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Hidden agendas and utopian wanderings
 Trying to be conscious of epistemological challenges
 and
 errors in doing research in art education

We should not confuse order and tidiness. Tidiness is something that happens when you have frontal brain damage. You get very tidy. Tidiness is symptomatic of brain damage. Creativity, on the other hand, is symptomatic of a fairly whole brain, and is usually a disordered affair. The tolerance for disorder is one of the very few healthy signs in life. If you can tolerate disorder, you are probably healthy. Creativity is seldom tidy (Mollison, 1981).

Introduction

Through my doctoral research at the University of Art and Design in Helsinki I aim to get a better insight in the epistemological foundations of so-called arts-based environmental education, whereby I focus on practices with children. I have termed my research an “ethnographically informed inquiry,” as I want to both make use of my academic background as cultural anthropologist and to employ typical ethnographic methods such as action research and participant observation.

In the context of this bundle – provocatively entitled “Let’s get confused” – authors discuss the prevailing paradigm (or *lack* of a paradigm) of research in art education at our university. In my contribution I want to analyze and discuss some features of my study which I view as being challenging and which may possibly point at paradigmatic tensions.

Perhaps the issues raised in this paper, which pertain to my own particular research, have – *mutatis mutandis* – also something to say for the field as a whole. But before going into this, I will first briefly outline the focus of my research and the way in which I define some central concepts that I use.

My subject of research

First of all: what is my definition of arts-based environmental education (hereafter abbreviated as AEE)? Basically, I conceive it to be a specific kind of environmental education that starts off from an artistic approach. Different from other types of outdoor or environmental education which offer room for aesthetic experiences – such as the “flow learning” approach outlined in the popular nature awareness books of Joseph Cornell, the “earth education” programs of Steve Van Matre, and “place-based education” as promoted by David Sobel – AEE turns the tables in a fundamental way. Art is not an *added* quality, the icing on the cake; it is rather the point of departure in the effort to find ways in which children can connect to nature.

In 1995, Finnish art educator Meri-Helga Mantere defined AEE as a form of learning that aims to develop environmental understanding and responsibility “by becoming more receptive to sense perceptions and observations and by using artistic methods to express personal environmental experiences and thoughts.” Artistic experiences improve one’s ability to see; they help one in knowing and understanding. Therefore, she maintains that these can be of high value in learning about the environment:

Arts-based environmental education is a method that supports fresh perception, the nearby, personal enjoyment and pleasure (and sometimes agony as well) of perceiving the world from the heart. It aims at an openness to sensitivity, new and personal ways to articulate and share one’s environmental experiences, which might be beautiful but also disgusting, peaceful but also threatening. In short, aesthetic environmental education is grounded on the belief that sensitivity to the environment can be developed by artistic activities (Mantere, 1995, p. 1).

It is this definition of AEE that I use in my research as well, and I want to note specifically Mantere's explicit reference to the "dark side" of environmental experiences: they can indeed also be disgusting and threatening.

A stumbling block in my research, however, is the "container concept" aspect of environmental education. Although my point of departure is the tradition of AEE as it has been developed in Finland (most notably by Meri-Helga Mantere and her colleagues), my own focus is more on the Anglo-Saxon connotation of environmental education, which to me seems to be virtually synonymous with outdoor or nature education. To be sure, concepts such as "environment" and "nature" have of course a long and complex history and several different meanings, depending on the agent using the concept and the context in which the word is used. In his *Last Child in the Woods*, author Richard Louv reflects on the meaning of the word nature in relation to children:

For children, nature comes in many forms. A newborn calf; a pet that lives and dies; a worn path through the woods; a fort nested in stinging nettles; a damp, mysterious edge of a vacant lot – whatever shape nature takes, it offers each child an older, larger world separate from parents.

Unlike television, nature does not steal time; it amplifies it. Nature offers healing for a child living in a destructive family or neighborhood. It serves as a blank slate upon which a child draws and reinterprets the culture's fantasies. Nature inspires creativity in a child by demanding visualization and the full use of the senses. Given a chance, a child will bring the confusion of the world to the woods, wash it in the creek, turn it over to see what lives on the unseen side of that confusion. Nature can frighten a child, too, and this fright serves a purpose. In nature, a child finds freedom, fantasy, and privacy: a place distant from the adult world, a separate peace (Louv, 2005, p. 7).

One of the first things one notes is that Louv, like Mantere, mentions the frightening side of nature. Louv underlines that the values that he lists are in fact utilitarian values of nature, and that, at a deeper level, nature gives itself to children "for its own sake." At this level, he says "inexplicable nature provokes humility." Citing Gary Snyder, Louv points out that we attach two meanings to the word nature. In its broadest interpretation, nature includes the material world and all of its objects and phenomena; by this definition, a machine, and even toxic waste, is part of nature.

The other meaning is what we call "the outdoors." By this connotation, a man-made thing is not a part of nature, but apart from nature. Louv, however, looks for a definition which does not include *everything* as natural, or, conversely, restricts nature to virgin forest. He discusses whether the concept of wilderness would be more fitting, in the sense in which poet John Milton refers to it, as "a wilderness of sweets." For Louv, Milton's usage of wilderness catches the very real condition of energy and richness that is so often found in wild systems. At the same time he is aware that wilderness has also implied chaos, eros, the unknown, realms of taboo, the habitat of both the ecstatic and the demonic. It is a place of archetypal power, teaching, and challenge. These reflections lead Louv to argue for the use of the word "nature" in a more general way. It then becomes an aggregate term meaning a kind of "natural wildness", and encompassing, in Louv's view, biodiversity, abundance, and "related loose parts in a backyard or a rugged mountain ridge." He adds: "Most of all, nature is reflected in our capacity for wonder. *Nasci*. To be born." Although we often see ourselves as separate from nature, to Louv humans are also part of that wildness.

A recurring hindrance seems to be that "nature" and "environment" are often, and certainly in mainstream popular discussions, perceived as realms that are somehow completely separate, at distance, from the perceiving human being. To avoid some of these problems – the implicit Cartesian dualism of Man (subject) versus Nature (object) – some have suggested using the concept of "the more-than-human-world" (e.g. Abram, 1996). This term has the benefit that it does not pit humans against the environment they find themselves in. The idea is rather that there are two spheres, of which one is more inclusive – engulfing and encompassing the other one. For clarity's sake, I continue to use the term "arts-based environmental education" here, seeking connection to the tradition of practice and reflection as it has been and is being established in Finland. When I use the terms "nature" or "environment" myself, I use them practically as synonyms and understand them in line with the richer description of Louv and Abram's more inclusive sense of "the more than human."

The "arts-based" component of AEE merits a further elaboration. But before I go deeper into that, I first take up the innate hybrid nature of this approach.

Cuckoo's egg

Arts-based environmental education seems to fall in-between two chairs: it does not belong to art education proper (it has a clear goal for art practice: environmental education), and it does not belong to and neither is confined to environmental education (which is usually more or less limited to narrow science education). In fact, one may say that wholly separate communities of art educators and environmental educators exist, often not aware of, or not understanding, each other's discourse, hence bringing along the problem of incommensurability of the paradigms from which they approach their practice. Environmental education is guided by the notion of purposiveness, that it should serve an explicit goal in the man-nature relationship: the main aim of learning process is to raise children that in the future will behave responsibly towards nature.

This might be illustrated by making a reference to the common triad of knowledge, attitude and behaviour: learning leads to a change of attitude which in its turn will lead to a change of behaviour. The desired effect is that this change of behaviour leads to ways of acting in a ecologically more sustainable manner and acting to protect and conserve the natural environment. The rationale is here that exposure to nature at an early age is carried by the person through the rest of his or her life. It has been shown (cf. Chawla 2005) that people with a strong commitment to nature conservation often recall intense experiences in their youth of having been out in nature. Rachel Carson expressed the sentiment well: "If I had influence with the good fairy who is supposed to preside over the christening of all children I should ask that her gift to each child in the world be a sense of wonder so indestructible that it would last throughout life, as an unfailing antidote against the boredom and disenchantments of later years, the sterile preoccupation with things that are artificial, the alienation from the sources of our strength." And elsewhere she writes: "If facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. The years of early childhood are the time to prepare the soil. Once the emotions have been aroused – a sense of the beautiful, the excitement of the new and the unknown, a feeling of sympathy, pity, admiration or love – then we wish for knowledge about the object of our emotional response."

Art education, on the other hand, is not so much predisposed to prepare the soil for a given set of outcomes, like manifesting themselves in ecologically desirable practices later in life. Art-making, as an activity, is process-oriented, fundamentally open-ended, opening up to ambiguity. Stimulating curiosity, allowing for paradox. Art assignments provoke, challenge the art-making subject, and the ensuing result often surprises both the art teacher and art-maker him- or herself. The *communio opinio* among artists is that efforts to make the aesthetic experience in some way a vehicle for moral or ethical values ought to be rejected (cf. Maclagan, 2001, p. 25).

So within a given group of art educators it is by no means self-evident that making art is a specific approach that can be selected in an effort of encouraging students to engage in a new way with the natural environment. To many of them this may give the idea that art is harnessed, in a way "forced" to give answers. It implies an instrumentalist approach to the artistic process, which, fundamentally should be autonomous ("l'art pour l'art").

Conversely, environmental educators will most likely also have to be motivated and encouraged to engage in artistic activity with their students. Art can well be seen as a domain that is totally foreign to education about such "straight-forward", clearly demarcated subjects as ecology, biodiversity and natural selection.

This aspect of relative foreignness of art to environmental education, and of "nature" to art education, renders AEE a quality of being a "cuckoo's egg", of an element placed in the wrong nest as it were.

In his dissertation "Whole systems thinking as a basis for paradigm change in education: explorations in the context of sustainability", educator and researcher Stephen Sterling (2003) tries to outline why his approach is radically different from conventional approaches. This shift should be seen against the background of a change of what he terms our "cultural root metaphor", which he perceives to be a shift from "mechanism" towards a "living systems" metaphor (2003, p. 9). According to Sterling, in Western scientific thought most emphasis is put on binary logic, analysis, distinctions and unidirectional causality, rather than pattern recognition, synthesis and feedback (ibid., 14). He suggests that it is important to think in a fundamentally different way about education, therefore he opts for the new term of "sustainable education", suggesting a need for a culture shift in educational thinking and practice *itself*, rather than working towards a form of

“education for sustainability” which tends to put the emphasis on the *effects* of education. Because of this, Sterling makes a distinction between education as “*subject of change*”, and education as “*agent of change*” (Ibid., p. 22).

Most mainstream education in his view sustains unsustainability – through uncritically reproducing norms, by fragmenting understanding, by sieving winners and losers, by recognizing only a narrow part of the spectrum of human ability and need, by an inability to explore alternatives, by rewarding dependency and conformity, and by servicing the consumerist machine (Sterling, 2001, p. 46). Mainstream education, he argues, is deeply influenced by the socio-cultural worldview or paradigm of society which affords the context within which education operates: “What is limiting education ... is the fundamental educational paradigm which informs its thinking and practice, and which derives from the context of the wider socio-cultural paradigm and its view of the nature and role of education (Sterling, 2003, p. 47). He argues therefore that our response to the effect of patterns of unsustainability on our current and future prospects should not be predicated only on the “integration of sustainability” into education, because this invites a limited, adaptive, response. Sterling regards environmental education and education for sustainable development as systems of interest, and as overlapping subsystems within the larger context of the education “human activity system”. Systemic change in the dominant educational paradigm ... might create more opportunities whereby environmental education could flourish further and influence the whole, rather than remain marginalised. Eventually, indeed, perhaps there would be no need for any separately identified “environmental education” all together (Ibid., pp. 47-49).

In his study, Sterling puts himself the following research agenda: “Why are education as a whole, and environmental and sustainability education in particular, limited in their ability to make a positive difference to the human or environmental prospect in terms of helping assure a more sustainable future – and how might they become more transformative?” (Ibid., p. 26). Further, his inquiry is also meant to address the following questions: “What changes may be required in the way we view and practice learning and education if they are to contribute fundamentally to such a change of consciousness [the kind that appears necessary to the achievement of a more ecologically sustainable society? ... Is whole systems thinking a key to paradigm change in education and wider society?” (Ibid., p. 29). Rather than starting on the basic level of analyzing how current education can contribute to sustainability, he starts to look at the prevailing educational paradigm of environmental education and sustainability education from the viewpoint of what he identifies as a nascent “postmodern ecological worldview”. This worldview provides the context for emergence of “whole systems thinking” which on its turn, has implications for an educational paradigm change (Ibid., p. 32)

Sterling quotes David Korten who gives a good description of the different angle of whole-systems thinking”, as different paradigm or metanarrative that can be used in social research: “Whole-systems thinking calls for a scepticism of simplistic solutions, a willingness to seek out connections between problems and events that conventional discourse ignores, and the courage to delve into subject matter that may lay outside our direct experience and expertise” (Korten, cited in Sterling 2003, p. 38). In Sterling’s view, whole systems thinking really is a syncretisation of systems thinking and ecological thought. Systems thinking comprises modes of thinking which recognize relationship and process as the primary reality, whereas whole systems thinking is a form of thinking which attempts to explicate the ecological worldview, through revisioning epistemology, ontology and methodology in terms of wholeness. (Sterling, 2003, pp. 38, 45) Moreover, Sterling maintains that it has a teleological dimension, that is, a sense of purpose, particularly when seen in relation to the quest for sustainability (Ibid., p. 39). On basis of this one may infer that Sterling – being a fervent advocate of applying whole systems thinking – also has a prior, purpose-oriented agenda for his research.

In 1970 Thomas Kuhn introduced the concept of paradigm. Essentially, a paradigm refers to the world view through which the world around us is interpreted. Paradigms are constructed through the process of building knowledge and the world view and assumptions about truth which emerge from this process. Different types of paradigms can exist beside each other. A metaphor often used in this context is that of a set of sunglasses, all having a different coloured glass, thus each “colouring” the world in a specific way.¹

¹ It is not so well known that Kuhn himself did not see paradigms as something applicable to the social sciences. According to him, the social sciences are not built upon “provable” information, but rather on

Stephen Sterling points out that there are three components of any paradigm: its *ethos* (the affective, belief and imaginal dimension), its *eidōs* (the dimension of ideas and concepts) and its *praxis* (the dimension of reflective intention and action). These dimensions of paradigms, says Sterling, are in relationship with the dimensions of our lived experience and knowing, that is, our epistemology, our ontology and methodology (2003, p. 10). In that way, the concept of paradigm and epistemology are closely linked, and the former can be understood as an overarching level of the latter.

Epistemology is the branch of philosophy concerned with how people know things and how people think they know things. My use of the term “epistemology” – in Sterling’s words, the *ethos* aspect – is based on the particular notion of anthropologist-biologist-philosopher Gregory Bateson, who regards epistemology as the process, by which we “know”, “think” and “decide” (Bateson, 1979). Bateson once made the observation that everybody obviously has an epistemology or they couldn’t know anything, and those who say they don’t have an epistemology have a lousy one. He extends the conventional notion of epistemology into other concepts, including the relationship between aesthetics and biological epistemology. It is for this reason that Bateson’s notion of epistemology is particularly useful for me, in the context of doing research on the pedagogical foundations of art education.

In Bateson’s view, the world is dynamic, and as one of the consequences it is difficult to draw a sharp distinction between the observer and the observed. He suggests that to think ecologically requires that we develop an “ecology of mind.” This is based on an understanding that *what we do* influences *what we can know*, and that *what we can know* is influenced by *what we do*. Bateson illustrates this idea with the example of how a person chops down a tree. When one begins to chop, one aims the axe and strikes a blow to the tree. Where the next blow is aimed depends on where the first one landed. This process continues until the tree falls. One’s actions (striking the tree with an axe) influence the knowledge about of the tree (the location of the mark left by the axe), and this in its turn influences one’s next action (where the next blow will be aimed).

Equally important to Bateson’s expanded notion of epistemology and his concept of an ecology of mind, however, is his analysis of *inadequate* ways of understanding the world, such as his theory of making “epistemological errors”:

The myth of power, is of course, a very powerful myth; and probably most people in this world more or less believe in it.... But it is still epistemological lunacy and leads inevitably to all sorts of disaster.... If we continue to operate in terms of a Cartesian dualism of mind versus matter, we shall probably also come to see the world in terms of God versus man; elite versus people; chosen race versus others; nation versus nation and man versus environment. It is doubtful whether a species having both an advanced technology and this strange way of looking at the world can endure....

The whole of our thinking about what we are and what other people are has got to be restructured. This is not funny, and I do not know how long we have to do it in. If we continue to operate on the premises that were fashionable during the Pre-Cybernetic era, and which were especially underlined during the Industrial Revolution, which seemed to validate the Darwinian unit of survival, we may have twenty or thirty years before the logical *reductio ad absurdum* of our old positions destroys us. Nobody knows how long we have, under the present system, before some disaster strikes us, more serious than the destruction of any group of nations. The most important task today is, perhaps, to learn to think in the new way. Let me say that I don’t know how to think that way. Intellectually, I can stand here and I can give you a reasoned exposition of this matter; but if I am cutting down a tree, I still think “Gregory Bateson” is cutting down the tree. I am cutting down the tree. “Myself” is to me still an excessively concrete object, different from the rest of what I

theories. For that reason, it was suggested that a distinction should be made between paradigms and so-called “meta-narratives.” For John Stephens (1998), a metanarrative “is a global or totalizing cultural narrative schema which orders and explains knowledge and experience.” Characteristic of metanarratives is that they usually are not told outright, but are reinforced by other more specific narratives told within the culture. Examples of fundamental metanarratives might include the story of the emerging utopian society, the story of the evil empire and the story of the monster hidden among us. In the context of this paper we do not follow Kuhn’s limitation of the concept of paradigm, and for practical purposes, we choose not to replace it by the concept of metanarratives, as seems to be more appropriate for the culture at large, than specifically for the a social science community (among which I rank researchers in art education).

have been calling “mind.” The step to realizing – to making habitual – the other way of thinking so that one naturally thinks that way when one reaches out for a glass of water or cuts down a tree – that step is not an easy one (Bateson, 1972, pp. 464-465).

Bateson points to the deep epistemological nature of the aggregation of ecological problems we are facing, which, according to him “arises out of errors of thought at deep and partly unconscious levels”. As his daughter Mary Catherine Bateson elaborates further on this “error”: “We remain less skilled at thinking about interactions than we are at thinking about entities, things.” (2000, p. 41). Like her, Sterling encourages a shift of our focus and attention from things to process. A key descriptor for him is “epistemic”, meaning that systems thinking can give rise to a qualitatively different epistemology than that which is currently dominant (Sterling, 2003, p. 42).

The sense of urgency that is so manifest in Bateson’s writing, the need to think in a new way, is something that I feel close kinship with as well. Further, it is interesting for me to note that Bateson points out that being *aware* of our epistemological flaws is not the quite same as being able to act in ways that in practice mean *avoiding* the error. (“I still think ‘Gregory Bateson’ is cutting down the tree.”)

In *The Phenomenology of Perception*, Merleau-Ponty (2002) points at a similar phenomenon of two parallel lines that have been rendered in a special way on a paper: we *know* through Gestalt theory that the two parallel lines are equal in length, but due to the “misleading” way that they have been arranged and depicted, our *perception* remains that they are of different length. To be sure, there are several examples which can be given of this incongruence between what we get from our immediate perception and our knowing and acting in relation to it.

In a similar vein, for philosopher Arne Naess there is an important difference between the spontaneous experience of (and direct contact with) reality on the one hand, and on the other hand the scientific analysis of abstract relations, through which one gets to know about the structure of reality. To illustrate what he means by “spontaneous experience, Naess gave the following example in an interview that I conducted with him:

There is a mountain in southern Norway which has been used as an object for artists to paint, and it is quite clear that many artists and non-artists find that its shape is that of a troll. A big fellow, the trees are the hair. Gestalt thinking is such that this spontaneous perception of a troll is a completely adequate description of reality, just as adequate as somebody saying: “It is a heap of stones.” As long as it is a spontaneous perception of a Gestalt. And a Gestalt of course is then not only the shape of a troll but also the *being as* a troll. That is to say, you then get all the mythology about trolls into what you see. You don’t see then a troll in the mountain. But what you see is, from a cultural perspective, a tremendously complex thing (Naess, 1995, p. 15).

Naess argues that natural science only asserts something about the abstract relations in reality: things and phenomena, and the relations between them. But not about its *content*. The content of reality, he maintains, one gets directly through spontaneous experience. The abstract relations, he says, are very important when you act: “If you see a mountain that seems to threaten you, to fall over you, you start running. Then you have some error in abstract relations of a geographical kind. But the perception of the mountain threatening you, *is* a perception of reality. Perceiving the geographical and physical relations of a mountain is only about expressing the relations between things.”

In Naess’s work on the relation between ecology and philosophy this notion of “spontaneous experiences” of reality is one of the key concepts. Another example he gave in the interview has close resemblance to Bateson’s view of “epistemological lunacy,” and the need for thinking in a new way. The example is about developers making a road through the centre of a forest. In such a case, the road builders may argue that the amount of square meters that the road will occupy is tremendously small. But Naess would then say that the road goes through the *heart* of the forest. To the developers this may sound as nonsense. To them, the road is such a small part of the forest that it makes no difference. Naess elaborates his point as follows:

The spontaneous experience, when you get deeper and deeper into the forest, is that you have this feeling of being *deep* in the forest. And if you then hit the road, this feeling

completely disappears. People may say: “Well, that’s your imagination. There is no heart here.” But if you start this way, saying there is no heart, just certain distances, you get into a worldview which resembles that of Immanuel Kant, the great philosopher. You end up saying: “Nature is without colours, even without shapes, and even without cause and effect. Because relations of cause and effect is something created by humans. So there is nothing there. In short: there is *nothing* in nature in itself! You have no access to nature in itself.” You see, you end up in complete nonsense....

Even in contemporary so-called post-modernism, nature is only a limiting thing, which you never can really see or appreciate. You appreciate only your own ways of thinking and feeling and you are completely determined by your culture, and so on. There is something there, but you don’t have any access to it.

It is important to see that what you experience spontaneously in a rich natural setting, in free nature which is not dominated by human presence, is infinitely complex. Whereas when you look at something you have made, you see the instrumentality; what it is made for, and it is so much poorer in content. So this is how I connect then my philosophy of nature and my general philosophy, through this term Gestalt (Naess, 1995, pp. 15-16).

At this point, having arrived at Naess’s articulation of a key element in his philosophy, we have in a way come full circle, starting from a reflection on the definition of “nature”, a discussion of the concepts of paradigm, epistemology and epistemological error, spontaneous experience and abstract relations, back to the question “what nature really is.”

For this publication, the contributors were challenged to reflect on the paradigmatic features of research in art education. From the issues that were suggested when we set out to do this, I chose to take up the following fundamental questions:

What are the paradigmatic beliefs that are concealed in both methodological and analytical attitudes we already adopted when the research process began?

Do we carry an agenda already, e.g. to make the globe a better place for generations to come, or create steps for a social evolution? Or, is art enough? Is there some “future plan”?

It seems to me that these concerns are somewhat overlapping, though the first question is broader in scope than the second. The first one concerns the *a priori* attitude of the researcher, when he or she sets out to choose and formulate the methodology and analytic approach that will be deployed. In the choices that are made at that stage, however, the “agenda” will implicitly already play a role in the framing of the research.

This notion of an agenda is something different than an explicit formulation of a “bias”, and also different from explicitly stating that a hermeneutical approach will be adopted

In classical models of American dissertations doctoral students include a “statute of limitations” stating what they are *not* going to do, and the reasons why they are not going to do it. They either write “I am not going to do it at all”, or, “I am going to do it later, therefore I am not doing it now.” The researcher knows that there is more out there, but this will give him or her a critical mass to study, and then in subsequent studies he or she may set out to increase the domain, and deepen it by conducting a longitudinal study. Such a statute of limitations anticipates on the criticism one is likely to receive when the results of the study are ultimately delivered.

If I were to make the case in my research that it would be meaningful to insert AEE practices in our existing school system, this endeavor would – though it could be an important undertaking in itself – in fact curtail and inhibit the radical developmental potential of AEE. My reluctance to do this is based on similar reasons as those espoused by Sterling above, and because of this my research perhaps has a utopian character, of “arm-chair wisdom” lacking a bearing in day-to-day reality. Yet, in my view, so many researchers of educational practices are willfully limiting their research to the confines of the status quo of the existing curriculum. Though such research certainly has its value, one of the consequences is that very few are charting the possibilities of developing wholly different pedagogies that would perhaps be more appropriate for the times we are living in today.

When one uses anthropological research techniques such as “participant observer” this inevitably means applying a hermeneutic methodology. By being “present” in a very physical, embodied sense, one cannot help but be subjective. Part of my research will therefore not merely consist of the observations that I am making, but also be a reflection of *me* observing. My methodology will contain a subjective element when I employ hermeneutic means: there will be periods of reflection,

as an artist, as a scientist, and so on, engaging all the features of what I am. So it is not just going to be a rendering of “here is what it was”, but rather “here is me looking at what there is.” By declaring this right out front I am saying in fact that I am giving, to the best of my ability, a report and analysis of “what there is out there,” but that the reader should not forget that it is *me*, and my way of saying it.”

The conception of a researcher “carrying an agenda”, however, is a characterisation which has moved beyond a mere statute of limitations. This notion of an agenda sounds more suspicious and underlines that the researcher in some way has a vested and prior interest in the outcome of the research, which will inevitably cloud the accuracy of his or her findings. It means that a detached, objective assessment of the empirical results is hardly possible. This may be the case. But, in my view, by making explicit what one’s “agenda” is, or what one’s hopes about the outcome are, one adds to a transparency of both the methodology employed in the inquiry and the intentions of the researcher. Ultimately, I do believe that also my research is informed and motivated by a prior agenda and by overt, as well as concealed, paradigmatic beliefs. So the task at hand is to make these explicit, to take them into the scrutiny of the light of the day. More elegantly put, I like to regard them as “conscious epistemological errors” or challenges. Below I have listed seven of the major ones as I am able to identify them at this stage. I start out by expounding briefly what my research agenda is.

Problem 1. Carrying an agenda

Something that impacts the way I conduct my study is the underlying motivation from which I set out to do my research. This motivation partly stems from my assessment that current mainstream educational approaches and, more specifically, most environmental and outdoor education, are lacking or failing in reaching children. Arguments to substantiate this claim can be found in the works of, among others, Louv (2005), Sobel (1996) and Sterling (2003).

I am motivated too by being inspired of the way AEE presently is put into practice at different places around the globe. I hold an (unsubstantiated) expectation that these examples hold a great potential as “learning laboratories” and sources of inspiration for other educators.

In this I am inspired as well by Arne Naess, whom I quoted before. Naess (1989) calls attention to Immanuel Kant’s distinction between a “beautiful act” and a “moral act”. An act is moral if it is in accordance with your ethical duty: you have an obligation to do something, and you do it. More often than not, this may go against your inclinations, against what you want to do. For Kant, a beautiful act is an act where we act *with* our inclinations, so that it is what we *want* to do. Naess writes that, through spiritual or psychological development, we can learn to identify with other humans, with animals and plants and even ecosystems. We can learn to see ourselves in these other creatures, and in that way they become part of our being. By identifying with the natural world, we *want* to protect it; we are not acting against our inclinations. According to Naess, the desire to act beautifully – rather than merely morally - is something that can be nurtured at an early age. For adults this seems to be a more difficult thing to do. In Naess’s view, adults may have to relearn the way children appreciate the things around them: “Children are more spontaneous in the sense that reflection and conventional views of things do not yet play such enormous role. If we could be able to see a little bit more like children, we would gain very much. That’s a very difficult re-development, to get into this state of children’s inner life” (Naess, 1995, p. 10).

These two motivating forces that prompted me to do this research may cloud my perception and constitute a bias, but as much as possible I will try to make this predisposition explicit in my writings.

Problem 2. Understanding children

My doctoral inquiry is specifically focused on children and teenagers learning about nature, the more-than-human-world, through art practice. The problem here is, it seems to me, that, as an adult, one can never quite fully retrieve the perceptual sensibility, the ways of being aware of the world, that children have. Some make efforts in this direction, such as Bruno Brettelheim (1976) in his analysis of fairy tales. But it seems to me that there is a definite divide, a threshold, dividing youth and adulthood. The risk looms large of expropriating the child’s way of being and moulding it into a adult’s scheme of reference.

In this context, it may be instructive to look at the model of subsequent “matrixes” following up on each other, through which every person passes through on the way to adulthood, as it was developed by Joseph Milton Pearce (thereby leaning on Jean Piaget). In his *Magical Child*, Pearce (1992) suggests that a person growing up moves through a series of matrixes during development. These may be thought of as one-way doorways. For Pearce, matrixes offer three things: “a source of possibility, a source of energy to explore that possibility, and a safe place within which that exploration can take place” and “the growth of intelligence takes place by utilizing the energy given to explore the possibilities given while standing in the safe space given by the matrix” (Ibid., p. 16). Matrixes shifts are not steps. The matrixes can be viewed as a group of spheres contained within each other. Each matrix is the safe place where the person dwells and can gather his force, his strength. That is the place where one feels most empowered.

For Pearce, each matrix acts as a safe retreat, what is known within the unknown and as a base for exploring this unknown. Each movement from one matrix to another is like being born to a new dimension of being. However, the process of exploration offers bridges between matrix shifts and bonds. Each matrix is thus both the safe and secure place to return to and also the starting point or the base for discovering new dimensions of the self and the world. Lev Vygotsky (1978) speaks in this regard of “zones of proximate development.”

First is the “womb matrix”, literally the mother’s uterus, from conception to birth. This is certainly a matrix that is easy to understand. Second is the “mother matrix”, from birth through about seven years. The first three to four years of life establish a solid relationship with the mother matrix. Then the child, well-bonded with his mother, begins to explore the “earth matrix,” from seven through approximately fourteen years. This is roughly the period of latency. Pearce 1992, p. 96): “Around age seven, a dramatic shift of brain growth and logic will occur. The child’s matrix will (or should) shift from the mother to the earth. She will then have the living earth as the place of power, the safe space, and the source of possibility.” The child feels comfortable and confident enough in the natural and social worlds to begin to differentiate himself from the mother and from his family unit. It creates a relationship with the earth matrix by bonding with it, literally communicating and exchanging with the earth. For Pearce, bonding can be understood as “a nonverbal form of psychological communication, an intuitive rapport that operates outside or beyond ordinary rational, linear ways of thinking and perceiving” (Ibid., p. 1).

And finally (fourth) is the “self matrix”, from around fourteen through twenty years. In the preceding period, the child loves to be outdoors and is not so much centred on trying to figure out who he or she is. The child plays with same sex peers. However, at adolescence, the young person becomes more centred on trying to find out who he or she is and sexuality surges back (Berryman, 2000). His or her interest in exploring the outdoors decreases as the adolescent opens to the cosmos. By age eleven, feeling at home in the earth matrix, grounded in the natural world, children begin to explore the self matrix, according to Pearce, and, by age fourteen, they make the transition from the earth matrix towards the self matrix. He describes the transition period between the two age groups, or matrixes, as follows, taking his own childhood period (the thirties of the twentieth century) as frame of reference:

The eleven- or twelve-year-old has a passion for learning, a passion for ideas, a universal longing to understand. I remember the long, late-night talks my buddies and I had at this stage, as we slept over at each other’s houses or out under the stars, rolled up in old army blankets. We understood more than adults had any idea of, and we longed to know and comprehend everything. We were filled with long, serious thoughts, engrossed in thinking about thinking. At twelve or thirteen, we ranged over universal issues: the vastness of space and time, the overwhelming problem of God, the meaning of existence. There were few limits to our journeying into thought whatever skimpy lines opened for us. None of our longings were met by schooling. (Pearce, 1992, pp. 196-197).

In my research I want to focus particularly on the earth matrix, roughly between ages 7 and 12, when the child starts to explore the “outside world” around the house. Edith Cobb asserts that children in this age group (though she thereby did not refer to the concept of successive matrixes) respond differently to the natural environment. They are more predisposed to be open to the natural world:

There is a special period, the little-understood, prepubertal, halcyon, middle age of

childhood, approximately from five or six to eleven or twelve ... when the natural world is experienced in some highly evocative way, producing in the child a sense of some profound continuity, a renewal of relationship with nature as process.... [This original childhood experience may be] extended through memory into a lifelong renewal of the early power to learn and to evolve (Cobb, 1959, p. 540).

What intrigues me in this quotation of Cobb is that the ability to experience the natural world in a highly evocative way seems to be bound to this special period; in other words, when one does not have such experiences at that time, it seems like it is an opportunity that is lost for the rest of life, a window that is open for some years and then later is shut down – only to be accessed through memories (“a lifelong renewal”).

However useful the overview and distinctions of Pearce may be in the context of my research, pointing for example to different age groups that require different approaches from the side of art and environmental educators (a point that is also taken up by, among others, David Sobel in his *Beyond Ecophobia*), it does not take away the element of “expropriating” the child’s world to our adult schemes.

In an interesting way, the epistemological “error” of an adult, never fully able to understand the inner world of the child, resembles the difficulty of anthropologists trying to understand “from inside” the worldview of tribal peoples: “the Other” as it has been referred to. Given the intrinsic and insurmountable problems related to this, some have argued that anthropology *makes* rather than *describes* (let alone *understands*) its object (cf. Fabian, 2002). This expropriation has been aptly called a “domestication of the savage mind” (Goody, 1992). By being able to call a myth “a myth”, and thereby objectifying and isolating it from its context, we have effectively placed ourselves outside a domain in which mythological worldviews are all-encompassing and explanatory for life.² This problem of “constructing the Other” is also at play in another epistemological problem in understanding childhood, and that is the tendency to romanticize childhood, which can be understood as a specific form of expropriation of the children’s universe by adults for their own purposes.

Problem 3. Romanticizing childhood

In her article “Affective Approaches to Environmental Education: Going beyond the Imagined Worlds of Childhood?” Rachel Gurevitz (2000) asserts that researchers in the field of environmental education have increasingly focused their attention on the question if other kinds of environmental knowledge might offer more or less effective foundations for encouraging individuals to engage in more environmentally sustainable behaviours.

The dominant framework within environmental education is that the accumulation of knowledge about environmental issues will engender behavioural shifts which are more environmentally sustainable.

On basis of research critical of environmental education programmes that emphasise scientific knowledge, one can, according to Gurevitz, identify three problematic issues. The first issue is that a direct linkage between scientific knowledge and environmental attitudes is disputable. The second concern is that a scientific understanding of environmental issues fosters and promotes a technocentric perspective which does not engage citizens on the level of their personal values. The third consideration is an emphasis on the complexity of ecological processes can be frightening and alienating for individuals, as it makes the problems seem too overwhelming for anybody to be able to affect them.

An alternative seems to be provided by so-called “affective education”, which seeks to tap into ways of knowing about our environment through emotional responses, rather than through scientific understanding. This approach, according to Gurevitz, is based on the belief that our emotional

² Something similar is at stake with notions as nature and wilderness. To have a distinct category in language of “nature” (being “out there”) or of “wilderness,” means that this realm is conceived of as being distinct from the rest of a people’s culture and worldview, rather than that it is a non-isolatable intrinsic aspect of it, as it seems to be for many traditional living tribal peoples.

responses and values can achieve more with respect to guiding our actions and opinions on environmental matters than scientific knowledge can. In that sense, AEE can be regarded as a specific kind of affective education. This claim can be substantiated for example by Gurevitz's own reference to Eileen Adams (1991), who makes the case that art education can extend environmental awareness. To Adams, art-based study of the environment is one of the few subjects in the school curriculum where an affective and subjective approach to study is valued, and where the relations of self with the world are explored.

Luigina Mortari believes that, in order to change anti-ecological conceptions of nature into an ecological view which acknowledges its value, it is important to promote aesthetic thinking capable of expressing appreciation of the surrounding world. The outstanding characteristic of ecological aesthetic thinking is the capacity of admiring the elements and phenomena of the surrounding living world. According to Mortari this capacity has its generative source in the disposition to let the mind be seized by the wonder of the world in front of it. Mortari introduces the Greek word *thaumazein*, which means "to wonder." *Thaumazein* does not mean a mere astonishment or puzzlement, but a kind of "seeing which admires". This mental disposition, she goes on to say, is not an interruption of the rational life of the mind, but is rather the origin of the thinking involved. From a pedagogical standpoint, she says, the kind of thinking generated by the experience of wonder is an ecological way of approaching the surrounding world because it safeguards things from an instrumental perspective: "Indeed, wonder sees not only timber in the tree but also the sound of leaves in the wind. The disposition to admire is the source of an 'affirmative thinking', which acknowledges that things have an intrinsic value." (Mortari, 2003, p. 117)

Rachel Gurevitz (2000), in her discussion of affirmative approaches to environmental education, points out that it is not easy to determine what the ramifications are of a shift from cognitive to affective knowledge. She cites authors Hsu and Roth who suggest that many environmental educators find it difficult to address affective environmentally literacy variables because they are often not associated with formal environmental education. Development of environmental sensitivity, according to these authors, appears rather to result from contact with a relatively pristine environment at an early age. (Or, we may add, from being exposed to nature in a deep way during the earth matrix period.)

Gurevitz then makes the following observation: researchers who have suggested that affective knowledges are more closely related to the kinds of environmental values that might encourage more environmental action, have carried out their investigations by talking to *adults* about their formative experiences. In contrast with this circumstance, she suggests that little research has been done about how contemporary *children* value and experience their environments. Gurevitz argues that it may be the case that programs in affective environmental education actually build on romanticised memories of adults, and are based on social constructions of children and nature that have persisted over time.

The author traces the roots of the idea of "the natural child" that supposedly is closer to nature, back to the poets Blake and Wordsworth and especially to Rousseau, who identified nature as the source of all good.

Focusing closer in on the situation in the United Kingdom, the author contributes the popularity of romantic constructions of childhood to the rapid rise of industrialism, and the concomitant notion of the loss of (a rural and idyllic) paradise. In the Victorian context of the early twentieth century, learning to appreciate nature was seen as being part of the training to become good British citizens. Such education drew on constructions of the innocent child. Gurevitz (2000, p. 258) contends that "the natural child" came to represent the self that contemporary adult society had lost, revealing more about the needs of the adult psyche in times of rapid change.

In a similar vein, according to the author, environmental education also seem to be founded ideologically on the innate closeness of children to nature. Children are believed to perceive their environment much more intense with their senses than most adults do.

Parallel to the romantic vision of children being at one with nature, Gurevitz discerns another, darker construction which holds that children cannot be allowed to be too close to nature for that would make them too wild. These two perceptions are paradoxical in the sense that one the one hand children are ideologically placed closer to nature, whereas on the other hand they seem to require adult guidance when they are outdoors in natural spaces. As a consequence, according to Gurevitz, many educational activities that emphasise other ways of experiencing nature are profoundly "adultist" (Ibid., p. 260).

Gurevitz goes on to discuss the work of Edith Cobb, who I quoted above as well and who was

highly influential on educational work that focuses on children's experience of nature. According to Cobb, the child's ecological sense of continuity with nature is basically aesthetic. Correspondingly, affective approaches to environmental education have generally focused on an aesthetic understanding of nature. Gurevitz cites Engel who suggests that environmental education with an aesthetic orientation can make children feel closer to their environment and expand and deepen aspects of the environment they know about. Gurevitz criticizes such research for taking the benefits of an affective approach to environmental education as given, whereas in reality the benefits are hard to test over a period of time.

Following Olwig, Gurevitz notes that there might be a considerable difference between the way many children and many adults experience the environment. Children tend to experience nature as a potentiality rather than a physical presence. Therefore education requires, says Olwig, that "priority [should] be given to 'the world' the small child constructs, on his or her own premises, out of nature, for the purposes of play and socialisation" (Olwig, quoted in Gurevitz, 2000, p. 262). Gurevitz cites a study that criticizes many nature interpretation centres in Denmark and the UK for not engaging children in experiencing landscapes for themselves. Their pedagogic strategy is described by other researchers as an "expropriation of experience" (Hansen-Moller and Taylor, cited *ibid.*). On basis of this critique, Gurevitz poses the question whether affective approaches to environmental education also represent an expropriation.

If children are more aware of the potential of natural spaces for play and peer activity and rarely highlight aesthetic qualities, Gurevitz argues, then methods such as those suggested by Adams and others could more accurately represent the socialisation of children to recognize *adult* aesthetic values than a heightening of a child's own awareness. She raises the question whether formative experiences of "contact with nature" that adult environmentalists have had provide in themselves enough foundation on which to develop environmental education programs.

Gurevitz suggests that it is hard to assert that specific environmental stimuli engender a positive environmental attitude or behaviour, given the infinite range of individual personalities. Added to that, she questions the extent to which educators really understand and know how to build on daily environmental experiences of children themselves. Instead, they might be designing programmes that teach children how to see and experience their environment with adult eyes.

According to Gurevitz, there are several social and psychological factors at play that influence the way children engage in outdoor activities, and these have not been adequately explored by environmental education research. This leads her to the conclusion that an aesthetic orientation infused with adultist social constructions of childhood-in-nature does not adequately reflect significant aspects of daily life that children themselves identify.

She asserts that affective environmental education has yet to demonstrate convincingly that its practice leads children to better understand their relationship to the environment, and the causes of environmental degradation more clearly, and that its practice can influence personal decisions about environmental behaviour.

Gurevitz summarizes her position with the suggestion that first and foremost practices need to be developed that build upon the foundations of children's *own* significant environmental experiences, rather than that the encourage them to learn how they *should* experience and value nature.

Gurevitz does not stand alone in her critical appraisal of the relation between affective approaches and desirable behaviour towards the natural environment. In her paper "Aesthetics in Practice: Valuing the Natural World," Emily Brady (2006) takes a critical look at the assumption of some philosophers that developing a relationship with nature through aesthetic experiences can encourage or contribute to a moral attitude toward nature. In the abstract of the forthcoming paper she maintains that this position has not been fully developed, and that there is a range of problems and questions that must be addressed. In her view, there is no necessary connection between positive aesthetic valuing of nature and a caring or respectful attitude towards nature.

To be sure, I also share this "concealed" paradigmatic belief, but critical analysis such of Gurevitz's and Brady's alarm me to the fact that I need to question this assumption myself as well.

Problem 4. Arm-chair wisdom

My research topic is, in many ways, a journey into new ground. It is investigating opportunities, rather than mapping practices that are already taking place. It is learning from those who are

innovative, who have an experimental attitude. This constitutes another epistemological challenge for I have to deal with the situation that the empirical cases for my research are necessarily sparsely distributed and mostly avant-garde. They are setting out the stakes in previous uncharted territory and, therefore, perhaps in some sense they are “elitist.”

This circumstance brings along that there is no established tradition or history of AEE that has been built up over the years, and as of yet no longitudinal study of the effects of AEE on participating children has been carried out anywhere. Another implication is that it is difficult to assimilate pedagogical understandings from AEE teachers and facilitators, as, also to them, this is a new practice which still seems in need of finding its bearings.

So a major part of my research is necessarily of a “utopian” character. It is not much research into current or past practices of AEE as it is opening ground for (and possibly lending academic legitimacy and credibility to) innovative approaches in this field. An expected criticism will be that this will be a form of practice-detached “arm chair” research – not on what *is*, but on what *might be*.

The best way to address this problem, it occurs to me, is to mention this issue explicitly, and to list it as one of the limitations of the research project. This leads me to the final epistemological challenge that I want to address here, which has to do with allowing for the future falsifiability of my research findings.

Problem 5. The falsification principle

Falsifiability (or refutability or testability) is the logical possibility that an assertion can be shown false by an observation or a physical experiment. That something is “falsifiable” does not mean it is false; rather, it means that it is capable of being criticized by observational reports. Falsification is the process of showing a theory or hypothesis to be false. This method, emphasized by Karl Popper (1959) in his *The Logic of Scientific Discovery*, is a powerful way to determine probable truth. In my research, as has been stated before, it is assumed that there is a positive correlation between a) learning about nature through art, and b) acting in a responsive way towards nature. But what if art practice has a contrary effect? In order to make the point that there is *no* added value – or even perhaps *negative* value – in encouraging artistic practices in the context of environmental education, one would have to show examples of artistic practices whose effect is not an enhanced ecological sensibility and a concurrent development of a caring attitude for the natural environment, but the opposite: more indifference, or perhaps even environmentally destructive behaviour. Given the fundamentally open outcome of creative processes, it is hard, if not impossible, to suggest conditions for allowing for refutation of my research premise. As Maclagan (2001, p. 38) says about visual art: we are more aware of the effects of painting (many of them subliminal) than of the process that gave rise to them. As was said at the beginning of this essay, our culture seems to be predisposed to focus on facts (effects and outcomes), rather than process. The creative process in itself largely remains a mystery. My over-arching epistemological challenge then, can be summarized as follows: *can* we (and *if* we can, *how* can we) make sense of the process that takes place when engaging in arts-based environmental education with children?

References

- Abram, D. (1996). *The spell of the sensuous: Perception and language in a more than human world*. New York: Vintage Books.
- Adams, E. (1991). Back to basics: aesthetic experience, *Children's Environments Quarterly*, 8(2), pp. 19–29.
- Bateson, M.C. (2000). “Foreword.” In Bateson, G., *Steps to an ecology of mind*, Chicago: Univ. of Chicago Press (Original work published 1972).
- Bateson, G. (1972). *Steps to an ecology of mind*. New York: Ballantine.
- Berryman, T. (2000). “Looking at children’s relationships with nature from a developmental perspective: Towards an appropriate curriculum.” *Environmental Education and the Contemporary World*, Proceedings of the International Congress Environmental Education and the Contemporary World, Lisbon.
- Bettelheim, B. (1976). *The uses of enchantment: The meaning and importance of fairy tales*. New York: Knopf.
- Carson, R. (1998). *The sense of wonder*. New York: HarperCollins.
- Brady, Emily (2006). Aesthetics in practice: Valuing the natural world. *Environmental Values*, 15(3), pp. 277–291.
- Chawla, L. (2005). “The ecology of environmental awareness and action.” In B. Bruun Jensen and A. Reid (Eds.). *Critical international perspectives on participation in environmental and health education*. Danish University Press.

- Cobb, E. (1959). "The ecology of imagination in childhood." *Daedalus*, 88 (summer): pp.537-548.
- Fabian, J. (2002). *Time and the other: How anthropology makes its object*. New York: Columbia University Press.
- Goody, J. (1992). *The domestication of the savage mind*, Cambridge: Cambridge University Press.
- Gurevitz, R. (2000). "Affective approaches to environmental education: Going beyond the imagined worlds of childhood?" *Ethics, Place and Environment*, 5(3), pp. 253–268.
- Korten, D. (1995). *When corporations rule the world*. San Francisco: Berrett-Koehler.
- Kuhn, T. (1970). *The structure of scientific revolutions*.
- Louv, R. (2005). *Last child in the woods. Saving our children from nature-deficit disorder*. New York: Algonquin Books.
- MacLagan, D. (2001). *Psychological aesthetics: Painting, feeling and making sense*. London: Jessica Kingsley Publishers.
- Mantere, M.H. (1995). "Foreword." In M.H. Mantere (Ed.). *Image of the earth: Writings on art-based environmental education*. Helsinki, Finland: University of Art of Design.
- Merleau-Ponty, M. (2002). *Phenomenology of perception* (C. Smith, Trans.). London: Routledge & Kegan Paul.
- Mollison, B. (1981). "The terrible time of day." Retrieved from: http://www.mnforsustain.org/mollison_b_introduction_to_permaculture.htm
- Mortari, L. (2003). "Educating to think in environmental education." *Southern African Journal of Environmental Education*, Vol. 20. Retrieved from: http://www.eeasa.org.za/images/publications/eeasa_journal_20_2003/t8.pdf
- Naess, A. (1989). *Ecology, community and lifestyle*. (D. Rothenberg, Trans.). Cambridge: Cambridge University Press.
- Naess, A. (1995). *Interview with Norwegian eco-philosopher Arne Naess*, Tvergastein, Hardangervidda, Norway. Interviewer: Jan van Boeckel, This interview was made for the documentary film *The Call of the Mountain* (1997). Stichting ReRun Producties, Amsterdam, The Netherlands. Retrieved from: www.naturearteducation.org/paintHolland/Artikelen/Interview_Arne_Naess_1995.pdf
- Pearce, J.M. (1992). *Magical child*.
- Popper, K. (1959). *The Logic of Scientific Discovery*. London: Hutchinson.
- Sobel, D. (1996). *Beyond ecophobia: Reclaiming the heart in nature education*. Great Barrington, MA: The Orion Society and the Myrin Institute.
- Stephens, J. & McCallum, R. (1998). *Retelling stories, framing culture: Traditional story and metanarratives in children's literature*. New York: Garland Publishing.
- Sterling, S. (2001). *Sustainable education*. Totnes: Green Books.
- Sterling, S. (2003). *Whole systems thinking as a basis for paradigm change in education: Explorations in the context of Sustainability*. University of Bath.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes (14th ed.)*. Cambridge: Harvard University Press.