are worth noting because they suggest that different types of group, e.g., groups of strangers or adversaries, or groups with radically different opinions, could affect the nature and outcome of the discussions. In Britta's words:

> If there was anyone who thought something a bit different, if someone had a bit of a crazy idea, then we'd all have a bit of a laugh. But I think that's because we all had pretty much the same way of looking at it, the same opinions. It's like we wanted it to be a democracy, everyone showing solidarity, everyone having equal rights in the society [...] I know that if it had been a different group, it could have been the opposite, with everyone doing their own thing. Such things can vary.

Participatory learning aspects. All four students thought that the task allowed them to work with sustainable development in an interesting and active way, and that all members of their groups had participated actively. Additionally, all four students thought that the mission was interesting and fun.

As previously mentioned with respect to deliberative discussion goals, successful group work is also relevant to foster the participatory learning involved in this method. Even here it is possible to refer to Andreas's earlier comment regarding group work. Britta also raised some relevant points about having active group participation:

> *Did you think it was good to work in a group with this?*
> Britta: Yeah, I think so. It meant that we could discuss ideas with each other. When we wrote stuff on our own we got some ideas, but when we could talk it was much easier. One person says one thing and maybe someone else then comes up with the next.

The students were also asked whether they found *the mission* task to be a stimulating way of working. All of the students agreed that it was.

When asked for ideas for other potential ways of working with sustainable development, Andreas and Camilla suggested traditional methods (for example, textbooks and lectures). However, they also felt that *the mission* was preferable to such teaching methods. Denise also made comments about *the mission*, saying that it was good because it asks learners to think of "everything they need", which helps hold their interest and encourages active participation.

Conclusions

The limitations of the current study make it difficult to draw firm conclusions. However, the results suggest that *the mission* task can provide a stimulating starting point for learning about sustainable development. In the form that was tested here, the task was not able to deliver on all aspects relevant to sustainable

development, mainly due to the limited time allowed for the students to complete the task. Despite this, it was certainly shown to aid the students' understanding of what sustainable development is about, providing "a-ha moments" and thus increasing their awareness of the relevant issues. This can in itself be viewed as beneficial, given that sustainable development is often seen as abstract and difficult to understand.

All of the groups in the current study showed a high level of intra-group cooperation, with all interviewees stating that the group members were in agreement and were pleased with their solution prior to presenting it to the class. Still, the lack of differing opinions may be questioned. One of the fundamental requirements for deliberative democracy is that all participants' voices be heard and that all are treated with respect. However, it is possible that participants who held diverging opinions neglected to express them because of factors related to group dynamics. This potential problem must be addressed in future studies. Based on our experience with this study, we suggest that group discussions might gain in deliberative quality if the students are informed about the meaning and significance of deliberative communication, as characterised by Englund (2006, cited above).

Deliberative discussion and participatory learning do appear to lend themselves well to ESD. In the current study, the task appeared to enhance participatory learning, as indicated by the participating students' high level of interest and activity throughout the various stages of the task. The results point to deliberative discussion being a promising way to achieve success in ESD. Yet even though there were active discussions within the study groups, it is likely that the potential of the deliberative discussion model was not fully explored here. In order to achieve this, we believe that instruction concerning the specifics of deliberative discussions would be useful. Additionally, with more time to research their ideas, even upper secondary school students can have effective deliberative discussions, which can enable them both to learn about sustainable development in an active way and to practice skills that are essential for democratic participation.

When assessing the universality of this particular task, *the mission*, it is also difficult to draw firm conclusions here due to the small scale of the current study. However, as documented in the post-task interviews, the students responded to *the mission* with great enthusiasm. All students stated that it was interesting and fun. In the focus school, one of the goals driving the current study was to ensure the active involvement of *all* students in discussions about sustainable development. It would certainly appear that working with *the mission* may be a way of achieving this goal, although other topics could most certainly be suitable for similar tasks. Ideally, the topics should take up complex and controversial current issues that involve aspects of ecology, science and social studies.

The knowledge-based motivations (the "why's") of the learners' choices are important, but the learners in the current study rarely included these in their presentations. With greater pre-existing background knowledge, the students'

ability to motivate their choices and develop their ideas is likely to improve. The students' positive response to *the mission* suggests that this type of task can serve as a vital starting point for further learning.

The current study indicates that there is much potential for further studies in this area. These include investigating the effect of group size and construction, which are factors that the current study indicated to have potentially significant effects. Testing the task in different class subjects and with students of different ages would also provide interesting information, as would increasing the time available for task completion to evaluate the effects of various timings on the outcomes of the task.

Overall, we believe that the current study highlights the vast potential that ESD provides to schools in terms of tackling several goals at once. It has potential for subject integration, given that scientific, social, economic and cultural issues are all relevant and interacting. Additionally, ESD can provide students with skills and knowledge that they need for an active life in the democratic society of the future. Furthermore, in terms of a pluralistic tradition (see Öhman's contribution in this anthology), adopting a participatory, deliberative approach in ESD could bring about a situation in which the democratic process is embodied in education itself.

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An approach full of nuances – On student teachers' understanding of and teaching for sustainable development

Gunnar Jonsson

Introduction

Mankind is facing complex problems embracing factors from different areas of knowledge where, among other, social, economic and environmental aspects are mutually intertwined. Understanding their interplay is crucial for thorough comprehension of sustainable development.

Teaching and learning play a key role in societies striving for sustainable development. The statement "all teaching is teaching about something" is somewhat trivial, but since research shows that teachers find it difficult to know what their teaching should be about (see for example Axelsson, 2004 or Hansson, 2004), this statement is of great relevance. In the documents stipulating the assignment of Swedish schools, it says the teaching should result in the students developing an ability to act and solve problems as well as to assess different arguments and participate in democratic debate (Baltic 21 E, SOU 2004:104). A striving for subject integration, holism and development of complex outlooks permeates the documents. Also by researchers in the field of environmental education it is claimed that holistic views and pluralistic perspective should be a significant feature of education for sustainable development (see Stables & Scott, 2002; Öhman, 2006a, b).

Teachers are one of the most important resources of schools. Even though there are many opportunities for learning in schools where teachers have a marginalised role, for example learning through computer programmes or the Internet, teachers may still be considered to have great and decisive influence on

students' chances to learn. This is pointed out by Hattie (1992), who, in a survey of 134 metastudies, representing a total of 7,827 research studies, discusses the greatest influences on students' learning in schools. Hattie concludes that the most important factors are those that the teachers can control. Teachers' instructional methods and their ability to give relevant feedback to the students had a considerably greater impact on the students' learning than other factors, such as curriculum texts or the students' home conditions (see also Marton & Morris, 2002).

An important part of teachers' competence is knowing what the learning should be about, while also possessing knowledge of how this can be presented and made available to the students. That is what Schulman (1986) calls Pedagogical Content Knowledge.

Schoolteachers who aim to educate democratic citizens with "holistic views," "complex thinking" and "pluralistic attitudes" must themselves possess these abilities. The opposite situation might be likened to a driving instructor who cannot drive a car or a mathematics teacher who cannot count. For teacher education, where the responsibility is to educate teachers in such a way that they will be able to offer their students a complex understanding of sustainable development, it is of great interest to know what this form of understanding may consist of.

Aim and structure of this chapter

This chapter will describe a study (Jonsson, 2007) that hints at what successful teaching for sustainable development might look like. The study focused on complex understanding of sustainable development: what it is, how it can be understood by student teachers, and what affects the complexity that is discernible among students taught by student teachers. Three contingent sub-studies – a survey study, an interview study and a video documentation study – explored the ways in which student teachers' understanding was expressed.

This chapter will mainly focus on the interview study and the video documentation study, but since the three sub-studies build on each other, the first one, the survey study, will also be described. Finally, implications of the results will be discussed and concluding remarks be made.

The survey study

The survey study explored the manifest content that 194 student teachers associated with sustainable development. The students were given the task of answering the question: What is to be sustained? Dobson previously used this question (1996, 1998) for the purpose of typologising different views of the concept of

sustainable development. A quantitative content analysis resulted in eight different thematic areas covering the student teachers' associations. These areas were *nature, natural resources, environmental problems, society, future generations, actions, ethics* and *economy*. Interestingly, 62 percent of the student teachers listed two or more descriptive areas in their answers, that is, they said that sustainable development is about more than just one of the above-mentioned descriptive areas.

On the basis of the survey study it was possible to describe a varying degree of complexity in the student teachers' reflections on sustainable development with respect to how many and which descriptive areas were represented. However, the results did not indicate how the student teachers understood sustainable development at a deeper level.

The interview study

In the second sub-study, the interview study, the analysis of the student teachers' understanding was deepened. The method this time was to ask the question: What qualitatively different attitudes to sustainable development may be found among student teachers? Since different attitudes were in focus, it was important that the student teachers to be interviewed could be assumed to have different attitudes. For this reason, a selection procedure in accordance with the principle of maximum variation was used. Eight students were selected.

The interviews that were conducted may be characterised as semi-structured research interviews (Kvale, 2004). The main theme of the conversation was sustainable development. A phenomenographic analysis method was used to describe differences in the student teachers' attitudes to sustainable development. The phenomenographic perspective usually focuses on how different conceptions of specific phenomena or aspects of the world differ qualitatively (Marton & Booth, 1997; Marton & Pong, 2005). In this case, the object of research was attitudes instead of conceptions. The concept of attitude is wider than that of conception and also consists of norms and intentions (Lindberg-Sand, 1996). As soon as a human being becomes conscious of a phenomenon's existence, s/he will assume an attitude to it. An attitude may therefore be seen as something preceding a conception.

In phenomenographic studies it is common to elucidate the research object by describing parts or aspects of it. One way of experiencing a phenomenon is hence defined by which aspects of a phenomenon and which discerned relations among them are simultaneously present in the consciousness (Marton & Booth, 1997). The phenomena that we perceive, or as in this case, assume an attitude to, are understood to be abstractions of imaginary phenomena and are thus human constructs reflecting our way of delimiting and systematising the reality we perceive.

Qualitatively different attitudes to sustainable development

The analysis of the interview answers led to the conclusion that there were two qualitatively different attitudes to sustainable development among the eight student teachers: A, *an action-oriented normative attitude* and B, *a content-oriented normative attitude*.

A: Action-oriented normative attitude

In this attitude, measures are focused on that can either be taken or avoided in order for us to create a better world to live in.

The meaning of this is that sustainable development is about doing the right things. The most important thing is what can and should be done. Why the actions are motivated is of subordinate importance. Sustainable development is in other words "doing the right things". The actions described may be concrete or abstract. The concrete ones are practical down-to-earth actions such as composting, recycling, self-sufficiency, cultivation, etc. The abstract actions are imperatives such as developing new knowledge, technology or things. What is characteristic of this attitude is that it expresses the meaning that something should or must be done, as shown in the following statement: "To me sustainable development is for example composting household waste". Sometimes the statements appeared insubstantial, since the intention, meaning or purpose of the actions was not mentioned. When this attitude was expressed, aesthetic and moral values were markedly often used, for example, "It is important to compost in order to get good topsoil." Or the moral reflection on the duty to take responsibility, "And I think that you must take responsibility for your old mobile phone that they have manufactured, I don't know how environmentally friendly they are or…everything becomes waste, sort of."

B: Content-oriented normative attitude

In this attitude the primary focus is on content aspects of sustainable development. Natural resources in particular are of central importance and are often the object that the statements relate to. The societal aspect and environmental problems are also given a large scope. Preserved welfare is emphasised, that is, that we will be looked after and that society will be able to function well in the future.

A central point of departure is that sustainable development has to do with our having access to resources in the future. Resources are dealt with from two perspectives. The focus is sometimes on issues of resource distribution, for example: "We live in terrible affluence while large parts of the earth's population do not even have access to pure water". Sometimes the nature-given processes that generate natural resources are instead focused on: "But in the end we are the

ones who will be hit; if we kill everything living except ourselves, then there will be nothing for us to share". Sometimes a student teacher assumes an attitude to both these foci at the same time, as in the following statement: "It is this very interplay that I have always thought a lot about; I think it's important that we find a way of living…all people on earth, which benefits both ourselves and nature". Irrespective of which focus is activated, a norm for what is right or wrong, true or false, fair or unfair, etc. is often expressed.

The study showed that there were students who frequently stated only one of the above foci, speaking for example exclusively about distribution issues or only about the importance of preserving functioning eco-systems. There was also one student who consistently included both these foci in his argumentation.

The video documentation study

In the third sub-study, the video documentation study, five student teachers were given the task of teaching a complex issue relevant to sustainable development, namely the world's water supply. The teaching had to include at least three teaching periods. The video documentation study's aim was to describe, in more depth, the student teachers' complex understanding, how it manifested itself in a teaching situation, and what affected the complexity that was possible for the students to discern.

To obtain an empirical basis for making such a description, the student teachers taking part in the study should themselves be able to express such an understanding. Conversely, it is highly unlikely that information will be gained by studying people lacking this understanding since they will probably not be clear about their teaching aims and objectives. A strategic selection of students was therefore made. A selection questionnaire asking for their reflections on the world's water supply problems was constructed. The selection group consisted of 120 students. Five of these came to be informants for the video documentation study. Those five had in common that when they were reflecting on the world's fresh water supply, they all did it from several different perspectives. In accordance with the result from the interview study, they could express that the water problem was both a distribution issue and a question of water access depending on the water cycle.

Data was collected in different ways: video recordings, sound recordings, observations, stimulated recall conversations[1] and short interviews with students provided complementary information. Each student teacher's teaching was visi-

1 Stimulated recall is a method where with the aid of audiotaped or video-recorded material the researcher documents an interviewee's activities. Shortly afterwards the interviewee can listen to the tape or watch the film and in this way "relive" herself/himself in her/his activities. The intention is that the person will be reminded of and helped to comment on her/his thinking and acting during the earlier episode (Alexandersson, 1994; Haglund, 2003). In this case it is the interviewee who speaks while watching a video film of his recently performed teaching. The method may also understood as a way of combining an interview with observations.

ted on three occasions. The student teachers conducted their teaching in groups of students with varying ages, from the second grade in the compulsory school system to the second grade of upper secondary school.

The analysis began by observing and describing each student teacher's teaching for the purpose of accounting for the complexity of the learning object that had been staged in the classroom (that is, the content that was possible for the students to discern). The next step was to search for possible explanations as to why this particular learning object had found an expression. Intentional analysis was used in this phase.

Unlike phenomenography, the intentional perspective makes it possible to study and explain understanding and creation of meaning at the individual level. In the intentional perspective, the research interest is primarily meaning-making processes, that is, how people contextualise and give meaning to different aspects of the world in their actions (Lundholm, 2003, 2004; Halldén, Haglund & Strömdahl, 2007). For the learners, the context becomes their own personal meaning frame within which they interpret knowledge content and the tasks they are given.

The intentional analysis model makes it possible for the researcher to interpret actions as parts or expressions of intentions included in larger projects. Actions do not necessarily have to be physical but may also be communicative acts such as speech acts, see Austin (1962) or Searle (1969). In the analysis, the students' actions and speech acts in both their teaching and stimulated recall and interview conversations could thereby be interpreted as intentions included in larger projects. This made it possible to view their understanding expressed in the learning object in the light of the contextualisations made by the individual student.

The results show that the student teachers who participated in this study communicated different learning objects in their teaching. On the basis of the ways in which they are structured, the learning objects staged in the classrooms can be divided into two separate categories: linearly constructed learning objects and integrated learning objects (see Figure 1, below).

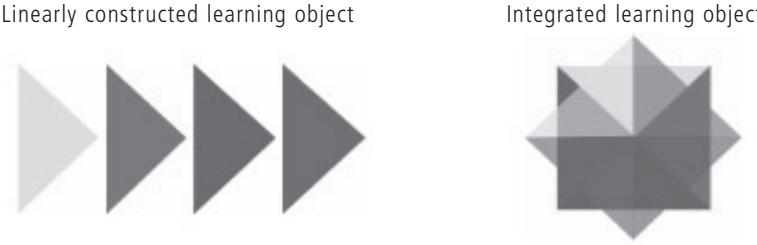

Figure 1. The four left triangles symbolise that the linearly constructed learning object may be understood as different parts following one another. The prism representing the integrated learning object symbolises that the connections of different parts of the learning object are important and give a nuanced content to the whole that appears.

Linearly constructed learning objects

Four of the five student teachers staged a linearly constructed learning object in their teaching. The emphasis was on offering the students an understanding of parts of the water supply issue which they thought was relevant for understanding the water supply problems. In the learning object that they communicated the water cycle was superordinate to other parts. There was a linear connection, like a "red thread", in the order in which the parts were treated and related to one another. Although there was some variation, it was possible to generalise the design of their teaching. The initiation into the problems was the water cycle. After creating an understanding of the water cycle, the teaching went on to focus on global differences in water accessibility. A third step focused on the consequences of unevenly distributed water resources, for example, people's possibilities of food production or hygiene.

Integrated learning object

One of the five student teachers staged a learning object that was markedly different from those of the others. Instead of a "red thread" a complex web developed. The teaching was characterised by shifts of perspective. This shifted from providing content to and elucidating individual aspects, which may be described as an elaboration within the context (Halldén, 1999), to explaining the connections among different perspectives, which may be described as an elaboration among different contexts (ibid). There was a constant change among different explanatory models, for example, between using causal explanations and discussing moral issues. Connections that linked and kept the whole together were just as prominent as the individual parts. In this way the complexity itself was configured, and it was the very complexity of the water supply issue that the students were invited to discern.

Some factors affecting the staged learning object

There was [obviously some] discrepancy between the understanding expressed by the five student teachers in their selection procedure and the understanding that was expressed in the classrooms. How might this discrepancy be explained? This question could [at least] partly be answered by interpreting the intentions and projects that were manifested in the teaching and the interview conversations. With the aid of intentional analysis, it was possible to ascertain that the complexity of the staged learning object had been affected by:

a. How they perceived the water supply problems as a whole.
b. How they perceived the students and knowledge formation, and in particular how they looked at the relation between knowledge content and students.
c. Their project of becoming good teachers and their view of what is worth striving for in good teaching.

The water supply problems as a whole

When the student teachers accounted for the water supply problems, they all pointed out the importance of "holistic thinking" and of creating "holistic understanding." There were some indications, however, that they meant different things when talking about totalities. The four student teachers who staged a linearly constructed knowledge object expressed a segregative holistic conception. They thought that the totality could be divided into different parts, and they assumed that the totality would be understood if each individual part was explained. That is, the totality was the sum of the parts. This holistic understanding also manifested itself in the teaching they staged. They treated the learning object as different parts or segments, for example, dealing separately with the water cycle and distribution issues.

The student teacher who staged an integrated learning object saw the totality, "the water supply issue", as the real problem and pointed out that there are conflicting forces in this totality. The totality was hence not defined by the parts in themselves but by the connections between them. The main focus was then on how they affected one another, i.e., interacted with one another. In the conversations this student stated, among other things: "The issues are so interacting…". In this student's teaching, an integrative holistic view was realised as an integrated learning object.

The view of students and knowledge formation

There was a difference in the ways in which the student teachers talked about the relationship between knowledge content and students' learning. Among the student teachers who staged a linearly constructed knowledge object, there were two who expressed an intention to adapt the knowledge content so that the students would be able to understand it. There was a direction embedded in this view: *knowledge should be brought to the student*. They were clear about which pieces of knowledge the students needed to understand. This manifested itself through them often beginning their statements by talking about what the students needed to know. "I gave them information in order to build it up", or "the

water cycle is like a linchpin that they have to understand." The direction of knowledge was then from the learning object to the pupil. The two other student teachers who staged a linearly constructed knowledge object expressed the opposite direction of knowledge: *the pupil should be brought into the discourse*. Metaphorically expressed, it seemed as if they wanted to take the pupil by the hand and take her/him to the knowledge content: "it is important to make them think of the right things".

Both the intention of adapting the knowledge content and that of bringing the pupils into the discourse seem to have affected the learning object that was discernible. It is likely that these intentions sometimes helped the students to understand something in a different way than before and that learning thus took place. However, a common feature of these four is that they put a ceiling on what is possible to attain. They all talked in terms of what was possible for the pupils to understand, for example to what extent they were too young or had insufficient pre-knowledge or what in the knowledge content was too difficult.

The fifth student teacher, who staged an integrated learning object, never spoke in terms of the knowledge content being too difficult for the students. The point of departure was that the problem as such was possible to understand for anyone. In addition, the problem was so "urgent" that neither the students nor the knowledge content needed modification. Nothing other than the presented learning object itself made up the framework for what was possible to understand. The point of departure was that all pupils had the capacity to learn.

Individual projects connected to the view of the teaching profession

It was also possible to discern many different individual projects that to a varying degree may have affected the learning object that was manifested. Some of these are briefly accounted for below. One student teacher expressed the intention of developing himself in his teaching profession by learning from the responses given by the students. The questions to the students were formulated on the basis of this intention, which can hardly have influenced their knowledge formation in a negative sense. Hopefully, this intention will benefit the student teacher's future students.

In parallel with his intention of helping the students to construct knowledge, another student showed the intention that students should learn to think independently. These two projects were sometimes in conflict with each other and hampered the student teacher's ability to communicate with the students, whose opportunities to learn in these situations decreased because of the lack of communication.

One student teacher expressed especially strongly his intention of caring for

the students. He showed a genuine interest in each pupil, and what problems s/he might have and how s/he was feeling were often in focus. It is possible that this sometimes diverted the student teacher's focus from the learning object, but on the other hand it was an intention that in the long term is likely to benefit this student's students.

Another project that probably hampered the students' ability to understand the complexity of the water supply issue was the intention of being a science teacher doing what such a teacher is supposed to do. This intention, which was based on conceptions of what a good science teacher should be like, clearly limited the students' ability to view the problems in a social science perspective.

Finally, an intention that probably favoured the students' ability to discern the complexity was the intention of creating variation in the teaching. There was a conscious aim to help the students to discern different aspects and connections through describing them in different ways and from different perspectives. There was a shift between what was figure or ground and between what was variant or invariant in the knowledge object communicated in the teaching. Several student teachers had this intention to a varying degree. To all appearances, this intention made it easier for the students to discern the learning object. The very variation of different perspectives caused perspective shifts to be trained and the water supply issue to appear both more clearly and as more multifaceted.

Implications of the result from the interview study

From the interview study, it appeared that there were two different attitudes to sustainable development among the student teachers. Either [as] A: *a normative action-oriented attitude* or B: *a normative content-oriented attitude*. Before discussing these different attitudes, it is important to point out that individual student teachers may be said to have one or the other attitude to a varying degree and that these are likely [also] to shift from one situation to another. What does having these attitudes imply for a teacher and what are the implications for the students [that this teacher is going to teach]? It is a realistic assumption that this is of importance for how curricula are interpreted, which matters are given priority and how the teaching is planned and conducted.

The interviews seemed to indicate that the student teachers expressing a normative action-oriented attitude seldom focused on a specific content. They reflected to a limited extent on the underlying motives for their actions. For this reason their statements often appeared insubstantial. One might speculate about whether a lack of knowledge content leads to this attitude.

If this attitude is allowed to prevail in their future teaching activities, it is likely to have consequences for the teaching they will conduct. Their students will have an opportunity to develop an ethically "correct" environmental be-

haviour. They will learn to sort waste, compost and be creative and innovative. They will thereby learn a subjective norm, i.e., they will learn to do what social pressure prescribes. Such norms may be functional in many contexts: they make it easy for people to behave in a socially correct manner, and hopefully such behaviour is beneficial for sustainable development. Problems will arise when new demands and new action patterns emerge in a changeable world and new norms hence have to be learned. Problem solving and critical thinking generally presuppose and exist in relation to some type of knowledge content. Without specific focus on content it becomes very difficult and perhaps impossible to develop analytical abilities, which is a prerequisite for active participation in democratic processes. We can therefore assume that this attitude does not foster democratic thinking or behaviour. Democratic dimensions of different teaching traditions within environmental education, such as the normative tradition, are also discussed by Öhman in his chapter in this volume.

The student teachers who expressed a normative content-oriented attitude in the interview study reflected on content aspects of sustainable development. The genesis of resources, distribution issues and environmental problems were often in focus in the student teachers' reflections on content. It is likely that in their future teaching activities they will also (if they keep this attitude) focus on content aspects of sustainable development. One implication for their students might be that they are given an opportunity to discern the content and thereby gain an understanding of underlying connections and complexities. A prerequisite for students beginning to reflect on what is relevant knowledge is conceivably that the teacher also makes these kinds of reflections. One might speculate about whether these students will also be trained to see underlying patterns and connections. Research by Trigwell, Prosser, & Waterhouse (1999) and Prosser, Martin, Trigwell and Lueckenhausen (2005) shows clear connections between teachers' attitudes to teaching and students or students' attitudes to learning. For the teacher, this attitude will possibly require more commitment, since environmental and future problems will change character.

Implications of the results of the video documentation study

The study showed that there were connections among the student teachers' holistic understanding, their views of students and knowledge formation, and the learning object that the pupils in the classrooms were given an opportunity to discern. This is in line with both Trigwell (et al.) and Prosser's (et al.) abovementioned research and Alexandersson's (1994) research, which have shown that the teacher's way of understanding the learning object constitutes the point of departure for her/his choice of method, which in turn affects the pupil's

ability to discern and contextualise the learning object. In the study it was also apparent that the learning objects manifested in the student teachers' teaching could be described in two different ways on the basis of their structure.

A linearly constructed learning object was characterised by problems being presented in different parts. There was a linear connection, like a "red thread", in the order in which the parts were dealt with and related to one another. How does this affect the students who are given an opportunity to discern such a learning object? They are obviously not trained to make perspective shifts or to view the issues from many different angles. On the other hand, they may get good teaching, because the teacher may find it easier to follow the teaching materials, as these as a rule are structured in accordance with this model. Younger students may find it easier to understand well delimited parts one by one and then be able to make a whole out of the parts (cf. for example systematic language learning or Piagetian constructivism). One problem with this might be that it restricts many teachers' opportunities to teach about sustainable development, since teachers might lack advanced knowledge about some aspects of the problems. It may for example be difficult for a teacher of Swedish to teach about the phase changes of water, unless this teacher happens to have a good grasp of this area. The solution to the problem may be coordination within the team of teachers to ensure that the students are offered relevant knowledge and that no particular area is neglected.

One advantage for the students may be that they are given pre-conditions for proceeding in each partial area. They are trained to be discursively faithful if the teacher has a discursively correct language. They may for example be given an opportunity to learn scientifically correct terms if a science teacher teaches the water cycle. On the basis of interest and talent and previous experiences, individual students may find it easier or more difficult to understand separate parts.

The students who were invited to discern an integrative learning object were taught to make perspective shifts and to see connections. People's capacity for multiperspectivity and for tackling future problems from different perspectives may be assumed to be an important, perhaps necessary, ability in order to be able to take part in the societal debate and make wise democratic decisions. Since the point of departure is totality and how the teacher understands totality, teaching for sustainable development will not be just subject-bound. Nor will it be as important to be discursively faithful, since it is not the separate parts that will be primarily focused on. A new discourse will be created and characterised by the issues being viewed from many different angles. All teachers will be able to take part in the teaching, since the point of departure is their own understanding.

This may also be a problem in that it puts great demands on the teachers' general knowledge. The teaching may at the same time become a political project for the individual teacher. All teaching is in some sense a political project. The problem is, however, that in this case it will be up to the individual teacher to

define the problems. The curricula and syllabuses decided on the basis of a parliamentary democratic system may be neglected. It will probably be more difficult to get an insight into and a grasp of the activities going on in the classroom. From a global perspective, one may also ask who has the preferential right of interpretation. Who, for example, owns the problem with the world's water supply? How and by whom is the problem to be delimited? These questions relate to the dilemma of relativism (see Öhman, this volume). If all parts and all connections are considered equally important and relevant, the problem will eventually comprise everything and everybody. There is a risk that the solutions will then be a matter of political power and not of knowledge and logical thought. It will then be the rhetorical set-up, not the content, that is rewarded.

Concluding remarks

In 1962 the well-known book *Silent Spring*, written by the biologist Rachel Carson (Carson, 1962), was published. Many people regard this book as a milestone in the environmental debate. Carson observed connections among environmental poisons such as DDT, birds' access to insects and lack of bird song. The book was followed by disclosures of poison catastrophes and environmental scandals all over the world. From a Swedish point of view, we can't forget the chemical plant BT Kemi's buried poison barrels at Teckomatorp in the mid-1970s. Who can forget the emission of dioxin at Seveso in Italy in 1976, or Union Carbide's poison cloud above Bhopal in India in 1984? Similar catastrophes have recurred all too often since then. Nuclear power plants have been wrecked, oil tankers have sunk and tunnel constructions have had unexpected consequences. Unfortunately, we cannot be sure that such environmental catastrophes will not happen in the future as well.

Now, in the early twenty-first century, there are new threats to humanity and the Earth. New York 11/9/2001, Madrid 11/3/2004 and London 7/7/2005 are places and dates that terrorism has engraved on our consciousness. Global warming and the greenhouse effect are discussed every day in the media. There is now no doubt that the greenhouse effect does exist (IPPC 2007). Is there a connection between floods in New Orleans and the Western world's consumption patterns? What are the connections between terror attacks, globalisation and fair resource distribution?

In 2007, 45 years after Carson jump-started the environmental debate, the former Vice President of the USA, Al Gore, was awarded an Oscar for his documentary film *An Inconvenient Truth*. The film shows unpleasant connections between environmental pollution, the greenhouse effect and our way of living. The environmental themes have undoubtedly changed. In view of the way in which the problems have come to be reformulated, we realise how precarious it

is to think of how to understand and tackle the future. We must find other views than those we had when the problems were created.

In this day and age, and with the complex problems we are facing, we must be allowed to cross discourse borders and try out many different ways of solving problems. I think we have everything to gain by offering people of the future the ability to view things from many different angles. The most important knowledge we can give our children is the ability to learn to act in a complex everyday world and in a future that we know very little about.

Based on the results reported in this chapter, which show that different ways of understanding sustainable development and different learning objects were made possible for students to understand, I would like, even though it may sound trivial, to maintain that the people of the future will need both deep subject knowledge and the ability to cross discourse borders. By this I mean that both these alternatives will have to be offered to students in schools. Since schools are already divided into subjects, there are good pre-conditions for meeting the first need for subject depth. It is, however, not equally self-evident to give the students an opportunity to see connections and exercise perspective shifts. I would therefore like to suggest that the teachers' task of developing the ability to see things from many different angles must be emphasised in both teacher education and the control documents regulating the activities of schools. What all this boils down to is that an approach full of nuances is advocated.

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Discourse, cause and change: A study on economics students' conceptions of child labour

Cecilia Lundholm

Introduction

This anthology addresses the ethical and democratic aspects of education for sustainable development and Öhman (first chapter) discusses the ethical dimensions in sustainable development. Taking as a starting point the view that sustainable development encompasses environmental, economic and social aspects, this paper addresses child labour, an issue that concerns the social and economic aspects and explores business and economics students' conceptions of this issue. The findings presented describe the ways in which the students conceive of child labour in terms of the discourse, causes, advantages and possibilities for change. These views can be said to encompass both individual and societal dimensions of the problem and its solutions. The paper ends with a discussion on the implications for practice when considering the students' notions of child labour as contested and controversial.

Background

Sustainability and the business world

In the business world companies are not only facing problems such as global warming but also matters of social concern regarding working conditions and violation of human rights. As production becomes increasingly globalised these issues present both challenges and opportunities. As Cramer (2006, pp. 13–14) argues:

> Some companies have turned this threat into an opportunity and now present themselves as socially responsible companies. By being a socially responsible enterprise, they try to increase their market share, innovative power and staff motivation to work for the company. Moreover, they try to achieve cost advantages, while simultaneously shaping their own moral responsibility. This ambition is called corporate social responsibility.

Companies working with corporate social responsibility (CSR) have developed "an identity that is based on finding a responsible balance between people ('social well-being'), planet ('ecological quality') and profit ('economic prosperity')" (ibid., p. 14). The use of child labour is an issue concerning 'people' and social well-being, which companies working with CSR are trying to abolish. This issue also seems to have generated the public's interest and concern and has been addressed in the Swedish media. In the present paper, business students' views on child labour are presented, with the hope of developing improved insights into students' understanding of the societal dimensions of environmental and sustainability issues.

Previous research on environmental education

In the research on environmental education and education for sustainable development, natural science has been considered an important knowledge domain and several studies have focussed on students' understanding of natural scientific phenomena (e.g. Boyes & Stanisstreet, 1998) as well as the word 'nature' (Loughland, Reid, & Petocz, 2002). However, a growing number of courses, particularly in higher education, now focus on environmental and sustainability issues in disciplines such as business and economics, law, political science and history. With few exceptions, however, little research has been conducted on students' learning within the realm of social science and matters that relate to the environment (c f. Torney-Purta, 1994, on students' conceptual understanding of olitics and economics concerning environmental issues). In a 2001 review on learners and learning in environmental education, it was also concluded that insufficient attention has been paid to the students' socio-political knowledge and understanding in comparison to their scientific knowledge (Rickinson, 2001, p. 307).

Research project and present study

The study presented here is part of a research project exploring how students come to learn in a new field – environment or economics – depending on whether their educational background is in environmental/biological science, or business and economics (Lundholm, 2007a,b,c; Lundholm & Halldén, 2007). The case study presented has a focus on exploring views of environmental/sustainable

issues among students of economics and business, and here, the particular interest is students' conceptions of the use of child labour. The project builds on current research on individuals' understanding and knowledge acquisition from a constructivist perspective within the field of educational psychology. Originating in the work by Piaget 1929/1989, continuing in the work by Driver & Easley in the 1970s and 80s (c f. Driver, 1981) the interest is on understanding the way children, and in later work adults (e.g. diSessa et al., 2003; Lundholm, 2005) conceptualise and explain the world and their experiences in it.

The research project takes into account the multifaceted content of environmental and sustainability issues including the aspects individual, society and nature and their inter-woven relationships (Figure 1). The point of departure in this paper, however, is to see how the students conceive of a sustainability issue concerning the socio-political matter of child labour.

1. *The individual.* This aspect focuses on conceptions about the human being and explanations as to why and for what reason people think or act towards society and nature.
2. *Nature.* This aspect concerns conceptions of nature. How, for example, is the greenhouse effect conceptualised and understood?
3. *Society.* Here, the interest is in conceptions of societal systems and structure as in economic systems, political organisation and the functioning of institutions. It includes notions of norms, justice and democracy that are conceptualised at various levels, local or global.
4. *The relationship between the individual and society.* This aspect concerns the way individuals perceive themselves and others, as being, or not being, part of society, as well as the ways individuals are influenced by society, and vice versa.
5. *The relationship between the individual and nature.* This aspect concerns conceptions of the way individuals' affect, and are affected by, nature through their actions.

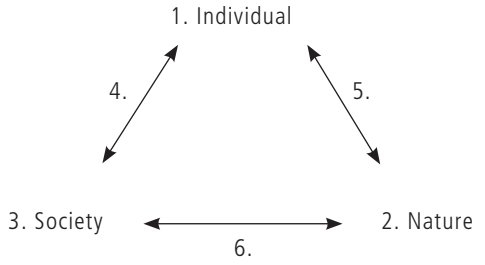

Figure 1. Different aspects of environmental and sustainability issues.

6. *The relationship between society and nature.* This aspect concerns conceptions and learning about society's impact and affect on nature, e.g. political governance influencing nature as well as nature as an economic resource and the prerequisites for the formation of society.

Methodology

The study that informs this paper was undertaken in 2004 with 15 students at a course on 'Sustainable management – theory and practice' at the Stockholm School of Business. In collaboration with the teacher questions for group discussions were designed that included economic key concepts such as 'supply and demand', 'outsourcing' and 'supply-chain', relating them to environmental and social matters. The questions thus reflected current issues of relevance to business, which have also been addressed and debated in the media. By designing the study in such a way the purpose was to explore the students' reasoning and conceptions of economical and environmental issues, while at the same time creating a situation for the students to discuss and explore 'real-life' issues related to business. In this paper the students reasoning about child labour is presented, and the question for discussion was stated as follows:

> We live in a global world with a global economy where 'outsourcing' is a key concept for production. 'Outsourcing' and 'just in time' are today two concepts that are seen as core preference to make companies efficient in the sense that production takes place in countries where, for example, salaries are lower. Discuss the following question! Some countries use child labour, is it all right for a company to do the same? If yes, why? If no, why not?

With informed consent from the students, all the group discussions were tape-recorded and transcribed in full. The analysis of data focused on the students' descriptions of child labour and possibilities for change. The results of the analysis, presented in terms of students' conceptions, draw on inferences made from an intentional perspective (e.g. Halldén, 1999; Halldén, Haglund & Stromdalh, 2007; Lundholm, 2003, 2004, 2005; see also Jonsson, this volume). This means that the students' responses in an interview or statements in a discussion must be considered as part of a social context. For example, the students' utterances can be seen as forming part of a group conversation, or as part of a test situation in which a student tries to give a "correct" answer. The idea of taking the social setting into account is to facilitate an empirically grounded analysis that takes not only cognitive but also discursive aspects into consideration, thus strengthening the validity of the interpretations made of the students' conceptions.

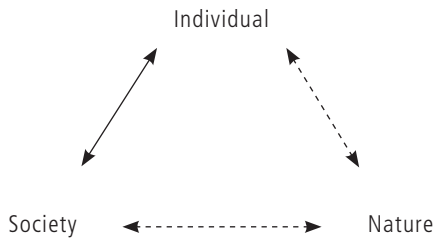

Figure 2.

In groups 1, 2 and 3 there were only Swedish students, whereas groups 4 and 5 comprised both international and Swedish students. None of the students had English as their native language, and all the names are fictitious. Within the excerpts from interview transcripts (ia) means inaudible speech.

Results

The views of child labour entail the aspects of the individual and society, and the relation between these (see Figure 2).

When talking about the positive aspects of child labour the child or the child's family was considered. Poverty, living off the streets or "having nothing to do" were the negative alternatives if the children had no work. Arguments and reasons for regarding child labour in more positive terms were the aspects of 'age' and 'type of work'. This means that students (in all groups) talked about the meaning of 'child' and the ways it is defined in different countries. Also, work did not have to imply physically hard work, as might be thought by the public.

In all the groups but one, ways for changing the current situation and abandoning the use of child labour were put forward. Institutions such as companies, the UN and local government were proposed to be of importance, and there was thus a shift in focus from the individual to society and the relation between these. In all but one group, companies were regarded as vehicles for change. In group 3, two students described the abolition of child labour by companies as the only way forward. The provision of education by companies was another suggestion, and in group 4 this was seen as development for the whole country and generations to come. Also, other institutions such as the UN should take a leading role in providing education. In group 5, on the other hand, the government was suggested to be targeted for change, as the government was seen as setting the standard.

The students also talked about child labour in terms of how the issue is con-

ceived by the public at large as "simplified", not taking negative consequences into consideration.

In the following section the students' conceptions of child labour, its causes, definitions, pros and cons, and possibilities for change are presented.

Causes of child labour

Several students mentioned the causes of child labour to be the need for the children to work in order to earn money. However, two students, Beatrice and Louise, attributed the cause to the companies:

> And what makes me most upset is that the companies state they're against it while they make the parents work for indecently low wages, and that's why the children have to work, in order to support the family.

Louise, being in another, group stated:

> I don't think it's right for companies to do the same and use child labour. I mean companies are in the position to change the situation, and if you pay people more money then they can provide education for their children.

The positive aspects of child labour and the negative alternatives

In all the groups child labour was perceived as something that was not wrong when considered in the light of the child's economical situation. This can be illustrated by the dialogue in group 2 where Diana started by saying she did not approve of child labour, although when considering the child's individual situation she did not wish for them to starve either:

> I don't think child labour is all right. /…/ I've seen on TV that if a company discovers their suppliers are using child labour, then they kick them out, and they won't use them anymore. I mean, the children's situation, or the family's, doesn't get – I mean then they can't make any money. What has to be done is that responsibility has to be taken by saying "here's the limit, 10 years of age and no one younger than that", but then also, to open a school and they can go there 5 hours a day.

John also talked about the advantages of children having work, and mentioned local companies as being worse:

> I can start because this is one of my favourite arguments. Of course I'm against child labour, at the ultimate end. Companies should be engaged in

> countries that also supply child labour, because often we forget that child labour is bad, but the second possibility is that they don't really have work at all, so they don't go to school as many people think, but they don't do anything at all. So, it is even better for the kids to have some work, as weird as it sounds for Europeans, than just don't have work at all or work for a local company which has even worse working conditions. So, even if child labour is bad, they don't have a good alternative, like good schooling, like other things to do.

Ophelia saw the problem of children working in terms of them not being able to take part in education. However, she described the advantages of work in terms of learning skills:

> Actually I've always wondered why child labour is so bad, because historically children were also work force, like before modern society. And if you look at farmers, they always work together, and family are always together. But if the children go to work then they're deprived the right to education. Of course they shouldn't use child work force but by working children also can get a skill and learn from the work, so I don't think children labour is a really bad thing.

Mary described the advantages of labour in similar words and also listed the negative consequences of children not having work:

> Of course it's not right to abuse children, they should be around to have freedom to do what they want, but if freedom is to run around on the streets, get beaten, kidnapped, sold as white slaves… /./ Of course they should be at school being educated, that's the ideal, but in some countries that is not gonna happen just yet././ While child labour is probably not a desirable thing, making children have no labour at all is equally bad for them and society in general because how are they gonna learn any work.

'Child' as culturally defined and seen as an adult in developing countries

When discussing the advantages of child labour and the way this issue is simplified by the public, the meaning of 'child' and 'work' were considered.

Three students in different groups addressed society's definition of 'child'. The students' statements can be interpreted as looking at child labour as not being *child* labour and thus regarded as less problematic and morally indespicable. Christian made the following statement:

> Another problem has to do with the definition of children. We look at young people as children until they're 18 years old. But if you're living in a developing country and you go to school until you're 12, to start working after that as an adult is not strange.

Work and working conditions among children

Anna, Irene and John elaborated on the meaning of 'work', that is, what *kind* of work were children supposed to do? John considered diamond mines as inappropriate work for children to be doing, or too dangerous to be doing at all.

> John: That's different from diamond mines, you know where they have a narrow hole where only the kids can come through. There it's like, as we discussed before about the nature of the work. So like really dangerous work, it shouldn't be for anyone, especially not for kids.

The discourse on child labour

In the talk on child labour the students related their views to that of the public. Several students talked about the issue of child labour being addressed in society in too 'simplistic' terms. John stated the following:

> If you for example go to Swedish (ia) and say, 'I'm not really against child labour, we should consider the circumstances' then most people wouldn't understand at all. So I really think it should be like a shift in focus, like public opinion should focus on providing education for these kids, that's sustainable development you know.

In the same group Lance made the following comment:

> It is also a tricky question because for us western European consumers it's of course very easy to sit on the sofa and say "argh child labour, I'm not going to buy those products". But what does it mean for the families involved? There's hardly a discussion about that.

In group 1 the students discussed the way people in general talk about child labour and condemn it.

> Anna: I think this is a very interesting question.
>
> Beatrice: Yeah, me too – because we don't put it in perspective at all. People don't consider everyday life and the reality for people in these countries. /./ People see everything through their own frame of reference: "oh, no, that's wrong".

> Anna: Yes, the scary thing is that when child labour is condemned, then the door is closed. And where these children and families go no one cares about, but you have fulfilled the request from the West.

In group 5 the discussion ended with Mary summarising their talk as being "controversial":

> I think we've said enough controversial things about question number four, so we decided to go on to question number five and the supply chain.

Possibilities for change

In all the groups ways for changing the current situation and use of child labour was discussed. Education was put forward as an option for change and in all the groups but one this was suggested as an issue of concern and task for the companies. There was also the notion that the UN would be a better organisation to deal with this. However, there was also a suggestion that the way to abolish child labour was to address the government and change its view and policy on child labour.

Companies

In group 3 the students focused on the companies' responsibility and discussed the advantages of companies providing education rather than cutting a contract with a supplier using child labour.

> Diana: The same question keeps coming back; how much responsibility should the companies take?
>
> Fanny: Well, of course it's more complicated for a company to open a school and check if they go there, than to stop using a supplier.
>
> Diana: Yeah, that's more difficult, but at the same time less expensive, one can say.
>
> Fanny: Then they can advertise that and get good PR.

In group 3, Helena stressed the fact that change cannot come about unless the company rejects child labour. Her argument was that *because* children and families are poor, there's no incentive for them not to take on work, and thus change will not come about. This way of conceiving the problem was sustained by Gudrun; if the companies don't abolish child labour, change will not prevail.

> Helena: I think these kids will try to work as much as possible. And just

> because it's okay in some countries, therefore it's okay for the companies. I really think that as long as there exists companies that use child labour, nothing will change. One has to, somewhere…/../
>
> Gudrun: But if one should say that this is child labour, which actually doesn't offer satisfying circumstances for the children who are working, than I don't understand how you'll ever change that if you as a company don't take a stand and declare that it's not okay. If you still say it's okay, than I feel it's not possible to change; not until it's not okay for a child to go to work.
>
> Helena: Perhaps one can do more good than bad by taking action… The child labour question was difficult.

Later, Gudrun raised the problem of a single company taking action:

> Imagine if all other 12 year olds work in that country, and there's a difference at your factory where one has to be 16.

The way Gudrun described the problem of only *one* company refusing to use child labour can be interpreted in terms of the 'prisoner's dilemma', that is, the problem of knowing whether others will take action.

United Nations

In group 4, Lance suggested that the UN should be an institution working to support educational provision. However, the other students proposed this as a task for the company and eventually agreed that child labour was approved if this task was fulfilled.

> Lance: This is something that has to be done by the international community. You are Swiss, I'm the work producer, it's not like the major partner in order to introduce schooling in Burma! It should be the UN or a relevant organisation of the UN that does that. It is very hard to bring this down to corporate level, or even to consumer level.
>
> John: But, lets say Bangladesh: we have child labour, what's the problem? I would say, well, we produce our soccer balls over there with child labour but as compensation we provide education. Say, half the day you can make balls and on the other half you get free schooling for that.
>
> Lance: I would say that's OK. /./ What is the responsibility of the company?
>
> Louise: To do something, for example to provide education, in house education.

John: Yes, so you think if companies employ kids for some work, and provide schooling on the other hand – than it's okay to have child labour?

Louise: Yes.

Government

In group 5 the student Nicole suggested a way for change by proposing that the government should be approached in the matter:

> So, I will say that in general, children shouldn't be used as a work force. But if there is a norm in a country to use children in the work force, then first we should do something to make the government change it. Because I don't believe that the corporation can (ia) if the government is supporting the use of children as work force.

Change for generations to come

In another group, Louise and John also discussed change coming in small steps, creating a better future for coming generations.

> Louise: I think it's also the situation in a short time, short term. I mean in the long term it is possible to abolish child labour. So, small steps.
>
> John: So, if you educate this generation of child labour, they get enough money for *their* kids and can send them to school.

Summary of findings

The individual and society

The students' conceptions of child labour include both individual and societal aspects. On the one hand they're considering the negative consequences for the children when losing income for themselves and their families if they're left with no work. This perspective is taken, presumably, out of concern for the children. No group takes the perspective of the company and for example argues for raised profit when using child labour. When talking about the causes of child labour the majority are referring to the needs of the children, and two students described this as a consequence of the companies paying too low salaries to the parents.

On the other hand, the students see solutions and changes in a societal context where institutions like companies, international organisations and the national government are actors. Group 2 talked of companies as key actors in making change and abolishing child labour, while on the other hand, in group 3 the

problem of *one* company taking action was addressed. This problem, also described as the prisoners' dilemma, is often seen as a problem for the individual when considering taking action for the environment, but is equally a problem for business (Terrvik & Hellsmark, 2002).

Furthermore, there are conceptions of a societal norm, or discourse on child labour, among the students. The issue of child labour is perceived as controversial in the sense that the students seem to have a notion of 'right and wrong' ways for thinking and talking about this issue. In the students' views public debate does not consider the cultural aspects (as in the definition of 'child') or the negative consequences for the particular child losing income, and simply condemns something that is bad. This makes the discourse on child labour seem 'simplistic'.

Discussion

In the context of this anthology and the contributing papers it is of interest to discuss the findings in relation to a vision of education that encompasses a "pragmatic" view (Öhman, first chapter) and provides students with opportunities to explore and scrutinise ways of viewing the world. The findings in the present study reveals the students' conceptions of a discourse on child labour, suggesting that the students have an understanding of the appropriate ways of conceiving and talking about this matter. Also, and what's more important in relation to education and instruction, they have the notion that their own ideas and views on child labour are not entirely appropriate and contradict the general notion of condemning child labour. A question that arises is therefore whether these conceptions and viewpoints could have been part of a classroom discussion?

In previous studies (Lundholm & Rickinson, in press) it has been shown that students can withhold their opinions, either because they don't want to reveal the fact that they don't have an opinion on the matter, or, because their opinion contradicts that of the teacher. Whether these economics students would have introduced their views in a classroom discussion with fellow students and their teacher is something that can only be speculated on. However, the fact that the issue of child labour is perceived as contested and that students find their views inappropriate or deviate from the general norm is worth considering in relation to practice. This points to the important question of what prevents such liberated discussions from taking place. It is probable that situational and institutional aspects of the education setting, such as exams and grades, are part of the explanation. Cotton (2006) also addresses these structural and institutional constraints in explaining why teachers who are particularly concerned with, and explicitly try to enhance balanced and liberated discussions, find it difficult to pursue these in the classroom.

Findings from this study highlight the importance of renewed efforts to im-

prove our understanding of environmental learning from the perspective of the learners. The views students bring to the classroom and the conceptions they hold when leaving need further research attention. In particular, I believe the relationships between the beliefs and values of teachers and students need to be further explored if we are to create education that strives to engage students in discussions on different perspectives, explore the taken for granted and enhance ideas on ways for changing current affairs.

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Self, values and the world – Young people in dialogue on sustainable development

Iann Lundegård

Introduction and purpose

In those discussions – with late and postmodern overtones – held on issues concerning sustainable development, people's attitude to the world is often described in term of "either – or". Either we have someone that, according to his or her origins, is intuitively and emotionally integrated with the world – often described in terms of animism or holism. Or, we have the modern-day person that finds him or herself in a value-neutral relationship to the mechanistic nature that s/he has been trained to face with a reductionistic attitude (see, for example, Merchant, 1994; Hornborg, 2001).

The purpose of this study is to restore the discussion, often carried out on a philosophical plane, to a more ordinary level, and thus investigate how values, emotions and the aesthetic are expressed when young people talk about sustainable development. By means of a pragmatic framework and reminders as to how we humans actually act in dialogue, the study aims to describe how young people associate relationships and personal standpoints with nature.

The article is based on two dialogues between two Swedish teenage girls (Sanna and Linn) and an interviewer (Erik). The dialogues relate to the students' experiences of the environmental science education they have received. It is also about what these young people regard as important, and their ideas about their own future in relation to questions about sustainable development.

Background

The modern

Education has been declared as central to the attainment of a sustainable society (United Nations, 1992; UNESCO, 2006). However, a frequently occurring criticism of the teaching that is conducted today with regard to this is that it actively upholds the Western world's modern myths (Merchant, 1994). This critique is based on the idea that the modern person finds him- or herself in a discourse where they are no longer connected to the world and that, due to cultural patterns, has been forced into facing the world objectively and reductionistically. For some decades now a lively discussion has been taking place where – mainly from a feministic standpoint or from "critical theory" – it has been established how modernism and its metaphorical ballast has affected and determined the Western person's way of facing the world. When the modern myths have been unveiled they have been equated with what Lyotard (1984) called meta-narratives. What is thought to have been revealed is how the Western world's narratives are characterised by, for example, dominance (Horkheimer and Adhorno, 1994), patriarchy (King, 1994) and anthropocentrism (Dewall, 1994; Macy, 1994).

Dualism

One myth that is regarded as being closely interwoven with the narrative of modernity is that which concerns dualism; the narrative that shows that in our culture we have a definite understanding of the world around us as being divided into dichotomies (Hornborg, 2001, 2003). Descartes is the person who has mainly been held accountable for the fact that in our daily conversations and in scientific contexts we often differentiate nature from culture, mind from body and thoughts from actions, although the tradition can also be to traced to earlier times; to antiquity (Cromer, 1993; Worster, 1994). Furthermore, it is argued that it is this very idea of dualism that has in turn led to talk of the free person and the main objective of education as one of emancipation (Biesta, 1999). Gough and Whitehouse (2003) write about this in the context of education for sustainable development:

> For a generation or more, environmental education discourses have been constructed around persistent Cartesian dualisms of modern thought that divide an "othered" category of being from that of a constituted homogeneous human identity (Gough & Whitehouse, 2003, p. 31).

Several scholars have pointed out that the dualistic way of regarding nature and existence also resulted in the possibility of people seeing it as being subject to conformity. Distancing oneself from nature also meant that it was possible to

classify, dominate and tame it (Horkheimer & Adhorno,1994; Leiss, 1994; Hornborg, 2001). The fact that we humans have taken a step backwards and systematically begun to objectify and describe nature in terms of cause and effect, it is argued, has resulted in us living with the idea that we can master it. This is also something that is said to go hand in hand with today's educational philosophies. As these are formulated in the modern spirit and with a growth and development optimism, they become excellent tools with which to continue the development of global market forces (Sammel, 2003).

A new paradigm

An increasing number of united voices are questioning the prevailing educational paradigms and arguing that the actual basis of the environmental problems that we are facing today are built into modern society's meta-narratives and structures, and that future issues can only be solved when we have learned to see beyond the basic power structures that Western culture is built on (Merchant, 1994; Gough, 2002; Argyris & Schön, 2004; Sterling, 2004). Or, as Gough and Whitehouse (2003) express it:

> One of the major insights such social theorising offers to environmental education, is to make explicit the webs of power, agency, and desire in which we are caught and to illuminate which social forces are at work to either enhance or limit an individuals ability to act. As such, poststructuralist analysis presents an opportunity to challenge the privileged certainties of meta- narratives and the configurations of power carried within them (Gough &Whitehouse, 2003, p. 40).

Sterling (2003) describes conventional education on such issues as cold, dehumanised and rational, and instead calls for a discourse where humanity is guided by tolerance, social concern and a feeling for natural rhythms. Within this perspective authors sometimes call for a new paradigm; a paradigm that begins in a holism or monism where the world and humans ought to be regarded as inseparable (Hornborg, 2001). It is only when we become aware of the fact that our experience of the world is not unblemished, or when subject – object relationships between individual and world are wiped out, that we will we be able to see ourselves as being less separated from nature (Hornborg, 2003). Merchant (1994) quotes Capra (1994) on environmental problems:

> Solving them requires a new social paradigm – a new constellation of concepts, values, perceptions, and practices shared by a community, which form a particular vision of reality that is the basis of the way the community organises itself [...] The problems facing science today reflect the inadequacy of the structures of modernism – mechanistic physics, industri-

> alisation, and the inequalities of class, race, and gender – that are fundamental to the domination of nature and human beings (Merchant, 1994, pp. 17-18).

Scholars, such as Sterling (2004), discern an opening for the new in the type of education known as ESD that has grown stronger and that also responds to matters of sustainability from a social perspective. Here are possibilities, argues Sterling, to actively confront the educational system; that which today serves the prevailing society. Rather than preserving, such education is concerned with identifying and disclosing the norms, social forces and power relationships that lie behind our society's origin and development and make it possible for the students to reform. He labels the education that he wishes to bring about "Reformative learning", in which it would be possible for students to question the core of the societal belief system at a higher value-related level. Sterling calls this "Learning for Change or Education *for* Sustainability" (Sterling, 2004, p.70).

In this article I want to take the critique of the Western paradigm seriously. In the above named discussion, which claims that some of the main problems facing humanity have their origin in our Western way of behaving and relating, there are many significant aspects – aspects that also show how important it is that the teaching does not contribute further to screening students' values and feelings from nature. However, one critique that can be directed towards these structural lines of argument is that they are based on a philosophical discussion that is removed from the empirical reality. Such a discussion never actually gains a foothold anywhere. Instead, the philosophical and universal claims displace each other in infinite number (Stenlund, 2000). Scholars like Öhman (2006a, see Öhman this volume) who refer to pragmatic ideas have shown that if rather than being enticed to further philosophising, one instead allows the questions to be answered empirically, there is the possibility that one will catch sight of something else. Through reminders about what people actually do in their daily lives, Öhman (2006b, see Öhman this volume) has been able to challenge ideas about how so-called "objective" natural science relates to people's moral actions. In this study I also try to bring some of the discussions that are often held on a philosophical plane back to a more practical level. I would like to explore whether some students, in a dialogue situation, actually do argue about sustainable development in such an emotional and value-free way as has been speculated upon in the above named context. I also aim to clarify the relevance of intellectual philosophical analyses when we look at and remind ourselves how students behave in dialogue.

The study's theoretical framework

The article takes its theoretical departure in practical epistemology as it has been formulated by Wickman & Östman (2002), and in John Dewey's argumentation about the aesthetic and experience (Dewey, 1925/1958, 1934/1980).

Practical epistemology

Traditionally, epistemology has been described as how people achieve the truth about the world. Practical epistemology – the concept alludes to Piaget's genetic epistemology – instead emanates from Wittgenstein's (1967, 1969) language-game argument and Rorty's (1991) anti-representationalist approach to knowledge. Here, for example, the claim to truth is described as one of a number of ends that human activity is directed towards. The practical epistemology that has grown out of this pragmatic perspective of knowledge helps us, among other things, to understand that when human actions interact with life's events, this happens in order to attain specific and often practical goals. It thus helps us to see that the relationship between how we learn (and act) and what we learn (the purpose we attain) is central, and that the content of this is constantly reformulated as a response to the continually varying context.

Like all learning theories, practical epistemology has three central aspects to deal with, namely: What is new in the situation that arises? What is passed on from one situation to the next? And how is the new integrated with the old? (Wickman, 2006). From these questions, and the arguments that follow, Wickman and Östman (2002) have introduced four concepts that are used to analyse learning in communicative actions. These concepts are: "encounters", "gaps", "relations" and "standing fast". In a practical epistemological analysis, the analysis object is transferred from the separate individuals to the interactions between them and to the transactions that take place in these encounters (Öhman, 2006a, Östman, 2003). In these encounters we observe, for example, how gaps are discerned and how, in the actions, new relations are formed that bridge these gaps. Afterwards we can also identify what stood fast in the actual encounter, i.e. that which was never challenged or questioned, and was baked into the action and led to the continuity of one transaction to the next. What is studied here is how individuals' action patterns are changed and with that, how new meanings are created in the actions. It is also this that is defined as learning (Wickman, 2006).

Dewey and aesthetic experience

When Dewey discusses how our lives create continuity he chooses, among other things, to do this in terms of experience (Dewey, 1934/1980). What is important to bear in mind is that, in this context, experience is not only to do with what

many of us normally refer to as relating to something that takes place, mentally, within a person. When Dewey talks about experience he doesn't at first differentiate between, for example, the experience of the truth, the beautiful or the good (Wickman, 2006).

It is also from this view of experience in continuity that one should understand how Dewey reasons about the aesthetic. Instead of lifting aesthetic qualities out of their context, our experience of life becomes aesthetic when whatever we discern forms continuity and wholeness in our lives. When he describes learning and the aesthetic in this way there is no reason to, a priori, differentiate between the practical, the intellectual or the emotional. A person doesn't only exclusively devote him- or herself to one or the other. It is rather when these together form an integrated wholeness that experience becomes fulfilled and aesthetic:

> It is not possible to divide in a vital experience the practical, emotional and intellectual from one another and to set the properties of one over against the characteristics of the others (Dewey, 1934/1980, p. 55).

Here Dewey (1934/1980) also chooses to describe the aesthetic experience as a movement and as a rhythm that can be said to take place when the different parts of a series of actions, whether communicative or not, move forward in order to be finally integrated and completed (Garrison, 1997b). The first step in this process is often that we humans divide the world up and separate the parts into entities. But when that which we have separated is gradually linked together through reflection, it forms a complete wholeness in our lives. It thus becomes meaningful for us, and it is then we actually experience the aesthetic. It is this process that Dewey chooses to describe as a rhythm. Lundegård & Wickman (2007) have shown how such a rhythm involves dialectic choices and how, for example, a conversation first creates participation in the moment it differentiates such choices and conflicts. Only when discordance has occurred and led to reflection can the aesthetic experience be formed. Dewey expresses it like this:

> And when the participation comes after a phase of disruption and conflict, it bears within itself the germs of a consummation akin to the aesthetic (Dewey 1934/1980, p. 15).

In Dewey's description of how people create meaning, feelings are not regarded as disconnected entities, but as an integrated part of the experience and connected to critical phenomena in the world. Garrison (1997a) also underlines them as being connected to our social lives: "For Dewey *all* meanings originated in social relationships, in cooperative behaviour carried out for a common purpose" (Garrison 1997a, p. 307). Feelings are naturally something that belong to each individual, but they are not separate from life or the world around us, it is

rather through them that we create relationships to our social construction of it. In this way the individual is connected to things and phenomena in nature via feelings (Dewey, 1925/1958; 1934/1980).

In this study I try to start out from Dewey's concept of the aesthetic when I describe how two students in dialogue integrate emotional and value-related aspects with intellectual ones. In the analysis I want to empirically investigate how the students, during a dialogue about sustainable development, transform their experiences in relation to the phenomena that the dialogue reflects and how this can be said to create the aesthetic in their lives.

EVA-relations

When I describe how the students relate to their world via values and feelings I do not make any distinction as to whether a statement is about morals, values or the aesthetic, neither do I try to classify the statement from a semantic classification, nor make reference to any universal psychological entity. Instead I make use of the term, EVA-relation (Bloom, 1992), which stands for Emotional- Value-Aesthetic-relation. These are the relations that those engaged in conversation *use* in order to comment on what is right/wrong, beautiful/ugly, true/false, or what they desire, hope for or want. I use the term EVA-relations on all those occasions when the students, through communicative action, associate the work with themselves, or *self,* via a value-related relationship. I am particularly interested in the processes that are involved and how the students *act* communicatively in questions relating to the environment. I investigate how the students, in dialogue, create EVA-relations between themselves, or *self,* and phenomena that are to do with the environment and sustainable development.

The study questions

The study can be said to work with two particular questions that finally merge into one overall question. As a first step I try to find out how the students create personal relations with nature via values and emotions. As a second step I test whether that can be said to create aesthetic experience as seen from Dewey's point of view.

The overarching question that the study tries to answer is:

– How are values and emotions expressed, and how do they become aesthetic when the young people create meaning, in dialogue on questions related to sustainable development?

Method

In this study I relate to two interview dialogues I (Erik in transcripts) had with two different female upper secondary school students. Both students were over 18 years of age and in the final year of an upper secondary school programme with an environmental science emphasis. The students took part in the dialogues voluntarily and were aware that the aim of these conversations was to contribute to an improved environmental teaching programme. All the dialogues were voluntary in nature, and the students were guaranteed anonymity. The dialogues were structured more as a conversation rather than a situation where they were expected to give correct answers to a set of questions. Each conversation lasted about 45 minutes and was recorded on tape. The dialogues were about the students' experiences of their education, the environmental issues they thought were important, and what they thought their education might lead to or mean for them in the future. The conversation sometimes touched upon related areas that were not directly connected with the dialogue's main purpose. In the analysis and interpretation of the dialogues my ambition has not been, in any sense whatsoever, to make any quantitative remarks about the students' views of environmental issues. Rather, by looking closely at some specific, short sequences of the material, my aim has been to try to get the reader to identify with *how* we usually talk about these issues and thereby also perhaps remind ourselves about "what we take for granted" but have perhaps forgotten because we have got lost in philosophical arguments (Öhman, 2006a, pp. 79-80).

Self – values – world, a dialogue in process

This investigation is based on my studies of communicative actions, in a dialogue, in movement. In such an analysis it often becomes apparent afterwards that a number of statements or utterances included in the discussion have never been challenged; they stood fast (Wickman, 2004). It is in those concepts, things and phenomena that are never challenged that it becomes possible for the interlocutors to establish new relations and create new utterances. This is also where experiences are transformed. When the new relations have been secured they can, in the next stage, form the basis of new moves in the dialogue and a further establishment of relations. In the analysis below I have mainly been interested in the relations that are established in the process between the individual, "self", and "the world". As will be revealed, these relations are often value-related in nature, and I call these EVA-relations. In the text I have highlighted the speech acts where the students associate themselves with the world via en EVA-relation in bold italic type.

What I also try to show is that in the same moment as EVA-relations are established, the person making the statement positions herself to the world normatively in terms of wanting to belong and not wanting to belong. In the following

pages I will present a number of such situations, where the two students identify such normative relations between themselves and the world.

Analysis and result

In order to provide the reader with guidance as to how EVA-relations come about in the conversation, I first present a simpler context in order to gradually, through a further four stages, illustrate a complex aesthetic experience.

The first stage (A. 1-3) gives examples of how the student establishes direct EVA-relations to phenomena and things in the world.

The next stage (B. 4-6) shows how the conversation first discerns a relationship, to which the student then connects herself through EVA-relations.

The third stage (C. 7-15) illustrates how the student accounts for affiliation/non-affiliation in that she associates value-related EVA-relations to things and phenomena in the world.

As a fourth stage (D. 16-25), the analysis shows how a number of non-emotional relations can be transformed in that they are associated with an individual through EVA-relations.

Finally (E. Linn's narrative), the analysis illustrates how a complex narrative, filled with identifications and relations, is created during a dialogue, and how this experience creates meaning and becomes aesthetic in that the individual associates with it through values and feelings.

If all this seems rather complicated, I hope that it will gradually be made clearer by the dialogues that follow. I begin with an extract from the conversation with the student, Sanna. The dialogue is about Sanna's choice of upper secondary school programme.

A.
Transformation through EVA-relations to individual things and phenomena

In the first passage that is presented, the conversation is about why Sanna has chosen to study an upper secondary level programme with an environmental emphasis.

1. Erik: How did you become interested in it [environmental issues]?
2. Sanna: Mmn… well, I'm not really sure […]. Well, no, I don't actually know, it just, it just *feels* right.

The first exchange of views identifies the concept of environmental issues. What is meant by environmental in this context is never challenged; it stands fast in the dialogue. Sanna directly establishes a new relationship between herself and envi-

ronmental issues via an assertion that "*it just feels right*." What "feels right" actually means in this context, or that it would be possible to establish such a relationship, are not challenged at all during the dialogue. A new relationship has thus been established in the dialogue – that between Sanna and the environment (a phenomenon in the world) via an EVA-relation. Sanna has associated her experience of *feeling* with her experience of the concept of the environment. In this way she has transformed an experience and created meaning through dialogue. In the next moment Sanna takes the statement further, so that when she explains her emotional relationship to the environment she again points to a relation. She establishes a relation between the feeling she expressed with more specific things in the world. For Sanna these associations include animals. The experience that appears in the next stage is thus the relationship between Sanna and her feelings for animals:

3. Sanna: because I, I know…*I*, ah *I really, really like animals a lot* so…
   Erik: Yes.

Even here the relationship is emotional. The experience is transformed through the dialogue in that Sanna associates a relationship between herself, here expressed as "*I*", and animals with the aid of a positive EVA-expression, "*really, really like animals a lot*".

Summary. What takes place during this short dialogue sequence can be described as an establishment of two relations between individual – values – world. Through the dialogue extract Sanna has thus created two EVA-relations. She first creates a relation to the concept of environment. After this she creates a relationship between herself and animals:

Sanna – feels – environment
Sanna – really, really likes – animals

B.
Transformation through EVA-relations to identified relations

That an emotional relationship between people and animals *can* be established is never doubted in the dialogue; it stands fast. It is obvious that there is another gap to fill, however. This gap has to do with why Sanna feels herself to be emotionally involved with animals. She continues in this vein:

4. Sanna: They are very much affected by what we do and this is why, why I think that it is, you know… *I really want* what's best for them and it *feels*, you know, *important*.

5. Erik: Yes.
6. Sanna: Yes, umm.

Sanna bridges the gap with a new relationship; that between people's actions and how this affects animals. She then creates a further two relations between herself and the relations she has identified. She does this by using the words "*want*" and "*feels important*". What it means that something feels important is never spoken about in the dialogue. Here it stands fast for the interlocutors, and the dialogue continues.

Summary. What happens in this short dialogue extract is that the conversation first establishes a relationship between people and animals, in that animals are affected by what we do. After this Sanna establishes two EVA-relations between herself, or self, and this relationship:

Sanna – wants – the best for animals.
Sanna – feels important – affected by what we do.

C.
"To belong or not to belong"
Value-related EVA-relations to individual relations in the world.

Every time Sanna creates an EVA-relation she also makes a value-related standpoint to the phenomena she identifies and value-related distinctions. Belonging is indicated through positive EVA-relations, while disassociation is indicated through negative EVA-relations. Below it is shown how the dialogue fills the gap that establishes relations through positive as well as negative EVA-relations.

During part of the conservation Sanna talks about wanting to be an agronomist. This choice takes the form of a positive EVA-relation that is to do with an agronomist having an impact on the world. Sanna's choice of profession would thus mean that she could have a positive affect on the world:

7. Sanna: …the fact that you, that you can, you know, also have some impact so that…, really try to…
8. Erik: Yes
9. Sanna: … that it'll be *better*, somehow.
10. Erik: What is it you want to have an impact on?
11. Sanna: Ah, *I want* to ensure that animals are cared for, and that the Earth… the Earth… you know, the role that animals play in society.
12. Erik: OK.

Sanna again relates to animals. Here she identifies a relationship between herself, both now and the fact that earlier she said that she wanted to be an agronomist. In choosing this profession she wants to make an impact on the situation of animals in society. By using the positive emotional expressions "*want*" and "*better*" she creates EVA-relations between herself, here expressed as "*I*", and the action that means having some kind of impact on the situation of animals.

The relationship she establishes is positive:

> Sanna – wants, better have an impact – on the role of animals in society.

After this she again identifies an experience – this time negative – that accounts for her previous utterance. This is to do with what she saw on TV:

13. Sanna: Like fattening cattle for slaughter and all that kind of stuff, *I* think it is *so absolutely awful* to watch those TV programmes and stuff like that.
14. Erik: Yes.

Here Sanna's experience is transformed through the dialogue in that she fills the gap between herself and what she has seen on TV with the aid of a negative EVA-relation:

> Sanna – absolutely awful – to watch TV programmes about fattening cattle for slaughter.

The dialogue also identifies other experiences that motivate her standpoint. This time it is to do with the poultry industry:

15. Sanna: The poultry industry, *ugh*, and slaughtering and *yuk*, *ugh disgusting*. (interpreted as "I think")

Here Sanna fills a gap between herself and the poultry industry with a negative EVA-relation and her belonging is transformed in the conversation with Erik:

> Sanna – ugh, yuk, ugh, disgusting – poultry industry.

Summary: In this part of the dialogue Sanna identifies a number of relations: that between herself and her choice of future profession as an agronomist; that between the profession of agronomist and the possibility of making some kind of impact; and that between what she has seen on TV and the role of animals in

society. In the next stage, Sanna associates herself, via an EVA-relation, to the relations that the dialogue has previously identified. Sanna creates positive EVA-relations between herself and her choice of profession, between herself and the possibility of making an impact, and negative EVA-relations between herself and a perceived role of animals in society that is based on what she saw on TV. Through negative utterances she further emphasises her position in relation to the poultry industry and the fattening of cattle for slaughter. Throughout the whole section the experiences of the dialogue are transformed and establish EVA-relations to that which she discerns.

D.
Emotional self-relations in relation to a number of identified relations

When Sanna relates herself to what she saw on TV and to the poultry industry the dialogue appears to create a gap of a more general character. Through her normative utterances and EVA-relations the dialogue moves on to questions about her choice of food. In a response to one of Erik's questions, Sanna identifies herself as a vegetarian:

16. Erik: Yes, right. Are you a vegetarian?
17. Sanna: Yes.
18. Erik: Ah.
19. Sanna: Yes, *I* am.
20. Erik: How long for, or, how, what do you eat and what don't you eat?
21. Sanna: Er, it's just that I don't eat meat.
22. Erik: No?
23. Sanna: Well, I do drink milk and suchlike, only now I only drink organically produced milk and stuff like that …
24. Erik: Ah.

In the dialogue, four relations are created between Sanna and food:

Sanna – Vegetarian
Sanna – doesn't eat meat
Sanna – drinks milk
Sanna – only drinks organic milk and stuff like that

In this first stage these relations are not value-wise/emotionally/aesthetically established through EVA-relations. However, in the continued dialogue, below, Sanna fills the gap between herself, here expressed as "I", and the relations that

she has established by describing herself as vegetarian. In the dialogue the experience is confirmed when Sanna justifies and underlines her standpoint with both positive and negative EVA-utterances – first of all with the positive EVA-judgement of "*matter of principle*" and then with the negative EVA-judgements, "*I'd never*", "*would never*" and "*don't want*".

> 25. Sanna: Well it's, it's a *matter of principle*, yes, it is. *I'd never*, you know, eat an egg that wasn't organically labelled, such as from…
> 26. Erik: Aha.
> 27. Sanna: …a battery … from a battery hen, *I would never do* that
> 28. Erik: No?
> 29. Sanna: Because, you know, I *don't want* to support that industry.

Positive EVA-relations:

> Sanna – matter of principle – choice of food (vegetarian, doesn't eat meat, drinks milk, only drinks organic milk).

Negative EVA-relations:

> Sanna – would never – eat eggs from a battery hen.
>
> Sanna – doesn't want – the battery hen industry.

Summary. The example indicates how complex a dialogue actually is when we try to dissect it. The dialogue first establishes a number of relations – in this case these were to do with Sanna's factual connection to which food she eats. Sanna then positions herself to these, both positively and negatively, via EVA-relations. Continuity is created when the dialogue is filled with both facts and EVA-relations.

E.
An aesthetic experience

In order to illustrate a conversation with an even higher degree of complexity I seek the help of another student, Linn. To a question about which current environmental issue Linn thinks is most important, she responds with a short narrative that contains a network of relations.

First of all we have the interviewer's question:

> **Erik:** If you had to choose one or some environment issues that you think are absolutely essential today what would that be?

Then we have Linn's narrative, which develops as the dialogue progresses:

> **Linn:** Er…the development in the Third World that I mentioned earlier. That what you build… you industrialise countries… undeveloped countries (**Erik:** Mm) and at the same time you destroy their environments. And it's like that in so many places, that people, you know… the aim is to get as many of the big companies as possible to invest in a country. (**Erik:** Mm.) And we let them… if they are to do that we must offer them something that is better than what they already have, and what is better is, sort of, unexploited environmental resources and eh… less rights for people in general and no environmental regulations, you know, weak legislation. That's what you offer companies that… (**Erik:** Mm.) which they can't do in their own countries. (**Erik:** Yeah, right.) **Linn:** So Swedish companies, for example, like Sandviken and a few others can have their production in places like Ghana I think it … where you can, sort of, ignore human rights and destroy their environment. Like poisoning lakes, and doing what you like without anyone giving a toss. I mean that's the whole point; getting as many firms as possible to establish themselves there in order to help the economy, sort of, (**Erik:** Mm.) but you can't just sell out a country for any old price. So that, I don't believe it, that those locals that live near their mines that, you know, poison their water, they don't gain much by that. They would rather have a poor economy, kind of thing, than have poisoned water. (**Erik:** Mm.) So in the end it's enterprises like Sandviken that win, not local folk in Ghana. And then you've totally missed the point, if you have, you know, industry or you have development in the Third World for the industrial-world's benefit (**Erik:** Mm) just so they can earn money, and I think that is *totally wrong*. I mean, it's a *really big environmental problem*. (**Erik:** Mm.) So you *really must* prioritise environmental demands, or even have environmental demands and human rights, over economic gains.

It should be pointed out that Erik's "Mm" is a common, encouraging and affirming sound that is often used by Swedes in everyday conversations. Although you won't find the word in the dictionary, by saying "mm" you are in fact telling a person that you are listening attentively and are interested in what is being said. It is comparable in English conversations to "right", "oh, yes", "interesting", etc.

Linn's narration is composed of a number of relations that weave together to illustrate a way of looking at the relationship between development in the Third World and the industrial countries' industrialisation of these countries. In short, Linn's narrative is about foreign companies being invited to establish themselves in poor countries where the environmental resources have not yet been exploited. This is attractive in that the non industrialised countries have poor environmental legislation and people there have their rights ignored. The aim of in-

dustrialisation is, as Linn describes it, to establish as many companies as possible there in order to improve the particular country's economy. But through the narrative's peripeteia it instead results in that when the undeveloped country's population is faced with poisoned water and exploited resources, it is actually the companies and industrialised countries that are the winners. Or, as Linn herself says at the close of her narrative, "you have development in the Third World for the industrial-world's benefit".

The narrative contains three EVA-relations; two negative…

> Linn – totally wrong – all the named industrialisation relations in Ghana
> Linn – really big environmental problem – all the named industrialisation relations in Ghana

…and one positive:

> Linn – really must – prioritise environmental demands, or even have environmental demands and human rights, over economic gains.

Summary. In order to understand which role this narrative plays in this particular moment of Linn's life, we should regard the entire narrative as a sub-phase in a dialogue between two people, where it plays a role in Linn's meaning-making concerning self and the context in which the dialogue takes place. As has already been mentioned, the narrative is a response to a question about which environmental issue Linn regards as being the most important at this moment in time. When, at the end of her narrative, she says "and I think that is *totally wrong*", the dialogue sequence reaches – in Dewey's (1934/1980) terms – an aesthetic fulfilment. Or, as Dewey himself expresses it: "A 'conclusion' is no separate and independent thing; it is the consummation of a movement". (Dewey, 1934/1980, p. 38). Here the movement is completed in that Linn positions herself negatively to the relations she indicates and the narrative thereby becomes a vital part of herself.

Even with her concluding comment, "I mean, it's a *really big* environmental problem", Linn positions herself with yet another negative EVA-judgement. But Linn doesn't stop there. With the comment and positive EVA-relation "So you *really must* prioritise environmental demands, or even have environmental demands and human rights, over economic gains", she creates a further kinship with the conclusion that the narrative led up to. In this way Linn's experience has been transformed in that she has identified discordances in the world and related to them. She has created continuity and can take her narrative further.

Concluding comments relating to the material as a whole

In the entire dialogue with Sanna, she expressed EVA-relations between herself and the world 120 times; 64 of which were to do with the environment and sus-

tainable development. The rest were connected with her education, her leisure-time activities and her plans for the future. During the conversation with Linn, the dialogue identified 54 EVA-relations to environmental issues. It would therefore seem apparent that both Sanna and Linn associate with questions about sustainable development and the environment by expressing desires, hopes and intentions, or in terms of right, wrong, beautiful, ugly, true, false, or through EVA-relations.

Conclusions

One conclusion that can be drawn from the material and the analyses is that dialogue can be described as a process of meaning-making, where the interlocutors associate with the world through different emotional standpoints or so-called EVA-relations. This does not happen gradually but is fully integrated in that the conversation proceeds and takes the following form.

During the dialogue, experiences and relations are re-actualised in the world (Östman, 2003). In these relations conflicts between different action alternatives are constantly being discerned. During the course of the dialogue, the students regard themselves as individuals in these alternatives. They associate personal, positive or negative EVA-relations to that which appears, and at the same time indicate to which they belong/do not belong. They do this continuously throughout the dialogue and at the same time create meaning around themselves as individuals.

In the analysis I have been able to draw attention to the fact that a dialogue about the environment and issues of sustainability tend to create emotional and aesthetic EVA-relations to the world. I have also shown that these relations lead to the taking up of positions. At the same time as we establish EVA-relations, and through these create continuity in a dialogue, we also take a stand for or against something and how we ought to act.

Discussion

When postmodern critics debate people's relations to nature they usually mean that the enlightenment paradigm has influenced the modern person to put too much confidence in science and rationality, based on root metaphors such as anthropocentrism, individualism and mechanism (Öhman, 2006b). Here I would once and for all like to express my respect for the critical analysis' ambitions to track down and reveal structural oppression. However, in this study I have tried to take the third route and instead make a pragmatic analysis (Wickman, 2006). Instead of leaning towards philosophical discourse analyses, I have

chosen to test how values, feelings and the aesthetic come to direct expression when two students converse with an interviewer. What I think I can show is that we do not always need to look beyond the actual situation, and that we perhaps do not always need to hunt for determining cultural patterns in, for example, the paradigm of the modern era, when stating how people relate to nature.

Dewey has drawn attention to how we are often tempted to talk about people's emotional experiences as if they existed independently of the world around us. In this way, feelings like love, remorse, fear, or disgust, have become separate entities (Dewey, 1934/1980). When Dewey discusses feelings he suggests that these are dependent on both the individual and the world. We always love, know and act in relation to things and phenomena. All experiences pre-suppose "nature." Or, as Dewey himself puts it:

> Emotion belongs of certainty to the self. But it belongs to the self that is concerned in the movement of events toward an issue that is desired or disliked (…). In order to be emotional they must become parts of an inclusive and enduring situation that involves concern for objects and their issues (Dewey, 1934/1980, p. 42).

Here I have mainly chosen to test Dewey's argument about the aesthetics empirically. Through my studies of conversations I have been able to point to how these are enacted in the continual presence of values, feelings and the aesthetic. All this could also be expressed as that: in the conversation young people engage at a tangible level with the world via values and emotions.

But what this study has also been able to suggest is that these relations are not neutral. At the same time as we create self-relations to the world around us via values, emotions or the aesthetic, we also choose to either belong or not to belong. When we create an EVA-relation we also take an ethical stance. This can be said to contribute to the creation of meaning in our lives. When Dewey describes how we integrate the intellectual with the emotional he is describing a rhythm that he argues is aesthetic. This can be described as that, when the trinity between self, values and the identified phenomenon create continuity in our lives we have then made the world a part of ourselves and allowed it to develop the aesthetic in our lives. In this way we make the world whole through action and can move on.

I have thus been able to indicate how the students, in the conversations relating to sustainable development that have formed the basis of this article, form personal relations with those phenomena that are exposed in a way that includes values, emotions and the aesthetic. This can generally be described as: in a first stage the world in divided into reflection, where a gap or a conflict is identified between different alternatives (Lundegård & Wickman, 2007). But the world does not remain divided. At the same time as the phenomenon is connected to

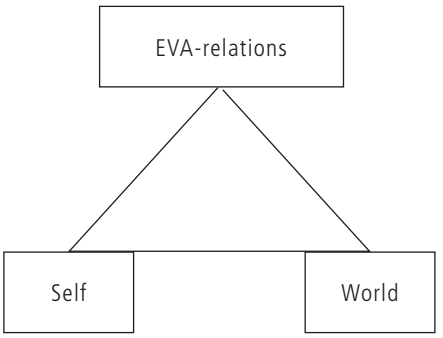

Figure 1. Communicative action creates a trinity between self, values and the world.

us via an EVA-relation, we also take a for-or-against standpoint to that which we have identified.

Here I would like to say that it is in the actual identification, in the value-related relations and in the moment of wanting to belong or not to belong, that we should start when creating a teaching programme around these issues. It is only when we can create a teaching programme that makes it possible for students to couple the content to themselves via the taking of standpoints that it becomes meaningful. Such a state also allows for the development of the aesthetic in their lives.

In this study I have, in a tangible way, been able to show that the disassociation with nature that the critical analysis often alludes to (see, for example, Merchant, 1994; Littledyke, 1996; Hornborg, 2001; Gough & Whitehouse, 2003; Sterling, 2003), is not always evident in young people's spontaneous discussions. Like, for example, Öhman (2006b, 2007), I have been able to draw our attention back to how some students actually act in practical situations. Here I also argue that, without needing to invoke transcendental mysticism, we can say that in such situations we connect ourselves to the world through communication, and find ourselves at one with it. What is more, it is a relationship that could very well be described as holistic.

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"We have to kill the animals so that they won't die!"

– Classroom discussions about hunting as a dimension of ESD

Helena Pedersen

Introduction

Education for sustainable development (ESD) has evolved as a field of education and research to include not only the development of economically responsible management of natural resources, but social, ethical and political aspects as well (e.g. Fien, 1994; Warren, 2004; González-Gaudiano, 2005; McLaren & Houston, 2005; Almers & Wickenberg and Kronlid & Svennbeck, this volume). These perspectives converge in research on hunting as a dimension of ESD around the notion of human-wild animal relations; relations that are problematised in the present ethnographic investigation of how discussions about hunting take shape in the classroom.

The present study is located in the intersection of ESD research, values education research, and human-animal studies[1] and is part of a larger research project on human-animal relations in formal education (Pedersen, 2007). The study illuminates processes by which the view of nature and wild animals as a resource for human society is both consolidated and contrasted with challenging perspectives, and how these contrasts are negotiated in different classroom situations. My main research objective has been to investigate the social processes and meaning-making practices by which human-animal relations are constituted as part of discussions on hunting in school, and their implications for ESD. In this way, the investigation explores how value dimensions of ESD can be configured in educational practice.

1 Human-animal studies is a cross-disciplinary area of research providing a platform for the development of knowledge about human-animal relations and interactions primarily from perspectives of the social sciences and the humanities (Shapiro, 1993).

Theoretical points of departure: Critical theory and critical pedagogy

The sections that follow present classroom interactions that may be used in ESD research as analytical tools to help us identify components of dominant discourses of human-nature relations. As Bonnett (2003) has formulated a general concern in ESD, these tools may help us identify and critically examine underlying motives that order current social practices. This is also a central critical theoretical approach in the Frankfurt School tradition, which provides a general framework of the present study.

Relations between human society and nature are fundamental notions in Frankfurt School critical theory, but relations between humans and animals more specifically have also been critically focused in a number of works by Frankfurt School members (e.g. Adorno, 1974, 2000; Held, 1980; Marcuse, 1991; Horkheimer & Adorno, 2002). Critical theory attempts to explain the ways in which dominant ideologies permeate everyday interpretative frameworks by examining the interplay between structure and social practices. By critical reflection we can develop an understanding of the present societal order as a social product rather than as something given and "natural", reveal its inherent conflicts and contradictions and understand that it is open to transformation (Held, 1980). Bringing key ideas of critical theory into education arenas, recent critical pedagogy and ESD oriented research has argued for a stronger recognition of animals as individual subjects in human-nature relations, thereby reaching beyond a focus on their instrumental ecological function as species representatives (e.g. Selby, 1995, 2000; Kahn, 2003; Andrzejewski, Pedersen & Wicklund, forthcoming). These versions of critical theoretical and critical pedagogical approaches to ESD provide a background to my analyses of classroom contexts where issues about hunting are brought up.

The ethnographic method

The investigation builds on an ethnographic field study. It was carried out in three upper secondary schools in Sweden (students 16-18 years old) that I call School X, School Y and School Z. At School X and Y I visited vocational programmes in animal care, designed to prepare students for professions in areas such as zoos, pet shops, wildlife management, veterinary clinics and so on. School Z focused on university preparatory programmes in the humanities/social sciences. The ethnographic approach includes participant observation studies, informal interviews and conversations with students and teachers, and analyses of study materials, documents and other artefacts in my field schools. Each day of ethnographic fieldwork was documented in field notes and processed in the form of a field log, a field diary and a research journal; each form having a specific

purpose in the planning, pursuing and analysing of the empirical material produced in the field (cf. Beach, 1997). I also carried out 9 semi-structured interviews with students, teachers and school leaders at the schools. The interviews took place between September and November 2003, and the ethnographic study between March and December 2004. Prior to and during my field study, I took measures in order to follow the research ethics principles in humanistic-social scientific research developed by The Swedish Council for Research in the Humanities and Social Sciences (HSFR).

Critical discourse analysis and data interpretation

Most of my empirical material was analysed not only as part of the context in which it appeared or was used, but also in relation to a wider discourse of human-animal relations in society. Critical discourse analysis (inspired by above all Zeeman et al., 2002 and Carabine, 2001) was a tool in the process of relating these different levels of analysis to each other.

Principles for the selection of data presented in the study include "typical" situations that recurred during observations as well as other situations that I considered significant for the purpose of the study. Such situations could, for instance, accommodate interaction that I regarded as deviating from the usual social interaction norms of a particular classroom; interaction or events evoking strong emotional expressions or responses among the people present; interaction where acts of dominance or resistance were clearly played out, etc. A primary intention was to attempt to capture a variety of meaning-making processes in human-animal relations within the realm of the "ordinary" daily activities of the schools.

This article is structured around four main themes. After a brief outline on how hunter education was organised and justified in the schools, three different hunting practices (lion hunting in South Africa, British foxhunting, and Swedish wildlife management) are discussed with respect to how they took shape in the classrooms. This is followed by an analysis of how the hunted animal is constructed in each context. Finally, hunting is situated within a larger framework of previous research based on (primarily) gender analyses.

Organisation and justifications of hunter education in the schools

At School X and Y, the animal caretaker programmes included hunting issues in courses in wildlife management and animal protection, respectively. Although School Z did not have this animal caretaker profile, a course in the theory and

practice of hunting and two philosophy lessons on animal ethics included some discussions on hunting. The hunter education course was an elective course that students could choose amongst a range of other "complimentary studies" alternatives. It was the second consecutive year that this course was offered and 26 students had registered for it.

In the animal caretaker programmes, knowledge and skills in wildlife management/hunting were seen as an important part of animal caretaker professions. At the social sciences oriented School Z, hunter education was perceived by teachers and students alike as a learning opportunity that created possibilities for a recreational pastime and for achieving valuable knowledge about animals and nature. The inclusion of hunting as one among many other complimentary study options such as furniture painting, diving and taking a driver's licence, emphasised hunting as a hobby and equated it with these other activities. For Pernilla, a third-year student in the hunter education class at School Z, the course was seen as a way to get easy school credits in what was otherwise experienced as a school with demanding study requirements:[2]

> The workload did not seem too heavy… School work is heavy now at the end of the third year. /…/ I looked through the entire list of courses from top to bottom to find the one that seemed to be the easiest. I had earlier chosen courses such as furniture painting, and thought that was fun (excerpt from field notes April 23 2004).

In the hunter course syllabus there is no mention of any critical analyses and the aims of the course are formulated as providing a background as to *why* hunting and wildlife management are *needed* (emphasis added). Susanne (a non-participant in the course), expressed a different notion about this when I asked her about her reasons for considering taking the course:

> It could be very good to [spend] time out in nature and… get more knowledge about… the countryside… And some want to have hunt-…, protective hunting and so on and then… if you have more facts [you can tell the hunters] you can't shoot here and go moose hunting on this island, instead of not having any knowledge at all. They [the hunters] listen more to somebody who has more knowledge and… knows more (excerpt from interview transcript September 15 2003).

Seeing the hunter education course as a tool of empowerment to confront hunters and protect animals was an exception among the students I met, however. Acquiring knowledge about hunting in order to resist it was neither encouraged

2 Even the teacher remarked in a conversation with me that the requirements for passing the course are not very high (field notes March 31 2004).

by the course syllabi nor the learning materials used. In fact in the main course textbook, *Jägarskolan* ("The Hunter School")[3], hunting was described in deterministic terms by it being an "innate instinct, an original drive" that is "deeply rooted in human nature" (as) our "oldest expression of culture" (Hermansson et al., 1999, pp. 13–14, my translation). Hunting as a "natural" form of interaction with nature was contrasted in the textbook with the presumed view of hunting opponents:

> To many city connected industrial people, the killing shots of the hunter may seem repulsive. They regard the animals as almost immortal and their conception of reality is not improved by romanticized and distorted nature descriptions in the spirit of Walt Disney (Hermansson et al., 1999, p. 16, my translation).

Another learning material, used at the wildlife management course at School X, justified hunting in terms of fauna preservation, regulation of animal populations and "enhancing the availability of huntable game" (*Viltvårdskompendium*, 2000 p. 24, my translation). On its cover page, a paradox embedded in the claimed justifications for hunting was acknowledged in a quote from Uncle Jimbo (a character from the animated film *South Park*):

"WE HAVE TO KILL THE ANIMALS SO THAT THEY WON'T DIE!"

The production of an ethical "framework"

During my classroom observations, I found that hunting discourses took shape in accordance with certain criteria: The *location* of the hunt, its *purpose*, *who* the hunter is, *how* the hunt is carried out, its *circumstances* and the *animal species* hunted. These criteria constructed a complex blueprint against which various forms of hunting were judged and constitute the basis of a normative framework of the "sayable" in the classroom to which most students and teachers alike then adhered. To find out where in the "framework" students and teachers located different forms of hunting, I noted how and to what extent the different forms were criticised, and which voices (proponents or opponents of hunting) were ascribed authority. The following sections outline classroom discussions of three different hunting practices.

3 The textbook was produced by the Swedish Association for Hunting and Wildlife Management, an NGO that organises Swedish hunters and represents their interests. I was informed by the teacher, Martin, that the book was to be replaced by a revised edition, but during my field study period the old edition was still used.

Beyond fair chase: Lion hunting in South Africa

Lion hunting in South Africa was the title of a critical undercover film investigation of "big-game" hunting adventure travel in South Africa that was shown to the students in the animal protection course. Prior to watching the film, the teacher, Gunilla, used a range of pedagogical approaches to create critical awareness of this particular form of hunting. For instance, she gave her students the task of searching the Internet for information on hunting travel and asked them to find out whether there are Swedish companies selling such trips and at what prices. Gunilla then used the Internet pages her students had printed out in a critical introductory discussion for the film. She talked about the financial interests involved and that the animals are given drugs and kept in enclosed areas to make them easy targets, and also mentioned that students in another class had discussed taking action against the travel organisers. After watching the film, Gunilla asked her class about their thoughts and at the same time expressed her own views: "What does it make you feel like doing [this film]? Drugging them [the hunters] and shooting them? I agree". (Field notes May 17, 2004)

In another animal protection class, a discussion unfolded as follows:

One student remarks that the travel companies try to attract customers by offering alcoholic drinks. Gunilla adds, with a critical tone in her voice, that one idea seems to be that they are supposed to drink during the actual hunt. Some students say that Swedish companies also sell such trips. "Who do they appeal to?", Gunilla asks, and continues: "It is often *men* of a certain *age*". Gunilla holds up the Internet pages her students have printed out and leafs through them. "Can you understand that people have so much money to spend on this… I think it is sick (and) as illegal as it can be /…/" (Excerpt from field notes September 24, 2004).

The critical message concerning this particular form of hunting was clear. The next example – British foxhunting – was equally strongly rejected, although its context was different.

Upper class symbolism: British foxhunting

The Hunt was the title of another film shown during the animal protection course. This film presented the heated controversy over foxhunting in Britain and was preceded and followed by a similar critical classroom discussion as the film on lion hunting in which the teacher, Gunilla, called it a "cowardly" and "entirely barbaric" form of hunting with the risk of wounding animals. (Field notes September 17 2004)

During the actual showing of this film, no teacher was present. One of the students, Sara, took a seat right in front of the video screen and loudly commented on the film scenarios while watching. She positioned herself clearly on the side of the foxhunting opponents:

> Sara raises her voice right from the beginning of the film: "Damn, how disgusting they [the hunters] are! Damned bastards – noble people!" She imitates one hunter's speech in a ridiculing manner by grossly exaggerating his upper class British pronunciation and placing a tremendously heightened pitch on the last syllabus of his name: "My name is Ru*pert*!" When we are shown a close-up of a hunter's injured arm, wrapped up in bandage, Sara laughs loudly. Shortly afterwards, she again demeaningly imitates the hunter's name: "Ru*pert*!" By the end of the film, Sara echoes the exclamations of the anti-hunting demonstrators: "Scuummm!". (Excerpt from field notes October 8 2004)

Sara's rejection of the entire foxhunting enterprise as well as the societal structures producing and re-producing it could hardly have been conveyed more effectively. The other students in the class also frequently expressed emotional reactions during the film (cf. Öhman, this volume, on "moral reactions").

The next lesson, Gunilla asked her students about the film. One student recited the hunters' explanation that they keep the fox population down so that there would not be too many foxes. "That is one thing", Gunilla replies, and then asks if the hunt wasn't cruel too (field notes October 15 2004). Sofie, another teacher who showed her class the same film, wrote a list on the whiteboard summarising the arguments of both the foxhunting proponents and the opponents:

Foxhunting

+	–
(breeding!)	
– wildlife management	– painful
– right/cultural heritage	– upper class sport, leisure hunting
– status	– bad riding skills
– subsidies to the landowners	– wounding foxes
– job opportunities	
– money	

(Excerpt from field notes November 8 2004)

Sofie's list embodies an effort to give voice to "both sides" of the foxhunting controversy. However, her approach could only be understood as a pseudo action, since other signals, operating in parallel with the surface structure of the lesson, conveyed a different message. When talking about the arguments of the proponents (the "+" column of the list reproduced above), her voice became sarcastic and she pointed out the immanent inconsistencies in their reasoning, thereby rendering their arguments largely invalid:

> Sofie tells her class that in many places, the foxes that are hunted (purportedly to keep numbers down and reduce damage) are actually *bred* and that the wildlife management argument is therefore not correct. She

> further remarks that at the beginning of the film the hunter had a completely different view of the fox than at the end. Sofie continues: Some shooting teams go out before the foxhunt and fill up the [fox] burrows. If the fox manages to hide it is no real sport and then the hunters will be disappointed… The discussion ended with teacher and students co-constructing foxhunting as an upper class sport, creating a shared classroom identity in opposition to the foxhunting discourse (excerpt from field notes November 8 2004).

The approach of giving voice to "both sides" was reflected in a written test a week later, where the students were asked to describe the viewpoints of the proponents as well as the opponents of foxhunting, and to outline their own thoughts about it (cf. Öhman, this volume, on "ethical reflections"). All the students expressed negative thoughts on foxhunting. Many of them referred to foxhunting as an upper class sport, which was framed as a negative feature and the fact that foxhunters shoot their hounds when they are not useful in the hunt anymore also provoked indignation among the students, seeing both the hounds and the foxes as being subjected to cruel treatment. Some students imagined themselves in the position of the hunted fox and described how they would feel in this situation. One student even compared the foxhunters to the Nazis in WWII. Another student wrote: "Hunting for pleasure is against human nature, or should be. The only form of hunting that is justified is hunting for food. Killing for pleasure is more like barbarity and all civilised societies should be above this".

Benevolent intervention: Swedish wildlife management

In Sweden, hunting has a long history as a cultural tradition and there are almost 300,000 active hunters in the country (Åkerberg, 2005). Danell and Bergström (2005) describe the increasing emergence of the ecological perspective in Swedish wildlife management since the late 1960s as a form of all-embracing ideology, nurturing a view of the hunter's mission as intervention in nature in order to adjust "nature's balance". Perhaps for these reasons, Swedish "wildlife management" was normalised in the classrooms and largely escaped critique. Johanna, a first-year student at School Y, explained to me that prior to the hunting discussions they had in class she thought that hunting was wrong, but now she thinks that animals sometimes have to be shot since we have taken all their predators away and otherwise "billions of roe deer would be running around everywhere" (field notes June 3 2004). The rationale here is that as long as an animal population comprises a certain number of individuals, hunting is inherently unproblematic:

> "How is it, are there many lynx [in Sweden]?" Peter (teacher at School X) asks. He continues: "There are so many that they *can* be shot". He asks how many animals there must be before they can be hunted: At least 100 animals

> to get a stable population. When there are two to three hundred animals, hunting can be permitted (excerpt from field notes October 18 2004).

The ethical underpinnings of the rationale constructed in the classrooms thus rendered "wildlife management hunting" both necessary and acceptable as a way of controlling the ecosystem.[4] The necessity and harmlessness of this form of hunting was further emphasised by positioning it against other more ethically objectionable forms. In the film *Lion hunting in South Africa*, it was explained that this sort of hunting is far from the annual moose hunt, which has broad popular support in Sweden. Swedish moose hunting is thus justified and framed as primarily unobjectionable and "good" by contrast (cf. Öhman, this volume, on "norms for correct behaviour"). An interesting question is what happens when a student challenges this strategy:

> Gunilla (teacher at School Y) asks her class about their reactions to the lion hunting film. /…/ One student, Sara, explains that "I am against hunting, regardless of whether it is about minks or wolverines or what have you." Gunilla then starts to talk about different forms of hunting. "Here, there was cheating on many levels", she says, referring to the film on lion hunting. "What forms of hunting do we have in Sweden?" she asks. "Is it legal to hunt foxes and bears in our country?" "For some quarry, there are certain [regulated] hunting periods, why is that?" One student replies that there would be too many [animals]. What happens then? Gunilla asks, gets a reply, and continues asking: "What sort of damage do they cause?" One student suggests traffic accidents. Gunilla confirms: *So* many [people] die in crashes with moose, she says, and attempts to summarise the discussion: OK, then we agree that the [moose] population has to be kept down. Sara, who doesn't accept her teacher's conclusion, objects: "I can't understand why you should kill animals for your own benefit". One of Sara's classmates argues against her: When these animals are hunted, at least the meat can be taken care of. It is not merely trophy hunting. Gunilla gives support to the argument. Another student adds, "there was a list in the newspaper of what animals you are permitted to shoot when at home." Gunilla added: "You can take a look at the website of the Swedish Association for Hunting and Wildlife Management and get a lot of correct information on regulations" (excerpt from field notes September 10 2004).

This classroom interaction indicates that there was a normative framework for certain forms of hunting. When a student contested the artificial consensus in

4 A few teachers, however, critically remarked in the classroom that hunters want to have large populations of animals so that they can get permission to shoot them (field notes November 15 and December 2 2004).

the classroom, her perspective was neutralised by a black-and-white picture where the "bad" form of hunting got all the critique and the "good" form was protected. Opportunities for re-negotiating the hunting framework were closed off and the voice of authority – the Swedish Association for Hunting and Wildlife Management – was presented as a neutral source of information and given the final word.

The animal as hunting target: "Victim", "pest", "game", and "meat"

Depending on the context and form of hunting discussed in the classroom, the hunted animals were ascribed different roles. In the case of lion hunting and foxhunting, the animals were constructed as "victims" by teachers and students alike. The film on lion hunting, and the classroom discussions around it, emphasised that the lions are drugged and kept in enclosures to make them easy targets. Further, the film stated that: "Lions are stolen from the [nature] reserve to die without having a chance and end up on the wall of some rich Westerner". (Field notes May 17 2004) Likewise, British foxhunting was framed in the classroom as "cruel", "cowardly" and "barbaric", with wounded animals as a potential risk. When animals are conceptualised as "victims", their sentience as individual beings is placed in focus.

In the case of "wildlife management", the hunted animals were conceived of differently. Moose, for instance, were said to increase too much in number and cause different types of harm and problems such as traffic accidents. In a wildlife management class at School X, wild boars were said to enter golf course areas and eat rare orchids, and beavers dig holes in and destroy roads (field notes October 25 2004). By positioning certain animals as "problems" or "pests", justifications for killing them are defined. This rationale goes back to the 19th century when the Swedish hunting discourse often described hunting in terms of a civilising project, a fight against "wild nature" and its pests that were considered undeserving of human protection (Dirke, 2005).

In order to justify hunting, animals do not have to be conceptualised as "pests". "Game" is another epithet that alone suffices as a signifier of legitimate hunting. In the hunter education classroom at School Z, "game" was defined as follows:

> "What is 'game', Jenny?" asks the teacher Martin one of his students. He writes on the whiteboard:
> Game – all wild mammals and birds
> Hunting – [to] hunt, catch and/or kill game
> (Excerpt from field notes April 23 2004).

With this concise definition as a starting point, the notion of "game" animals was further elaborated in the hunter education classroom on basis of the *size* of the animal killed (typically symbolised by the trophy), which is also an important marker of the success of the hunt:

> (The teacher Martin writing on the whiteboard):
>
> Moose
> (Height): 180-210 cm bull
> 150-170 cm cow
>
> "Can you imagine such a big moose?", Martin asks. One student asks: "Have you ever popped one like that?" Referring to the animal by the size of his antlers, Martin responds that "a 10-pointer is the biggest I've shot" (excerpt from field notes April 23 2004).

Not only their size, but also the *number* of animals (conceptualised in terms of their availability for legal killing) seemed to be ascribed significance:

> When one student asks "Where are fallow deer found, then?", Martin explains that these animals have increased more and more in number. Another student then comments: "Out and pop 'em". Martin, echoing the student's comment, repeats: "Out and pop them, yes". /…/ One student, Karl, wonders how many moose may be shot: Are you allocated a certain number of animals that you are permitted to shoot within a specific period of time? Martin confirms this. The number [of animals] depends on the size of the area. Karl asks if the number [of animals] is [counted] per hunting team or per person. Martin replies that if you are on your own, "then you can shoot your moose". Karl laughs. Martin develops his comment by explaining that an area produces a certain value and that just now the authorities want more moose to be shot (excerpt from field notes April 23 2004).

In these classroom interactions where animals are viewed as "game", hunting is given a value that is socially constructed around certain quantitative indices, i.e. the number of animals available and their size. The animal's size is symbolised by the number of points of the antlers that will later be transformed into a trophy and by representations of the height and weight of the animal's body; both as a living creature and as dead meat. These examples of the symbolic exchange values of the hunt articulated in the hunter education classroom mean that hunting therefore cannot only be understood in purely economic or ecological terms. Hunting must also be seen as a symbolic meaning-bearing and identity-creating activity (cf. Cartmill, 1993; Bye, 2003).

There are more aspects of the notion of "game" animals. While individual

animals are valorised in terms of their size, they are, paradoxically, also de-individualised so that one individual can be seen as representing all other individuals of the same species as a collective entity and terms like "planting in" and "locating out" game (*Viltvårdskompendium*, 2000 pp. 41-42) are used that implicitly equate animals with plants or artefacts. The term "biomass" (Hermansson et al., 1999, p. 37) is also used. This term incorporates live animal bodies and plants in a collective quantitative/quantified entity at its most logical extreme, thereby denying them subjectivity.

Hunting is often seen as a way of actively inserting oneself into the "food chain" (and thereby achieving a direct connection with nature) (Kheel, 1999). In a discussion on animal ethics in a philosophy class at School Z, one student remarked that "If we shoot the animals outside and eat their meat, they won't have to experience the [animal] industry" (field notes September 30 2004), seeing hunting as actually doing animals a favour by saving them from a worse destiny. For this speaker, the point is that in the end animals are naturally predetermined to be consumed by humans anyway.[5]

The co-occurrence of the discourses of hunting and meat consumption also took other forms when the learning process in the hunter education classroom involved viewing the animal as a dead object even before the animal is actually hunted (cf. Adams, 2002). One mechanism involved in this process was the concrete and abstract fragmentation of the animal body, reducing the animal not only to the sum of his/her anatomical parts but also to an object subjugated to human handling. In classroom interaction, this was expressed as follows:

> (The teacher Martin writing on the whiteboard):
>
> Carcass weight
>
> "What is carcass weight, then, Annica?" he asks one of his students. Annica replies, and Martin comments on her answer: "You have taken out everything [from the animal body], taken away the head and [the flesh] beneath the legs". And you have removed the skin, he adds. (Martin writing on the whiteboard): "Carcass weight: The weight without intestines, lower part of legs, skin, head, about 50 percent"… Martin says that it is called "carcass weight" since animals in the barn are slaughtered in the same way. "We should be able to shoot 50 percent of the winter [moose] population", he remarks, adding to what is written on the whiteboard:
>
> 50% shooting
> 50% – calf

5 The perceived acceptability of hunting animals for their meat led me to expect the issue of indigenous people's "subsistence hunting" to be singled out in the classrooms as the most ethically acceptable hunting practice, but this did not occur in the discussions on hunting that I observed. Rather, these hunting practices were placed in a negative light, for instance, by focusing on whale hunting and bush meat hunting, which were either heavily criticised or otherwise negotiated in the classroom (field notes April 14 2004; May 17 2004; September 24 2004; October 5 2004).

> One student asks: "How big are the calves, approximately?" Martin talks about the carcass weight of calves. The next question from the class is: "How much can a big bull weigh?" Martin talks about the bull's carcass weight, as well as their weight when alive. "Real beef,[6] right", he says (excerpt from field notes April 23 2004).

In the examples above animals are dislocated from original states of being, oscillating between their present life in the wild and their future dismemberment as dead raw material. It is in the interface between these two representations of the animal that a significant part of the hunting discourse operated in the hunter education classroom.

Hunting as a gender marked activity

Hunting practices have implications that stretch beyond human-nature relations. Critical studies on hunting and wildlife management include both gender and postcolonial[7] analyses, and some of these have situated narrative frameworks of hunting at the intersection of gender and race marginalisation and objectification (Luke, 1998; Kalof & Fitzgerald, 2003). Gender perspectives are particularly well represented in sociological research on hunting and such perspectives also emerged from my interviews and classroom observations, where occasionally a link between hunting, traditionally seen as a male domain, and gender was explicitly acknowledged. Carina, a third-year student at School X, told me that at her school, the (optional) hunter education course was subject to affirmative action on behalf of female students, waiving the tuition fee for them. Eric, a social science teacher at School Z, assumed that their voluntary hunting course primarily attracted boys, believing that male students feel that hunting is "close" to them and that female students experience more distance to it (interview transcript November 4 2003). Eric's assumption was supported by the fact that the hunter education class consisted of an overwhelming majority of boys (although a few girls also participated). The jargon in the hunter education classroom also affirmed the gender markers of hunting:

> A student told an anecdote he heard about a girl who shot for the first time. The teacher Martin seems to be familiar with the story, and joins in. According to the story, the girl [who hunted] had said "I have shot a little bull". Martin reveals that it was a (big) 27-pointer. "And she [the hunter] was a girl, right", he emphasises, adding that the boys' [in the shooting

6 The word "beef" has a double connotation: 1) A muscular body (of a living being). 2) A meat dish prepared for consumption.

7 Postcolonial critiques of hunting are presented in Pedersen (2007). See, for instance, Simpson (1999) and Proctor (2002) for analyses of hunting as affirmation of white male hegemony.

> team] egos were probably slightly broken at that time. The boys had asked the girl [who shot the moose] to keep silent about it. The students in the classroom laugh (excerpt from field notes April 23 2004).

The perspectives expressed by the teachers Eric and Martin resonate well with previous research on hunting from a gender perspective. Bye (2003) points out that women may be welcome to join the hunting party as long as they comply with the conditions set by the men and as long as their interest in hunting does not threaten the male community. Female hunters are expected to follow the masculine discourse in which hunting skills are measured by the number of animals killed, the size of the animal, and the antlers. In Bye's words, male hunters seek to protect the gendered (masculine) hunting space and find strategies that create a distance from feminine influence. Gunnarsdotter (2005) reports about similar experiences during her participant observations of hunting parties in a Swedish rural community.

The connection of hunting with masculine identity formation and male bonding goes deep (Cartmill, 1993), and previous studies point to several critical aspects of this connection (Cartmill, 1993; Dahles, 1993; Luke, 1998; Kheel, 1999; Bye, 2003; Kalof & Fitzgerald, 2003; Kalof, Fitzgerald & Baralt, 2004). In the history of Swedish hunting, hunting has been viewed as a "manly" sport or war against "pests" considered enemies of human civilisation (Dirke, 2005 pp. 76–79). This perspective contrasts with the contemporary view of hunting as harmonious human-nature interaction alluded to in the textbook *Jägarskolan* (Hermansson et al., 1999, pp. 14–17; cf. Cartmill, 1995; Kheel, 1999; Danell & Bergström, 2005).

Connections of hunting with masculine identity formation are relational and may be expressed differently in different social, cultural and historical contexts, but still signal something that is potentially problematic. Narratives and representations of hunting analysed by previous research not only indicate the objectification and subordination of human and non-human others to a particular kind of masculinity, but also contribute to creating a hierarchical categorisation of masculinity stereotypes in which men who do not hunt and who feel no innate urge to do so risk falling outside the normativity scale produced.

The capitalist logic of hunting

In the West, hunting has a history as a manifestation of the identity and privilege of elite classes (Cartmill, 1993) that is perpetuated today in, for instance, "hunting to hounds" and game hunting as a form of adventure travel. This perspective of hunting only partly applies to contemporary Swedish society, where hunting also engages members of other societal strata. Contemporary "wildlife

management" articulates the exchange value of hunting differently, embedded in a terminology incorporating the animals in a capitalist logic as exemplified below by interaction in the hunter education classroom:

> Martin asks his students what they think is the term for a certain animal [deer] "in the prime of his life". Martin gives the answer: "He is called *Capital*", he says, writing on the whiteboard:
> Capital – return
> 12 points (referring to number of points of antlers as a marker of "capital")
> About the opposite of the term "capital", Martin explains: "He goes in return" (referring to reversed development of body/antlers). The students laugh. One student asks: "Do they all become 'capital'?" When Martin replies that they don't, the student continues asking: "It is not something that all of them achieve?" One of his classmates adds to the question: "How many points will it be for the moose then?" Martin explains further, adding that in Norrland (the northern part of Sweden) they have bigger trophies (excerpt from field notes April 23 2004).

When presented to the students, this perspective opens up new modes of thinking about animals, and becomes part of the socialisation process of becoming a hunter. The terminology embedding hunting in financial relations was further developed in the learning material *Jägarskolan*. In the section "Hunting and ethics", the following statement was found:

> Good hunting ethics is to tax the ground on its yield. To overtax is unethical. Not to usurp the biggest possible allotment on the license, without working long-term for big and vital game populations, from which the surplus is taxed, is an example of good hunting ethics. (Hermansson et al., 1999, p. 252, my translation)

The concept of "taxing" was frequently used as a synonym for shooting animals in the textbook *Jägarskolan*, which thus represented animals in terms of an economic and symbolic resource and killing in terms of a routine economic transaction for regulating what is conceived as nature's surplus production.[8] This economic notion was presented already in the introductory sections of the textbook, where the value of hunting was calculated into percentages of "recreation value" and "meat value" in a manner that also added a certain pseudo-scientific aura to the hunting rationale. Animals are constructed as "game" and "game" is construed as a renewable resource, a production unit whose successful management generates both "meat output" and "pleasures

8 This representation of nature in Swedish hunting discourse goes back to the 19th century when animals were seen as a kind of repository existing for the benefit of the human being (Dirke, 2005).

and trophies" for human beings. These constructions help to socially and economically valorise the practices and products of hunting in a kind of distanced relation to nature that was otherwise emphatically criticised in the textbook (Hermansson et al., 1999, pp. 13–16).

Conclusions

Öhman (this volume) has outlined a didactic typology of ethical dimensions in ESD based on the notions *moral reactions*, *norms for correct behaviour* and *ethical reflection*. While all these dimensions are expressed in the empirical material presented above, I argue that the classroom interactions analysed cannot be understood solely in these terms. An analysis of how subject positions, power relations, and value hierarchies are constituted and played out in the classroom is also needed.

Although the schools investigated here differed considerably regarding the forms of hunting discussed as well as the pedagogical approaches used to deal with them, certain values tended to be embedded in the hunting discussions that developed. *Symbolic exchange value* was one of these. This value included the number of antler points, the size of the trophy and the weight of the animal's body before or after killing and dismemberment. The *commodity value* of hunting was another. This value included economic exchange values such as meat and pelts, whereas *use values* of hunting included recreational and sustainability motives.

The articulation of these values in the classroom justified certain kinds of hunting by valorising some dimensions of the hunt (such as the central role of the trophy and use values generated by hunting) negatively in certain cases and positively in others. Likewise, the same arguments that were accepted as justifying Swedish "wildlife management" (controlling the ecosystem and economic damage caused by the animals) were on the other hand rendered invalid in the case of British foxhunting. It was an effect of this that enabled different forms of hunting to be positioned as qualitatively disparate forms of activities (in terms of their perceived ethical acceptability).

"Wildlife management hunting" appeared as the most privileged hunting practice and three main aspects contributed to its position. First, the inclusion of other dimensions than hunting, such as knowledge about wildlife and their living conditions helped to form a larger context where the hunting part could be defined as a "natural" activity. Second, the targets of hunting – the animals – were constructed in ways conducive to the different hunting forms. That is, as individual, sentient subjects in lion hunting and foxhunting and as a collective mass (biomass) largely devoid of subjectivity in wildlife management. Third, as

Donald (2006) notes, the condemnation of *some* forms of killing[9] may serve a diversional purpose as a "false alibi" that vindicates other forms of killing and removes a sense of guilt towards them by positioning them as *not* cruel (Donald, 2006; The Animal Studies Group, 2006). Paradoxically, whereas hunting as an activity giving pleasure and status was largely rejected as unethical and distinguished from discussions about "serious" wildlife management in the animal protection course at School Y, these were seen as uncontroversial and integrated aspects of wildlife management in the hunter course at School Z.

In these ways, hunting discussions taking place in the classroom may employ a range of strategies that effectively disconnect certain hunting practices from others and place them beyond the reach of destabilising forms of critique. In the process, larger frameworks of domination of human and non-human others were selectively discussed in relation to certain forms of hunting and not others and congruities between hunting practices were left unexplored. These findings offer ESD a range of critical departure points by which to analyse and interrogate the multiple and sometimes contradictory meanings of hunting that are produced and reproduced in school as well as in other parts of society, and how these meanings resonate with the values and objectives of ESD.

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Breaking and making norms – Young people's stories of consumption actions for sustainable development

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In this book's introductory chapter Öhman reminds us that changes in the global climate have become increasingly obvious: extreme heat waves, droughts, floods and melting glaciers have been observed to an increased extent. According to the assessment of the most comprehensive UN climate report to date, it is highly probable that humans are the primary cause of the recent increase in the average global temperature. Two thousand of the world's foremost climate researchers stand behind this massive fourth report of the Intergovernmental Panel on Climate Change (IPCC).[2] The report states that the release of greenhouse gases at or above the current levels will result in further warming and cause considerable global climate change in the 21st century. These changes will most likely be of a greater magnitude than those observed in the 20th century. A Swedish Government Official Report (2005) indicates that humankind's collective life style, with an ever increasing conversion of material and fossil energy to such things as transportation, food and clothing does not establish the conditions for a sustainable development[3] that takes into consideration coming generations as

1 This article is written within The research programme "Action Competence for Sustainable Development – stories of active youths" sponsored by the Swedish Research Council, Formas 2006–09.

2 Recognising the problem of potential global climate change, the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988. The IPCC was to assess scientific, technical and socioeconomic information relevant to the understanding of climate change, its potential impact and options for adaptation and mitigation. The reports by the four Working Groups provide a comprehensive and up-to-date assessment of the current state of knowledge of climate change: http://www.ipcc.ch/index.html

3 This is based primarily on the well-known definition of sustainable development that was introduced in the Brundtland UN World Commission, *Our Common Future*, 1987. The World Summit on Sustainable Development in Johannesburg in 2002 stressed the three dimensions – ecological, economic and social – of sustainable development. The Summit also underscored the need to integrate sustainable development perspectives into educational systems at all levels in order to promote education as a decisive factor for change. The UN Decade (2005-2014) of Education for Sustainable Development (DESD) was proclaimed by the UN General Assembly in December 2002.

well as the distribution of global power and resources. The world has already surpassed its ecological carrying capacity by 25% as a result of mankind's total and unevenly distributed production and consumption (Swedish Government Official Report, 2005). A UN Food and Agricultural Organisation report (FAO, 2006) indicates that the global impact of livestock production on climate has surpassed that of the transport sector's.

In the Swedish media, climate and resource issues came to the fore in the autumn of 2006. A discussion accelerated regarding the need for the high-consuming portion of the world's population to change life style and consumption patterns in a sustainable direction. On today's editorial pages and in political arenas, voices are being raised that in addition to investing in new technology, we need to establish new norms that support actions allowing sustainable development. In this explorative study we have searched for stories describing patterns of action and actor contexts with the goal of obtaining in-depth knowledge on how and where learning on sustainable development is taking place. This is significant as the UN is again highlighting Education for Sustainable Development (ESD) in the 2005-14 Decade of ESD (DESD) as one of the most important tools for change. Our information providers are young Swedes who, several years before the autumn 2006 sustainability boom, had already begun searching for patterns of consumption and life styles that could be combined with long-term sustainable global development. What can society in general, university employees[4] and the world of education learn from the experiences of these young people? What can be done differently in today's education?

Starting point

This study is based on the assumption that it is the *distance moral*[5] dimension in actions both spatially, but above all temporally, that is the specific political novelty in the fundamental values of sustainable development. This can be compared with the closeness moral dimension that has a longer tradition in the Swedish environmental discourse or the Swedish school system's attitude to environmental issues. In the social norms, which are assumed and can be identified in the sustainable development themes, taking responsibility is intergenerational and global.

4 In Sweden, the research community has recently (2006) been assigned an additional task by a new amendment to the Higher Education Ordinance's opening paragraph: Institutions of higher education, "… shall promote sustainable development in their activities." This means that research and instruction directed towards ESD is one of Swedish society's prioritised knowledge and research fields that will contribute to developing and supporting norms for sustainable consumption patterns.

5 Distance moral here means an intergenerational and global responsibility. Distance moral actions have consequences for someone you have no direct relation to for example, because you do not live at the same time. The consumption of phosphates (non-renewable resource) by the generation currently living, for instance, will most likely have consequences for generations that we will never meet. The distance from those whom the moral relation affects can involve time as well as place (see Almers, 2005).

The goal of this study is to interpret portions of seven young adults' stories on their distance moral commitment. We have limited the study results to the young people's action patterns and social norms for three specific types of consumption: transport, food and clothing. This is because these action patterns are socially reproducible and can be empirically identified using the methods of the social sciences. The young people have a common moral-ethical-ideological point of departure in a distance moral commitment manifested through their participation in different environmental organisations. For them, acting with distant moral responsibility is not always considered as being identical with what others believe is normal, i.e. acting according to prevailing social norms.

Subjects and selection

The young people who participated in the study were selected strategically.[6] The crucial selection criterion was that they were actively committed to issues that reflected their feelings of responsibility for individuals and/or ecosystems beyond themselves in time and location. What they do to influence such things as climate change or the effects of flooding on Southeast Asian farmers and fishermen resulting from cutting down mangrove forests to raise giant shrimp, hardly has direct consequences for the young people themselves, anyone they know or with whom they have a personal relationship. These are examples of issues that concern distance morals.

The seven young people ranged in age from 17 to 26 years at the beginning of the pre-study in 2004. The upper limit was set at 26, since that is the official age limit for membership in youth organisations in Sweden. Some of the participants passed the 26-year-old limit during the study, but they had been pupils in the Swedish school system in the 1990s when *contributing to sustainable development* was an official and articulated educational goal.

Focus, aim and research questions

In relation to the common themes of this anthology, *Values and Democracy in Education for Sustainable Development,* our main emphasis is on distance moral dimension, social norms and impact. This explorative study is motivated by the goal of seeking knowledge about and an understanding of how it has been and is possible to break established social norms and incorporate new social norms, consumption patterns and habits. Our focus has been to work with the themes

6 One chooses interview subjects that are of interest from the point of view of the study. The aim of such a selection is not to be representative but to discover more qualities, and as in this case, to understanding people, their intentions and actions.

of social norms and norm breakers to find tendencies and indications in the material that can illuminate the following research questions: What are the points on which the young people – reflectively or unreflectively – break with society's social norms and with commonly existing social consumption patterns? What are the social norm environments and arenas that over time have supported the norm-breaking and norm-making development of the youths in their consumption patterns? What does this mean for ESD and ESD research?

Method and theory

The empirical basis of this study can be found in the life history tradition (Bertaux, 1981). In this case, it means that the empirical material is collected through a combination of life story interviews and thematically open interviews that aim to illuminate the research questions. There are different traditions in story research, each with its own approach to the relationship between life and story. The empirical study that has contributed material to this explorative study (Almers, forthcoming) has its basis in Merleau-Ponty's phenomenology (1945). In the present research we view the story as an articulation of life that both clarifies and provides it with a new, richer meaning.

Thus, we view the stories of the young people neither as constructions independent of lived experience nor as representations of the past from a naively realistic perspective. Instead, we see the stories from the interviews as constituted interpretations of the past, the present and notions of the future. The lived experience, including the interview situation, is the basis of the stories that are constituted.

The empirical material is from an ongoing research project and is not to be considered as general results for the entire group of young people who are distance morally committed. On the other hand, with the assistance of the empirical findings we want to try to understand how distance morally committed youth reason about their norm-breaking actions. With the social norm as an analysis tool, we have studied their stories focusing on their statements about *consumption actions* when it comes to transport, food and clothing. Embedded in the actions there is a social norm that can be identified and formulated by means of the question: What does the person say that one *ought to do in the social context*? In the analysis, we then let the results emerge from the material as answers to the questions asked.

The *social norms* – here defined as socially reproducible action directives – that govern and influence our lives (i.e. our action and consumption patterns) are often unspoken, invisible and taken for granted.[7] It is not until we actually study the *norm breaker* and his or her patterns of actions that we can catch sight

7 See Öhman's chapter on norms in this anthology.

of and identify the norm environments in effect. By focusing on the norm breaker's social consumption patterns we can learn something about these influencing processes and their terms. From a research perspective based on the social norm model developed at the Sociology of Law Department at Lund University, actions carried out in reality are studied in order to understand why things happen as they do. Norm research deals with understanding the driving force of human social actions. The action is seen as subjectively determined and science has to then work with scientific categories and concepts that are able to relate to the normative. The concept of norm can be seen as the connecting link between the actual and the desirable, between what is and what should be, or as expressed in social scientific terms, between system and action.[8]

Will and reason are central driving forces/dimensions/prerequisites for acting with the intention of attaining a desired state or value. Knowledge (situated cognition) is another important prerequisite for being able to carry out actions and solve problems in the way one wishes. An additional prerequisite deals with the possibilities to realise that which one both desires to attain and has the knowledge to implement. It is the terms of the system that both enable and limit the action alternatives that are available. Norms influence everyday practice when people act according to the action directives of the social norm, when one behaves as others do in a given social situation, that is to say, normally.

Here we use the norm's three dimensions – values, knowledge and system conditions – as analytical tools for interpreting and understanding how norms are constructed. Norms are seen as a mixture of cognitive factors, system conditions and values. How they appear in the individual case is an empirical question.

Empirical basis

The results are illustrated with quotations from the interviews to show how the young people interviewed reason *about norms* concerning transport, food and clothing. These three consumption areas spontaneously and frequently appear in the stories about norms in the study. It is in the young people's motivations for their actions that the distance moral norms emerge. Their distance moral commitment is expressed in their life style choices as well as in their efforts to influence living conditions and structures for a sustainable development. The choice of influencing methods varies from individual to individual, but also in the course of one individual's life. For example, some of the young people have moved from an action strategy of making as ecologically and socially sustainable

8 Empirical research on norms has been elaborated in articles, books and doctoral theses from the Sociology of Law Department, Lund University – some of them only with an English summary (2006), Elster (1989), Etzioni (2000), Hechter & Opp (2001).

choices as possible in their own life styles to trying to affect structural changes. They tell how different events and encounters with other approaches have contributed to them changing action strategies – and starting to act in accordance with other norms. In this study, the statements used are disassociated from the individuals. By assigning them letters (I, J, K, L, M, N and O), however, it makes it clear which quotations come from the same individual. The statements are provided to concisely illustrate how norms related to sustainable development and distance moral can be expressed in different ways in the stories of young activists. Words that are emphasised by the young people in their oral stories have been italicised in print.

Results

The results are initially presented in relation to the norm themes related to transport, food and clothing and the arguments put forward for norm breaking in these areas. Subsequently, norm arenas are presented including school, the family and voluntary organisations where the norms are developed and supported as well as how the young people describe their significance for norm development. On the whole, the interviewed youths are satisfied with their choices of food, clothing and transport. They do not often see their choices as sacrifices even though they deviate from what are considered to be common choices among young people.

Norms related to transportation

For all the people interviewed, living sustainably when it comes to transport primarily means avoiding car and air transport as much as possible. Public transport, primarily railway, is stressed as being positive, as are walking and cycling. One of the interviewees advocates using sources of energy other than fossil fuel. Global fairness is evident with all interviewees, namely the idea that all people on Earth have the same right to environmental space, i.e. just as great or limited a right to use the biosphere and atmosphere as a resource and recipient. One of the interviewees relates how he once asked in a public debate if it would be sustainable for all Chinese to have cars. And then if the same applied if all Swedes had cars.

> O: So I asked, "Is it sustainable that all Chinese have *cars*?" And for the public it was obvious: It was *not* sustainable. And then I asked the question, "Is it sustainable that all *Swedes* have cars?" … Even if most of them answered no, there was a totally different *hesitation* in the answer. It wasn't as *obvious*. What is one's view *in that case*?

Interviewee O shows indignation over a view that he thinks means that people make a distinction between Chinese and Swedes when they decide if it is sustainable to have a car; a view that goes against the idea of fair environmental space.

Reasons and arguments for norm breaking in the transport sector

The reasoning behind walking, cycling or taking the bus, train, underground or tram instead of a car or plane is, "to practise what you preach as far as possible" (K). But it also has to do with "wanting to show that it can be done" (O), that it feels good not to support bad systems, that your experience is influenced by your values to the point that you can actually feel bad about doing something that runs contrary to them. Knowledge, morals and feelings are interwoven. One of the interviewees relates how your aesthetic experience is coloured by your knowledge and moral values:

> O: I don't want to support the *system*… You're influenced, you know, by the values you *have*, which means that I think it's really a *pain* to drive a car everyday, entirely for my *own* sake. Just like I think that wind power can be beautiful, I think that driving is a real *plague*.

All those interviewed did not feel the same. Driving a car for another interviewee is an emotionally positive experience. But that is in conflict with his values which are against driving. He resolves this by not buying a car in spite of pressure from others:

> I:…like my brother asked, "When are you going to get a car?" And I just said, "No, *I* don't plan to get a car." For sure, it's *fun* to drive a car and all. And if you *have* a car you are going to *drive* it. And so you don't get a car (laughs) if you don't believe it is *good*. Take public transport as much as possible and … cycle. If you have access to a car, you *get* lazy.

Several of the youths relate that they see themselves as parts of a system and a culture that is not very easy to completely break out of. They believe that it may not even be desirable or effective. Living sustainably at a personal level is not an end in itself if it does not result in further changes. Breaking the norms is a matter of balance. They reason about how far one should go and how much one should adapt:

> O: But at the same time you have to live, right? And you live in a given culture and you can't entirely break out of it. Or of course you *can* break out of it, but I don't think that is the smartest way to go.

For some of the interviewees, one adjustment to the norm involves flying when the purpose is perceived as being legitimate. Flying on the job or for a good cause can be allowed, but flying to go on holiday is excluded: "It's out of the question". (K). It is important to be able to defend one's action for oneself. A trip is considered legitimate if it serves a purpose and if it is because a person is going to move away for a long time and do something beneficial:

> O: In that case I could imagine flying there. It would feel more OK for my own sake. […]. Then I can at least defend the carbon dioxide emissions. [Who would you defend yourself against?] Myself (laugh). But that I hopefully *learn* something in the works and do something *worthwhile* when I'm there.

From the perspective of impact, some of the youths, over time, tone down the individual responsibility aspect for emissions and life style in some contexts. You cannot expect that individuals should be so up on the issues and motivated that they "should pay 10 times as much to take the train" (O) instead of flying, for example. In O's opinion, a more accessible approach would be to influence public opinion by lobbying for "political acceptance" among citizens of policy decisions that make flying more expensive and trains cheaper.

> O: In other words, I was probably more judgemental during high school. Now I have greater understanding that some people have other priorities or that they don't *know* any better. It's like impossible to *have* that knowledge. You can't expect that of every individual … Well, yeah, maybe *knowledge* about climate change and some awareness that we have to do something about these problems.

Norms related to food

The food related section of the young people's stories are associated with the following norms: not to eat meat or eat less meat, purchase KRAV (organic) labelled/ecologically produced food, purchase locally produced and seasonal products, buy fair trade certified products, boycott products that are considered to be unsustainable "villains" such as giant shrimp and threatened fish species. Here you find boycott[9] as well a buycott[10] among the methods of applying pressure. Another, and in part alternative approach to advance sustainable food consumption and production by means of one's own life style, is to work for collective changes in food and agriculture policies.

Being an aware consumer also means striking a balance. Buying local pro-

9 Here it means actively refusing to buy something with the intention of having an impact.

10 Here it means actively and positively choosing to buy a product because it is fair trade or environmentally labelled, for example.

duce can at times outweigh buying ecologically. It is a matter of *considering* sustainable aspects when you shop, and adjusting accordingly:

> M: There is so very much, to consider … that it's not just the *label* but … that it is more a matter that you *think* a little when you shop […] Like, for example, I would rather buy Swedish apples that are not ecologically grown. Things like that. I *never* compromise on *certain* products, like . . coffee and cocoa and tea and stuff like that. Because it is so very *important*, and yet, I see it as a bit of a luxury. And bananas, too. You do what is sensible.

Reasons and arguments for norm breaking related to food

Being a vegetarian or vegan is motivated in the stories because by so doing, you place fewer demands on the limited environmental space than a carnivore does, as well as enabling food production that is less resource demanding.

> M: In part because it uses less *energy*; it is less resource demanding and takes up less environmental space. It would give more people the opportunity to increase their standard to a fairer level if we didn't use as much agricultural land for cows to graze.

One argument is that the same arable area could feed more people.

> K: Well you know that ten times more land is needed to produce a kilo of meat than to produce a kilo of vegetables and such.

But it also has to do with animal ethics and one of the interviewees feels that it was the animal rights argument that convinced him to become a vegan. Even milk and egg production involves the exploitation of animals.

> K: It was like this classical thought that animals are individuals with their own worth, so to speak. And that it is wrong to use them just to produce … yeah, like producing food for people. Especially if it is done on a large scale and in a way that is painful.

The only one of the interviewees who started to eat meat again after several years as a vegan and even more as a vegetarian motivated the decision as follows:

> K: Suddenly I could no longer buy the idea that animals were individuals. Plus that I had a more nuanced picture of the environmental argument for vegetarianism and veganism and that stuff. Maybe I had realised that … an *optimal* diet from an environmental point of view was, perhaps, a mixed diet. […] So it was a combination of what is a good environmental choice and how you view animals.

He still tries, though, to keep down his meat consumption because he knows that "there is an upper limit to how much meat you can eat […] if you want to keep yourself within an equitable environmental space and such" (K). He thinks that the optimal diet for a Swede from the point of view of environmental and global fairness is one of locally produced root vegetables and grains with smaller amounts of vegetables, meat, milk, eggs and possibly fish. His reasoning is that there is land that is not suitable for cultivation but better for grazing.

As it was with the positioning in the transport sector, reduced meat consumption is motivated with "practise what you preach" (L), but without going to extremes because it is important that others accept the message and reduce their meat consumption:

> L: I don't think you have to be that careful and that you can eat fish now and again because I am a vegetarian for solidarity reasons and for environmental reasons. So I don't absolutely follow my own rules. I think that is very important too because you want to get people to accept the message, that it's not just about turning on and off a switch, but that you can *reduce*. If people *reduce* their meat consumption, that's good.

Boycotting unsustainable villains is something young people do, among other reasons, for their own sake because it feels good not to participate in unsustainable development. But they also see boycotting as a way of having an impact. It is comforting to know that you do not support the depletion of cod, while at the same time, according to O, you probably would do more good if you put your energy into building public opinion against illegal cod fishing and less into your own personal eating habits.

> O: It feels really good not to eat fish when you see all the stuff about illegal cod fishing and giant shrimp and there is a lot that is related to fish consumption. Just so you're not a part of it, right? Not *supporting* it. My *money* doesn't support that awful black market mafia that is depleting the sea … But, I mean, I would probably do more good if I ate cod and did one of those documentaries (critical of the cod fishing industry).

The feeling of living a life consistent with one's values is a strong driving force, i.e. to live according to one's convictions. A positive basic outlook can be another driving force. You *can* make a difference.

> N: And then I suppose I have chosen to believe in … that you still *can* … reverse the trend. So that things turn out *better*. In other words, that everything doesn't *have* to go to hell. It *can* actually … It is a fairly *positive basic outlook,* I think, that is the driving force … I can be *really* angry and *really tired* and yet, I wouldn't be able to keep on fighting for different causes if

> it wasn't that I believed that you *can* make a *difference*. That you can reverse the course of things.

The reason for choosing to put time and energy into a boycott of the unsustainable villains can, apart from the gains in factual matters, be because it can be a way of attracting the still uncommitted to a greater awareness and involvement in sustainable issues in general. For one of the interviewees, the giant shrimp issue is an example of a truly "educational" (N) question when it comes to talking to other people who are less interested in sustainability questions about what ecological, social and economic sustainability can be:

> N: I got caught up in it (giant shrimp issue) because it was such a *clear* example of something in which the social, economic and ecological are interrelated. That's when you can really *speak* the different languages when you're talking to other people. To not *just* say, "Yeah, save the mangrove forests because they are so *fine*. A lot of fine animals live there. And the biological diversity, you really have to have more of that." You *can* continue until you are talking about deep sea fishing. Or anything *conceivable*. And then it immediately becomes more interesting, even for economists.

In that way, N believes, it becomes a question about that which you can communicate with *everyone*. It can be a gateway to talking about global contexts of an ecological, social and economic nature. And of what we have the *right* to do to other people:

> N: It's not just that it's easy to talk about it. If they've understood *that* question, they can also often talk about other things *as well*, when there are clear examples of how everything is *related*. Socially, economically and ecologically, you can say. It's such a good … (short laugh) summary of global *environmental problems*. And you can ask yourself … "by what *right* do we think that we … can eat giant shrimp in Sweden?"

That giant shrimp are such a clear symbol of luxury also makes it interesting as an issue to become committed to. It is so easy to replace:

> N: But *this* is a product that I can't even really … that is probably what makes it so interesting, that I can't even see the *point* of it. I think that they can be *replaced*, that there are shrimp in our oceans too (laughs). They are not giant here, but … In that way it becomes *even* more of a kind of luxury symbol.

Becoming very knowledgeable about issues involving the ecological and social consequences of different sorts of production results in one easily *thinking* and

feeling more and *caring* more, according to one of the interviewees. But one problem is that the information does not get to the population in general. "I believe that you could talk about banana cultivation with poisons for an hour and quite a lot of people would care. It's just that you can't get the information *out*" (N). But even when the information is spread, it does not always have an impact on everyday action anyway: "But sometimes the *economic* arguments take over so that it doesn't manage to trickle down into everyday life anyhow" (N).

Norms related to clothing

The young adults in this study associate the West's over consumption of clothing with resource depletion, environmental pollution and socially unsustainable working conditions in the producing countries. Their counter strategies are to reduce clothing consumption, make conscious choices of producers and second-hand purchasing. Clothes are also seen as style indicators with consequences for the possibilities one has to reach out with ideas and messages.

Reasons and arguments for norm breaking related to clothing
The young people's arguments for reduced consumption of clothing and other goods are energy consumption, hazardous emissions, emissions that negatively affect the climate, health problems of workers on cotton plantations and unacceptable working conditions for employees:

> M: If you think about, say, clothing production, it is really very terrible when people die from poisoned cotton when they are only 40 years old.

There should be incentives for reduced consumption even for consumers, such as a shortened working week and more leisure time:

> M: If you bought *less* … then maybe you would also have more time. You would see that everything is related, so to speak. A shortened work week, for example. If we bought less, we wouldn't need to work to get as much money either and then we could maybe *live* a little more and do *other things* that are fun.

Changing clothing norms is related to a bigger life style change, the aim of which is to reduce one's consumption and negative impact on other people's health and environment. It is the result of an awareness that all one's actions have an impact. Sometimes the life style change is radical:

> O: People don't believe me when I *say* it. That I really could spend all my *days* trying on *clothes* and going to McDonalds's when I was in junior high. I hadn't started to change my *life style* like I did later on in senior

> high. I tried to consume as little as possible (during senior high). Not to *buy* so much. Not buy so much clothing. Mostly second-hand clothes. Yeah, reduce your consumption and environmental footprint quite simply. Related to the fact that all of your actions have an impact. And try to reduce the impact and reflect on the ways you *want* to make an impact. It is *enormously* related to consumer power. But not *just* consumer power. It's also a matter of reducing your consumption.

It is a dilemma for one of the youths because he thinks it is fun to buy new clothes:

> M: There is so much artificial need. I *have*, like, … one and a half closets full of clothes. I can hardly push any more *in*. But I still think it's fun to buy new clothes (short laugh). You wish you could somehow be satisfied, be mentally stronger and not care so much about the *superficial* and *clothes*.

Another of the young people still uses clothes from when he was in middle school and does not feel any need to buy new ones:

> J: In other words, I have worn the same clothes since I was in 6th grade. So it's like no problem for me. And it's really no problem for them (friends who buy lots of clothes) either, but it must be some kind of psychological attitude that they need clothes even if they really don't. And that type of attitude can very well be altered with trends.

Consumption of immaterial services instead of consumption that reduces the Earth's resources "could become fashionable" (J). "That people buy those kinds of immaterial services, I mean, like programmed codes … It can very well vary with trends" (J). However, J is also of the opinion that it is not entirely impossible to expect that even his "hedonistic friends" (J) could one day realise the unsustainability of continuing with consumption that would deplete "6 Earths" (J) if everyone was to live like we do in the West.

> J: It's certainly not the case that they are so hopeless either. They could very well come to the conclusion that it might not be entirely reasonable to expect that we will use up 6 Earths …

So far, though, J has not seen any tendency in that direction among his friends.

Low consumption compared with average, particularly when it comes to clothing, can have undesirable consequences in that the low consumer stands out. This is a consideration that some of the interviewees also talk about. Extreme

clothing styles can attract some young people, but repel others and thus reduce the ability to involve broader group of youths. It becomes a choice between the goal of reaching more and broader groups by keeping within the accepted clothing norm, and reducing one's resource consumption by distancing oneself from the accepted clothing norm:

> I: Even if I also buy a lot of my wardrobe second-hand and maybe don't dress like someone in Vogue magazine … I still try not to have a clothing style that is too extreme. Because I *believe* that also make you stand out a little. I have to admit that to a *certain* extent radicalism, just like extremism, can *attract* those who are searching for it. At the same time, *I* think that we have to be more *mainstream* to get more young people to join the movement.

Summary

An overall social norm expressed by the young people in the study is that they want to live in a way that means their consumption is restricted to a fair and just Environmental space[11]. Their justification for their actions is that it feels good to act in a way that agrees with what they think is right, but their motivation is also of a strategic nature: They see action as a means for change and a way to make an impact. Some of the youths have altered their view of individual responsibility for life style being the key to change. They now strongly emphasise action strategies to try to influence structural changes that make living sustainably easier for all. In spite of this shift in perspective, they continue to adapt their consumption to a great extent to what they consider to be sustainable, for several cited reasons.

Norm arenas where norms develop and are supported

Three important norm-building arenas are described by the young people: school, family and voluntary organisations. The roles these arenas play are different for the interviewees especially when it comes to where the balance lies between school and family. The study's strategic selection procedure ensures that voluntary organisations are a significant arena for all the young people involved because it was here the interviewees were found in the first place.

In the young people' stories, the significance of family often has a weak rela-

11 *Environmental space* means the consumption of natural resources and pollution of the environment that is acceptable without compromising the ability of future generations to support themselves and maintain biological diversity. *The fairness principle* means that each country has the right to the same amount of environmental space per person. It does not mean that everyone has to necessarily consume exactly the same amount of every individual natural resource. However, it guarantees all people's right to have their reasonable material needs satisfied.

tionship to the interviewees' actions on specific issues, with the possible exception of food. The family has great significance when it comes to basic values, general commitment and confidence in one's ability to make a difference. The importance that the adult world plays emerges in the stories: adults are there to challenge the opinions of the young people and as a confirmation that their commitment is positive. School is also described as influencing values, self-image and knowledge growth. Membership in associations and friends play a large part in knowledge growth when it comes to problem definitions, primarily in terms of solutions and action alternatives.

The significance of the family

One of the youths describes his and many other young people's commitment as though it "builds on a legacy from our parents" (K), a legacy that is expressed in a new way today. It may concern different issues in different families. When it comes to food, it might be about everyday activities such as buying ecologically produced groceries:

> A: We (in the family) have been a lot into "buying *ecologically* and buying *locally*." My mum bought milk from a place, a farm where she worked. She bought cheese and bread from a local ecological farm. And she was involved in starting up a shop that sold ecological produce.
> B: My mother really went in for ecological milk. She was a part of the old vegetarian movement. I think she joined up in the 60s. She always pushed for ecological products.

Parents were both a springboard and discussion partners in factual matters, although some of the youths describe it as being more the other way around, that their parents were influenced by the discussions. One of them related the impact he had on his father's understanding of transport issues, "I don't know if he had it from *the start* but he *got* it in any case. He is quite receptive" (O).

Several of the interviewees relate that a positive basic outlook on their own abilities to have an impact come from their families:

> N: I think that I got it from *home*, because I have a mother who … never gives *up*. She is really a giant … she can *convince* most people of what she thinks is appropriate. I mean, she can go into a petrol station and get them to remove the pornographic magazines just by *talking* to them.

The significance of the school

Some of the interviewees point out positive and committed teachers as being significant in developing confidence in their ability to have an impact. One of them relates that he remembers "that they were positive" (K). They questioned such issues as homelessness, starvation and environmental pollution and show-

ed alternatives, "It could be like this instead" (K). His teachers presented development as something that grew out of the action of humans. "That democracy was something humans had established and won" (K). That it was "someone who arranged it, so to speak" (K). His teachers emphasised "the ability to take action" as being significant for change.

The young people bear witness to varying experiences of how school contributed to their knowledge growth in the norm areas being investigated. There are examples of disappointment with high school environmental instruction on transport. Information material from the car industry was used uncritically in classroom instruction. The catalytic converter was portrayed as having already solved automotive environmental problems, which contradicted the information they had received from the voluntary organisation in which they participated:

> O: In school we had information material from the car industry that told how catalytic converters had fantastically changed the Swedish environment. First there were *dark* pictures and then it was just, "Oh, after the catalytic converter all the water was clean …" We *knew*, though, that things *hadn't* changed. We *had those* kinds of facts, of course, from the environmental movement. We may have gone through it in chemistry class as well; I'm not sure, though, maybe. But not with *that* teacher in any case. And he was not at all critical… . *Really strange!*

But the young people also have very positive things to say about the school's role in their knowledge growth. The education they received has led to an understanding of scientific relationships that has facilitated their reading of environmental literature outside of the school context:

> O: … but *chemistry* was fun because you could understand more about acidification, ozone … Yeah, the teacher got into a lot of that … chemical reactions. Or low-altitude ozone, how it is formed. Now I don't remember that stuff anymore, but *then* I knew it well. Exactly how it worked. Thanks to school.

For one interviewee, what he learnt in school has stimulated him to reduce his meat consumption:

> I: I went to a high school that was located in a nature reserve and we were served vegetarian food. I was a vegetarian and I already had some kind of environmental political involvement then … and there was, of course, considerable environmental awareness at that school and there was a lot of discussion on questions of fairness and equality at school.

In another case, it was the absence from school that was experienced as enabling:

> J: I usually … from a popular science point of view say that I became a vegetarian when I had strep throat and watched educational programmes all day. I stopped eating pork and then beef and then I stopped eating lamb; chicken I had already stopped eating and I stopped eating fish two years later […] Yeah, it had a lot to do with the global waste of resources involved in livestock breeding. It had something to do with 10 percent … On the whole, these bouts of illness were much more productive than my time in school.

But school played an encouraging role when a student had already taken a position. J related how a teacher in a biology lesson on the nutritional pyramid incorporated the position J had taken to eat vegetarian. J thus received attention and an opportunity to develop his arguments:

> J: The nutritional pyramid was a part of it, of course, though it wasn't a part like this "with the 90 percentage loss." In the books it was presented more as a good quality picture with a lot of fish at the bottom and one at the very top, or a person or something like that. But … then … I don't think that I *wasn't* considered as a resource as a vegetarian. There is still a point there. I mean, the teacher saw me as a subject for debate …

One of the interviewees describes the role distribution as follows: it is in the family and school that basic values are formed but, "On the other hand, I would probably say that it is in the voluntary organisations, those contexts that you choose yourself, that the real development or processing takes place" (K). An organisation is a context one has chosen and that is where one starts to talk to peers about it.

The significance of voluntary organisations

As one of the interviewees formulated it, it is in the voluntary organisations (like Nature and Youth Sweden) that one starts to reflect on what fundamental values, such as everyone's equal worth, really mean. Organisations and the courses and spare time activities they offer have been important in supporting the young people's break with previous norms. The non-formal lectures in voluntary youth organisations are highlighted by some of the interviewees as important clarifiers of concepts and connections. That the non-formal lecturers have been young committed people is also stressed as important.The context plays a significant role in the emotional impression and thus on the impact:

> O: And it was really … it was *really awesome* to hear the lecture on … *global* … issues and hear someone put it in words … It became so *obvious* somehow when … 20 percent of the world's population consumes 80 percent of the world's resources. I don't remember having *that* presented so clearly to me before. I mean, it can't have been the first time I *heard* it in my life. But just in that *context* and with those *people* made it so enormously *powerful*.

Organisations as well as friends have contributed to knowledge about the role of transport in sustainable development. One example is knowledge of structural causes of increased emissions from the transport sector:

> O: …and it was really connected to the insights that freeways increase traffic. [Yes, and how did you gain those insights?] It was *not* at *school*. It was through discussions. It was being at *meetings* … then it was also in discussions with others in the Society for Nature Conservation or that you received a brochure, or that you talked about it with someone.

There are also stories that describe the road to conscious vegetarianism by means of adapting to a significant person or group. Vegetarian eating habits came first and then the arguments and awareness were gradually developed: that it had to do with global environmental space and not exceeding one's ecological footprint.

> L: I became a vegetarian in junior high but it probably was mostly because my brother was one and I looked up to him so it wasn't so much taking a stand – or it was that – but it wasn't like I had come up with the idea myself. […] The first vegetarians in 7th grade – it was me and the Muslims who got special meals in the cafeteria. The next year there were more who became vegetarians. In the beginning I couldn't find any arguments for being a vegetarian – I thought sausages were a bit disgusting (laughs) but gradually I learnt that it had to do with global environmental space – how much space a person can occupy without exceeding his or her ecological footprint. That you shouldn't consume more than what the earth can bear … and to show solidarity with animals.

Not eating broiler chickens was a prevailing social norm in the Nature and Youth Sweden club that collided with the family norm when one interviewee, as a 12 year old, joined the club. The attitude towards eating broilers among the "old" members appeared to be a bit tough, but it felt like "no offence was intended." Having different norms in different contexts could be a solution when approaches and habits collided. One norm could be the standard at home and another in the club: "You changed *there* (with the Nature and Youth Sweden club) in any case" (N). Even though you continued eating chicken at home. "If you are

12 years old, it's not very often that you can really restructure an entire *family* … I don't even think I *tried* to take that battle on at home" (N).

Some became vegetarians more or less on their own, but eventually met other vegetarians in organisations. One of the youths related that he did not know any vegetarians when he became one but, "On the other hand … It was at about the same time I joined the Nature and Youth Sweden club. And then, a little bit later, I met other people who were vegetarians and vegans" (K).

Another of the interviewees related that to start with, it was quite unusual to have vegetarians at school, but that the norms there changed gradually. Some of the friends who at first pestered him and thought it was bizarre were eventually influenced and became vegetarians themselves:

> L: I was the first at school to become a vegetarian. And all of my friends were on my case. They nagged me about it for weeks on end. "But why? Oh how strange! Why are you like that? Oh, oh." And then *they* were the ones to become vegetarians themselves later on. They thought I was some kind of Martian when I did it. But it has an effect eventually. Often. Not on everyone. But on some.

All of the interviewees testify to the importance of school knowledge. But all strongly emphasise the knowledge growth that takes place in their time spent in organisations. As one of them expresses it, it was in the organisations that knowledge felt important and fun:

> L: All I have learnt, on the whole, that I have had use for – no, *all* is an exaggeration – but *most*, I have learnt in *organisations*. I learnt a lot in school, too. There is a lot of basic knowledge you have to have and such. But the place where I felt that it was *important* and *fun* was, for sure, in the organisations.

Another young person describes the importance of meeting peers in the organisation setting like this:

> K: …in school we learnt such things as that all people are created equal and that we have a responsibility towards future generations. On the other hand, we never were allowed or encouraged to reflect on what that really *meant*. But I think that is something that is rather natural because … in school it's like the meeting of two generation … and one has the upper hand because they have the authority. And then when you discuss with peers, that is when you formulate, as it were … the *significance* of it all.

It is clear from the stories that the three norm settings – family, school and voluntary organisations – have contributed in varying ways to the young people's

formulation of norms. It is also clear from the results that organisational life plays a crucial role in the youths' reflected consumption choices and in their considerations of how they can have an impact on development in a sustainable direction. In the mission from UNESCO (2005) to work for change of consumption norms through EDS, it appears reasonable to focus some of the searchlight on informal and non-formal learning arenas such as the family and voluntary organisations.

Discussion and conclusions

In our empirical material, we have observed a number of tendencies in the stories of young people. From them we can draw the following conclusions:

The young people in our explorative study have broken social norms concerning established and frequently occurring consumption patterns for food, transport and clothing. Their norm breaking corresponds to recommendations for life style change that the IPCC advocates in its fourth report on steps to counter climate change. In other words, they are actions that could be on their way to becoming social norms. The young people in the study can be seen to be at the forefront of this change in norms and thus become norm breakers as a result of their way of transforming knowledge of sustainable development and the taking of a distance moral stance into action in their everyday lives and in their communities.

Different norm settings have had varying significance for the young people's ability to break established norms when it comes to consumption actions – food, transport and clothing. Consequently, it is of scientific value to consider the importance of different social groups, organisations and social movements in ongoing ESD research and education. We can describe these as norm supporting (or norm-breaking facilitation) settings for young people. The organisations and social movements have been significant for knowledge growth and in providing an arena for action, thus enabling and supporting the establishment and reinforcement of new social norms.

ESD research can learn from the processes in norm-building settings to be found outside school. We can understand and describe these processes as informal and non-formal education for sustainable development.

It is important for ESD research to not just focus on the system aspects of education (school, teachers, teacher training, textbooks, etc.) but to see other active arenas of influence and norm settings such as the home, family, peer groups and voluntary organisations, the media and the press as significant for young people's norm building and norm breaking. What concrete significance can these have for ESD research and the educational system? The soon-to-be-completed study of active Swedish youths that this article has borrowed em-

pirical material from examines how commitment and distance moral in action has emerged from the perspective of young people. It would be valuable to have international studies to compare how the three arenas – informal, non-formal and formal learning – interplay in other conditions than Swedish ones. What role do differences in legislation and regulations play between countries? What role do the distinct conditions for voluntary organisations and social movements as well as family life play in active young people's stories from different countries? These are questions that are highly topical and urgent in the UN's decade of education for sustainable development.

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