

On Being in Nature: Aldo Leopold as an Educator for the 21st Century

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The paper describes activities and reflections during and after a four day outdoor education course from the point of view of four educators: a philosopher, an outdoor educator, social work educator and a literacy educator. During the course, various philosophical and educational activities and ideas were put to the test, issues such as slowness, solitude, and silence were both practiced, discussed, and reflected on. After the course, reflecting on the whole experience, ideas from Aldo Leopold on conservation aesthetics are used to make a case for a certain kind of environmental education, and David Orr's account of myths of education are used to argue for the importance of such education. To develop the ideas further, the paper discusses both recent neoliberal trends that are affecting educational systems around the globe, and also issues such as the difference between situated knowledge and representational knowledge, and the significance of language and perception for human connection with nature.

Keywords: Environmental education, outdoor education, knowledge, perception, Aldo Leopold, David Orr

Education is often said to be the key for addressing the grave environmental and social crises that humans face now at the dawn of the 21st century. Sometimes people say this for a want of a better idea, sometimes they actually believe that education can make a positive difference. We consider ourselves in the latter group, though not optimistic members of it. In the present paper we try to outline an idea of environmental education, based on ideas from Aldo Leopold, David Orr and others, and make the case for its relevance. The present thoughts originated in an outdoor education course in Iceland named *Friluftsliv and Outdoor Journeys*. The course was designed to be moderately challenging and give the students an opportunity to walk through parts of the Icelandic highlands, passing from areas transformed by a geothermal power station to pristine areas where human impact would be barely visible, and then have an opportunity to reflect on the journey. Bad weather, however, forced us to turn everything around. But what some might have seen as catastrophic to the educational potentialities of the course, was welcomed by the educators as an opportunity to challenge the students and ourselves to think about nature, face our own vulnerability, and appreciate mutual support and to reflect in way that rarely has place in formal education.

1. Philosophy as a companion on a hike

The wind was literally howling and the rain came pouring down when we took off, four teachers and around 20 students, for our four-day outdoor education course. The plan had been to be on the move from Wednesday to Saturday but, with the Icelandic Meteorological Office issuing a wind and rain warning for the area, that plan had to be changed. Instead of hiking through a mountainous area

during the first two days, camping in the wild, and then settling in a campsite for reflection on day three, we went straight for the campsite. Arriving there the students were asked to find a suitable place to put up the tents. As they walked around the area, they found some spots where the tents would be shielded from the wind, but those were sitting low and were flooded. The drier spots—which of course were far from dry—were mostly on slopes and open to the wind. Finally, they settled on a bank near the lake. Nearby, two large tents, which seemed to have been used as an eating place, were in ruins. Having put up our tents we headed for a shed where we could eat and reflect on this beginning of the trip, and get a break from the wind and the rain. There, we encountered the owners of the two collapsed tents: a group of Spanish scouts who had camped there the day before but were forced to pack their gear when the wind and the rain began to tear their tents away. On the third day, when the weather had calmed, we hiked back part of the mountainous route which we had initially intended to cover. We put down our tents for the last night, some went for the geothermal baths nearby, while others just crawled into their sleeping bags exhausted after a long day. Next morning, we only had a short hike before we caught the bus back to town.

The students' experience of hiking and their physical capabilities varied greatly. Some were quite experienced and took the course as an easy and fun way to earn credits, others saw it as a worthy challenge, and for a few of the students it took considerable courage to go on a hike like this. None of the students had any philosophical background, and they did not know what to expect from the philosopher in the team. They had certainly not joined the course to do philosophy but, on the contrary, to do something physical in the Icelandic highlands: get out and be active.

The organizers of the course (second and third authors) are experienced outdoor educators. They had asked the philosopher in the group (first author) to join the team since he had written on philosophy of nature and various subject within philosophy of education as well. The fourth teacher (fourth author), was an experienced action researcher with a special interest in reflective practice for personal and professional growth. At the time, she had joined the organizers of the course in a research project on reflection at the intersection of formal and informal education. Being in this course was an opportunity to explore the ways in which nature provided opportunities for personal and professional reflection. The philosopher had joined the team without any clear idea about his role in the course. Perhaps he could have gotten away with a lecture or two on some salient themes in philosophy of nature, such as the distinction between intrinsic and instrumental values, or the difference between human centered views and eco-centered views, or the rights of animals, etc. But he feared that such lecturing would have turned out to be little more than a philosophical monologue falling on deaf ears. And, besides, he saw no reason to simply transpose what is normally done in the confines of the classroom to the open natural space. Rather, he wanted to take this opportunity to do philosophy with the students and his fellow teachers about nature and education, while being in a natural setting.

At the campsite, we were given access to a small cabin where we could sit comfortably in a circle, be dry and warm, and reflect on our situation. The first night, after sharing our expectations and worries with the rest of the group—and talking a bit about what to do if the tents begin to leak and the sleeping bag becomes wet—the philosopher read from the first chapter of a book titled *Philosophy of Walking* by a French philosopher, Frédéric Gros (2014), “Walking is not a sport.” There we were, many quite sportsmanlike, wondering how to pass the time around the campsite where we would be stuck for some time. In these circumstances, that message touched a sympathetic chord: Walking is not a sport; it is not about winning, it is not about getting somewhere within a time-limit, it is not about mastering certain technique, and it is not about getting to a hard to reach destination. Nor is it about having the smartest gear. It is simply about walking. It is so simple that almost anyone can do it and, moreover, one can engage in walking without the slightest intention of becoming better at it. After reading from the book, the philosopher took a passive role, giving the students space to share their thoughts and ideas. We sat there for an hour or so, many of the students participated in the discussion, contemplating the possibility of engaging in an activity that would be so simple and

common that it would not merit any special mention when they would return, it would have no external goal, and neither would it be a means towards some further end. Then we returned to the tents, cold and damp.

The next night we would talk about slowness, solitude and silence in a like manner. All this has some value in itself; it is valuable to learn to walk slowly, to feel alone with oneself (even while walking with a group of people), to pass along in silence and to engage in an activity that is not a sport. But our hope was also that all this might contribute to something more, namely, that at least some of the students would find themselves *in* nature and perhaps develop a greater appreciation for it, even feel affinity with the places through which they were passing, slowly and at times alone in silence. Perhaps they would learn to see the world a little bit differently.

2. Leopold on Aesthetics, Conservation and the Land

Later, when the four teachers met to reflect on the four days with the students, an old essay titled “Conservation Esthetic” by Aldo Leopold came to our minds. It seemed to touch on so many things that we were trying to get our minds around. Aldo Leopold wrote a truly remarkable book, *A Sand County Almanac*, back in 1948. The book was first published in 1949, a year after he had died fighting grass fire on a neighbors’ farm in Wisconsin. In addition to the almanac, it contains a few short essays including “The land ethic” and “Conservation esthetic.” The book is truly remarkable, not just because it had a strong impression on us personally, but because it was an important inspiration when environmental ethics was emerging as an academic field through the writings of philosophers such as Richard Routley in Australia (Routley, 1973) and Holmes Rolston III in the United States (Rolston III, 1975), and it continues to influence scholars and laymen alike. Back in 1975 Rolston III wrote an essay titled “Is There an Ecological Ethic?” where he talks about Leopold:

Perhaps the most provocative [moral endorsement of the ecosystemic character] is in a deservedly seminal essay, “The Land Ethic,” by Aldo Leopold. He concludes, “A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.” Leopold ... is seeking, as he says, to advance the ethical frontier from the merely interpersonal to the region of man in transaction with his environment. (Rolston III, 1975, p. 99)

Aldo Leopold was not a philosopher by training but had become one through his thoughtful engagement with nature. He cared deeply for the land and had grown to think profoundly about the values that are inherent in nature—both moral and aesthetic—and the ways in which people experience such values. He begins the essay “Conservation esthetic” with the following observation:

Barring love and war, few enterprises are undertaken with such abandon, or by such diverse individuals, or with so paradoxical a mixture of appetite and altruism, as that group of avocations know as outdoor recreation. It is, by common consent, a good thing for people to get back to nature. (1949, p. 165)

And then he asks two questions:

But wherein lies the goodness, and what can be done to encourage its pursuit? (1949, p. 165)

The essay is an attempt to answer these questions and to illustrate the importance of understanding their urgency. He begins his exploration by observing how diverse the category of the so-called recreationists is: duck-hunter, bird-watcher, a motorist who covers all the national parks in one summer (and then heads south for Mexico City), a professional who works through conservation organizations “to give the nature seeking public what it wants, or to make it want what he has to

give” (1949, p. 167). He then notices that all these activities are organized around the appropriation of some physical thing, be it a duck, a fish, some plant specimen, a bucket of mushrooms, a photograph, etc. These may have some value, as food for instance, but that is usually negligible. Most of those who try to catch fish in a river are not short of food. One thing to which Leopold wants to draw our attention is that “all these things rest upon the idea of trophy” (1949, p. 168) which “attests that its owner has been somewhere and done something, that he has exercised skill, persistence, or discrimination in the age-old feat of overcoming, outwitting, or reducing-to-possession” (1949, p. 169). There is nothing wrong with seeking trophies, we all do it, but as Leopold observes, a problem arises when it becomes a mass endeavor.

... mass use tends to dilute the quality of organic trophies like game and fish, and to induce damage to other resources such as non-game animals, natural vegetation, and farm crops. (1949, p. 171)

Mass use does not only dilute the quality of such trophies, it also dilutes the opportunities for solitude and silence, and we might add, slowness. When campgrounds, trails, and toilets are spoken of as development of recreational resources, Leopold says that those are spoken of falsely with respect to this component.

Such accommodations for the crowd are not developing ... anything. On the contrary, they are merely water poured into the already-thin soup. (1949, p. 172)

Although Aldo Leopold devotes the first part of the essay to the problems of recreation—in particular, the problems having to do with the success of promoting the outdoors, the wilderness, as a valuable venue for recreational activities—he is not pessimistic. Quite to the contrary, he is rather optimistic and his optimism derives from a component that is present in many recreational activities, even if only as a minor ingredient. This component is the perception of the natural processes. He goes on to say that recreation is not the outdoors but our *reaction* to it, and that the quality of the experience depends not on the quality of what is seen (we add: or smelled, heard, tasted, or touched) but on the quality of the *mental eye* with which it is seen. Continuing this line of thought, he concludes:

The only true development in American recreational resources is the development of the perceptive faculty in Americans. All of the other acts we grace by that name are, at best, attempts to retard or mask the process of dilution. (1949, p. 174)

Leopold then connects this component of perception to what he calls *husbandry* which he says is “realized only when some art of management is applied to land by some person of perception” (p. 175). Towards the end of the essay he reflects upon the situation of his time:

The disquieting thing in the modern picture is the trophy-hunter who never grows up, in whom the capacity for isolation, perception, and husbandry is underdeveloped, or perhaps lost ...

The trophy recreationist has peculiarities that contribute in subtle ways to his own undoing. To enjoy he must possess, invade, appropriate. Hence the wilderness that he cannot personally see has no value to him. Hence the universal assumption that an unused hinterland is rendering no service to society. To those devoid of imagination, a blank place on the map is useless waste; to others, the most valuable part. (Leopold, 1949, p. 177)

Leopold concludes the essay with the observation that “recreational development is a job not of building roads into lovely country, but of building receptivity into the still unlovely human mind” (p. 177). Recreational development, in this sense, is an educational endeavor.

When camping out and hiking with a group of students it was an education of this sort—or at least a step in this direction—that we hoped for by engaging the students through the experience of walking in conversations about walking not being a sport, and about slowness, solitude and silence.

We believe that all these elements are fundamental to education which we like to think of as a personal growth, but a growth that is directed both inwards, towards more fully developed self-concept, and outward, towards a richer and more meaningful relationship with the environment, whether human or non-human.

Education as growth in this sense lies at the heart of many conceptions of environmental or outdoor education which may be defined as involving three components: (i) understanding the ecological relations in the environment, (ii) developing physical skills, and (iii) developing communication skills and relations toward oneself and others (Gilbertson, Bates, Ewert, & McLaughlin, 2006, pp. 5-6). It may seem paradoxical that there, stuck in the campsite and having to rely on man-made structures to cope with the weather, the courses reference to friluftsliv and outdoor education became so apt through our sharing the experience of battling the storm around the campsite without any specific goal except walking.

3. Some myths about education

Although a forester by training and profession, Leopold's main concern in the *Almanac* is educational, that of building receptivity into the human mind. Since then, we have witnessed increased environmental awareness among scholars and international institutions such as the UNESCO, who devoted the decade from 2005 to 2014 to education for sustainable development (UNESCO, 2014). But where in the modern educational systems do we find the kind of education that Leopold was calling for? And where do we find educators that are capable of promoting the cause? These questions may seem to suffer from an abundance of answers rather than a lack. In the foreword to the book *John Dewey and Education Outdoors: Making Sense of the 'Educational Situation' Through More than a Century of Progressive Reforms* by John Quay and Jason Seaman, the eminent outdoor educator Clifford E. Knapp writes:

In order to communicate this way of reforming education to others, educators decided to describe it by placing the adjective, 'outdoor' (meaning outside the classroom) as a prefix to the word 'education.' As time passed, different words have been used to describe the 'how' and 'what' of this type of school reform: nature education, camping education, conservation education, environmental education, adventure education, experiential education, earth education, bioregional education, ecological education, place-based education, and more. I have compiled an ever-expanding list of terms, currently at 78, that have been used to label these fields of study designed to reform education by expanding the concept of 'classroom.' (Knapp, 2013, p. xiii)

Wondering where to find the kind of education that Aldo Leopold was calling for, the answer might seem all too obvious: We find it in many ordinary schools, from preschools through primary and secondary schools and within some disciplines in universities, and there are educators who specialize in exactly this kind of education. Many laudable examples of such work can be encountered, from compulsory education, through various extracurricular activities to special therapeutic programs (Árnadóttir & Hafbergadóttir, 2015; D'Amati & Krasny, 2011; Vilhjálmsson, 2015, 2020) There are also worthy examples from the tertiary level, as Phillip G. Payne and Brian Wattachow have documented (2008).

There certainly is an abundance of outdoor education programs, many of which rest on long and rich traditions. And environmental education is a common subject found at all school levels and taught by skilled and committed teachers. And scholars do research in the field which they then publish in academic journals specifically committed to environmental or outdoor education, or whatever name it has been given. Still, most of such education is not the kind of education which Leopold was calling for, and even when it is, the learning may be undone right away through other

subjects and other activities in schools. Quay and Seaman point this out reflecting on the ups and downs of outdoor education:

Throughout the 20th century, outdoor education as a pedagogical approach enjoyed periods of success as well as struggle. These periods followed a discernable pattern; just as the early nature-study had become botany and the so-called ‘fads and frills’ such as camping education were superadded to a fixed system of schooling, the various cycles of reform reproduced the underlying dualism of method and subject-matter, and what resulted was crowding in the curriculum rather than a fundamental re-imagining of education as a cultural institution. Outdoor education has thus refracted over a century into an increasing array of different hybrids. (2013, p. 58)

The different setting or the different pedagogy of the environmental or outdoor activities may provide a welcome break with ordinary schooling, but end up being little more than that: a momentary break (Jónsson, 2015) before everything turns back to “normal”. Another common problem with various programs environmental or outdoor education—and which sets them apart from the kind of education that Aldo Leopold was calling for—is that they tend to focus more on specific activities and give too little attention to time itself and the nature of experience.

In schools, the overcrowded curriculum is squeezing outdoor education on to the periphery. This time(table) famine exerts greater constraints on what is possible and has the indirect consequence of elevating the importance of the activity basis of outdoor education critiqued above. (Payne & Wattchow, 2008, p. 26)

We will get back to the concerns of Payne and Wattchow later when discussing the role of perception in learning. First, however, we want to take a more general look at education as a systemic institutional activity.

David Orr begins his book *Earth in Mind: On Education, Environment and the Human Prospect* with four short essays under the heading “The problem of education”. In the first essay, “What is education for?” Orr distinguished six myths of education (2004, pp. 8–12):

- I. Ignorance is a solvable problem.
- II. With enough knowledge and technology we can “manage planet earth”.
- III. Knowledge, and there through human goodness, is increasing.
- IV. The fragmented modern curriculum can be restored.
- V. The purpose of education is to give students upward mobility and success.
- VI. Contemporary (western) culture represents the pinnacle of human achievement.

People working within the field of education recognize these myths—whether or not they are recognized as myths—and they all mitigate against the educational project for which Leopold was calling. To these myths we could add the seventh component which, sadly, is not a myth:

- VII. One of the most pronounced functions of the educational system is to cultivate the attitude of a trophy-hunter.

Through graded tests, awards, scholarships, competition for places and merits, interpersonal and intra-personal comparisons, competitive research funds, competition for the best students and more, educational systems are organized around a conception of education as perpetual trophy-hunting. This applies to environmental education no less than education in other fields. It is evident in much of contemporary curricular design and educational evaluation, some of which may be traced to recent neoliberal developments (Beames & Brown, 2016; Hursh, Henderson & Greenwood, 2015). However, the lack of what we might refer to as Leopoldian environmental education is not only due to recent development in political ideology but is rooted more deeply in certain approaches to

education which we refer to as “scientific” as opposed to “humanistic.” In the United States, such a scientific approach has been influenced, since the early decades of the 20th century, by the work of Edward L. Thorndike and Charles Hubbard Judd and their like, at the expense of philosophical and sociological work inspired by John Dewey and George Herbert Mead, among others (Lagermann, 1989).

The combination of the six myths and the reality of education as perpetual trophy-hunting has led to some intractable paradoxes in education. Stephen Stirling points to some of them in his book, *Sustainable Education: Re-visioning Learning and Change*. He writes:

Western education is presently characterized by a number of paradoxes, which raise some profound questions about its role. Firstly, for nearly thirty years education has been identified in international and national policies as the key to addressing environment and development issues, and latterly to achieving a more sustainable society. Yet most education daily reinforces unsustainable values and practices in society. We are educated by and large to ‘compete and consume’ rather than to ‘care and conserve’. Secondly, education is, as never before, subject to unremitting emphasis on inspection and accountability in the name of ‘quality’. Yet dysfunction, stress and the pressure to compete are widely compromising the quality of educational experience and the lives of educators and learners. Thirdly, governments are concerned about the ‘socially excluded’, drop-outs from schooling and ‘failing’ schools and higher education institutions; yet policies which force institutions to compete mean that the advantaged ones get better and richer while the disadvantaged ones become further disadvantaged and receive blame for failing. (Sterling, 2001, p. 21)

According to the myths, education will provide solutions to the environmental problems. However, the reality is different. Shall we then conclude that our educational systems are good for nothing? We don’t think so, they are good for many things, although they have failed in the most important one: to teach us to care for and preserve the earth on which we live. And still worse: Educational systems all around the globe are deliberately and systematically pushed towards further and more thorough failure in this respect. This extends to environmental and outdoor education, no less than to other forms of education, as Payne and Wattchow point out:

... the ways in which outdoor recreations and, inevitably, outdoor education are undergoing some differentiation is also a product of the impacts of increasing middle-class affluence and social hierarchies, technological developments in highly sophisticated outdoor ‘hardware,’ media representations of ‘nature’ and cultural images of what it is like to be in nature ... Effectively, the ‘great outdoors,’ nature and its popularised surrogate in North America and Australia of the wilderness is often a lofty (Bourdieu, 1984) and privileged escape (Beck, 1995), or mirror of our own unfulfilled desires (Cronon, 1996). A further conversion is occurring in the staple diet of activities to ‘extreme’ and competitive sports of ‘speed’ where corporate sponsors, hefty rewards and trophies are now a constant lure for a new type of outdoor ‘elite.’ Outdoor/adventure recreation, as postmodern sport, is accelerating with strong signs of being emulated in outdoor education. (2008, p. 26)

The mention of trophies and sport, in the above quote, is reminiscent of Leopold’s complaints. These problems are symptoms of the general outlook depicted by Orr’s six myths and aggravated by neoliberal development within educational systems. In an editorial to a special issue of *Environmental Education Research* on environmental education in a neo-liberal climate, David Hursh, Joseph Henderson, and David Greenwood write:

It can be readily shown that neoliberal tenets have formed the core principles for primary, secondary, and higher education reform in many countries over the last two decades (Hursh 2008; Hursh and Wall 2011; Lave 2012). Leading Finnish educator Sahlberg (2011) writes that these countries adopt ‘management and administrative models brought to schools from [the] corporate world’ (203). Teaching, for example, is constrained by prescribed curriculum, and learning, evaluated through standardized tests. (2015, p. 306)

They further note that within the neoliberal climate where marketization of nature prevails and the assignment of monetary value to most everything is the norm, thinking about nature as a commodity—a source of good or a service provider—becomes normalized. They then refer to an observation made by Sullivan (2010) and Gabrys (2014) that:

... the increasing prevalence of environmental discourse conceptualizing nature as an ‘ecosystem service provider,’ or as a suite of resources to be brought under control via supposedly efficient quantitative and increasingly technological management techniques. (Hursh et al., 2015 p. 307)

What Hursh and his coworkers are describing here is what Orr referred to as the second myth from above, i.e. that with enough knowledge and technology we will be able to manage planet earth.

Thinking back to the time when we were passing time at the campsite, we could not avoid appreciating the way in which we were forced to adapt to nature; controlling it was out of the question. On the second day when the storm was still howling, we dressed up in our best gear and walked through the hilly surroundings of the campsite for some three or four hours without any expressed purpose except to walk. This activity, so utterly unsportslike, providing no motivation for a competitive attitude, set the scene for what would follow; we were here to walk and just be together in nature, or simply be present. When we gathered in the shed after the walk, reflecting on the day, one of the students remarked: “I felt we became a group.”

4. Conditioned Humans and Detached Knowledge

Formal education is to a large extent premised on the assumption that ignorance is a solvable problem. This is the first myth on Orr’s list. In the current neoliberal climate this problem—or rather, this fact which is conceived as a problem in need of solution—has become a major market force, as Hursh and others have described (Beames & Brown, 2016; Hursh, 2007; Hursh et al. 2015). While much of the political discourse on education concerns who should address this problem, how it should be addressed, and for what ends, Orr questions the very idea of ignorance as a problem. Rather, he says that ignorance is an inescapable part of the human condition. We might take this one step further; not only is much of formal education premised on ignorance being a (potentially) solvable problem, it is actually premised on the assumption that the human condition is a problem in need of solution. And this is no new thing. In the opening paragraphs of *The Human Condition* (1958), Hannah Arendt begins by reminding the reader that the first satellite had been launched into the sky in 1957. She then notes that the joy over this achievement was not triumphal.

... it was not pride or awe at the tremendousness of human power and mastery which rilled the hearts of men, who now, when they looked up from the earth toward the skies, could behold there a thing of their own making. The immediate reaction, expressed on the spur of the moment, was relief about the first “step toward escape from men’s imprisonment to the earth.” And this strange statement, far from being the accidental slip of some American reporter, unwittingly echoed the extraordinary line which, more than twenty years ago, had been carved on the funeral obelisk for one of Russia’s great scientists: “Mankind will not remain bound to the earth forever.” (Arendt, 1958, p.1)

The second myth on Orr’s list, that we can manage planet earth, is alike in its misconception of the human condition. Orr notes that “it makes far better sense to reshape ourselves to fit a finite planter than to attempt to reshape the planet to fit our infinite wants” (p. 9). When we think of managing planet earth we perceive nature as an external thing, a kind of commodity that is potentially within our domain of control. With infinite power and infinite knowledge there might be some hope in succeeding in managing the planet. But even so, such a management task would be out of the

ordinary, for it would involve managing the lives and deaths of *all* people. And that is not some technical job but a moral and political one and, were it to be trusted to some manager, she or he would have to be not only infinitely wise and infinitely powerful, but also infinitely good.

The third myth, that knowledge is increasing and through increase in knowledge also human good—flourishing or well-being—does, in like manner, lead us astray. As Orr points out, “some knowledge is increasing while other kinds of knowledge are being lost” (p. 9). The issue of loss of knowledge is one which deserves more attention than we have space for here. The way in which current marriage of knowledge, technology and commerce works towards destroying nature (von Wright, 1993) shows us how a combination of certain knowledge, values, and practices must come to an end. All of these are to a greater or lesser extent based on and supported by formal education from around the globe. We might say that this shows that schools, from primary schools up through universities, must *unlearn* a host of things. Humans have too much knowledge of how to exploit nature, and too little knowledge of how to relate to it in a more caring way.

Orr elaborates on the issue of increase and loss of knowledge, but we want to pause a little here, reflecting on one of the hopeful things Aldo Leopold wrote about in the *Almanac*.

The last decade ... has disclosed a totally new form of sport, which does not destroy wildlife, which uses gadgets without being used by them, which outflanks the problem of posted land, and which greatly increases the human carrying capacity of a unit area. This sport knows no bag limit, no closed season. It needs teachers, but not wardens. It calls for a new woodcraft of the highest cultural value. The sport I refer to is wildlife research. (p. 184)

So, would not more knowledge which came about as a product of this kind of sport at least potentially increase also the human good, and contribute to flourishing human life on this earth? We think it certainly would but, unfortunately, we are not optimistic that formal education will promote this sport. Given the neoliberal global trends in education (observed by Hursh et al., 2015; Sahlberg & Oldroyd, 2010) formal educational systems are not likely to promote the cause. And outside the educational circles, those forms of outdoor sports which turn a blind eye to wildlife seem to have the upper hand. But then we can ask: Why is the observation of natural process so rarely part of formal education?

There are various reasons for this, some having to do with the myths identified by Orr. But there are also other reasons which have to do with our very understanding of nature and our ways of relating to nature. In their discussion—and criticism of outdoor education—Payne and Wattchow point to lack of attention to time and the nature of experience in this respect. We think they are right, but this is not only a problem for outdoor education but is endemic in all formal education which is increasingly organized around predefined learning outcomes which students then try to reach in the most efficient way possible (Hursh, et al., 2015). But as the speed has increased and the managerial vocabulary has become more prevailing, so has a reaction of a growing movement of slow education (Domènech Francesch, 2009). But why is the issue of time and experience so difficult and trying in environmental or outdoor education? We mention two reasons. The first one we might call *moral* since it has to do with our conception of nature as a commodity. The second one is *conceptual* and has to do with the way in which we (humans) tend to approach nature in an attempt to understand it.

The moral reason stems from the fact that science is not only an intellectual field driven by thirst for knowledge and beauty, it is also a major economic activity driven by concern for utility. Nature as an object of scientific research is often considered a resource from which some potential but tangible good might be drawn. Leopold raised a similar concern saying: “Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse land because we regard it as a commodity belonging to us” (p. viii). This way of relating to nature actually takes us back to the myth that we might manage the planet, for when it is seen primarily as a source of goods for the benefit of people, the main concern becomes that of using it wisely, i.e. managing it so that it can continue to be such a source. The problem here is not the actual work and motivation of the

scientists themselves, for at least those who we know as the “great scientists” are rarely, if ever, driven by a shallow concern for utility but by the pull of beauty of the world and a desire to understand it a little bit better, as a famous quote from Newton, supposedly uttered shortly before he died, captures nicely:

I do not know what I may appear to the world; but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me. (Brewster, 1860, p. 331)

The moral reason for why the observation of natural process is rarely the concern of education seems to have less to do with the sciences themselves and more with the trend to subsume science under larger system, whether educational or economic, where nature is approached as a commodity. With the current neoliberal trends this problem just gets worse (Beames & Brown, 2016; Hursh et al., 2015).

The conceptual reason has to do with the way in which people approach nature as an object of study. We often do this through conceptualization by inventing words like “ether”, “atom”, “mass”, “flora”, “species”, “continent”, “solar system”, etc. Some of these concepts turn out to be useful, others prove to be a fiction and fall out of use. But however these constructions fare, whether we manage to say something true using them or not, they are the result of our attempt to bring the unknown into the realm of the known, bring what is distant into proximity, find structure and organization in the manifold or, as the Greeks would say: make *cosmos* out of *chaos*. The traditional way of doing this involves making a sharp distinction between, on the one hand, nature as an object of study and, on the other, ourselves as researchers and knowers. Nature is studied as something that we can set apart from our own lives, some external object, of which we can have knowledge without immersing ourselves in it. João Afonso Babbista describes this double edged nature of representational knowledge in a paper titled “Eco(i)logical knowledge”:

... by allowing knowledge to be produced, distributed, and claimed in the absence of the actual referents, representations can serve to support the physical alienation of the knower from the objects of his or her knowledge. Yet representations are relational. They connect the knower with the known in various ways and can bring the knower closer to the known regardless of the physical distance between them. At the heart of the matter, representing and representations are a form of relating. (2018, p. 399)

Knowing is a way of relating while at the same time it can cause alienation. Leopold’s conception of husbandry is far from the image of two distinct realms; it combines both knowledge and perception for the purpose of caring for and cultivating the land. The divisive approach is also far away in Rachel Carson’s *Silent Spring* (1962); reading the book one not only gains knowledge about the large scale use of pesticides and other poisonous chemicals—which itself is the product of research and knowledge—but can almost sense her strong relation to nature where knowing, feeling, and caring are mutually reinforcing. The book contains both generalizations and abstract knowledge, but is always also clear about what is being generalized and from what concrete facts the abstractions derive their relevance.

As a means of relating, knowing is always conditioned by the way in which the objects of our knowledge appear. Michael Bonnett notes that “Things are always revealed to us in a context of human concerns and practices and their reality is therefore always conditioned by such concerns and practices” (Bonnett, 2002, p. 17). But what concerns and practices count? Are the concerns those who stem from viewing nature as a commodity? Such concerns are very different from the kinds of concerns that one may have when viewing nature as an organic whole, something that has an integrity of its own possesses intrinsic value (Rolston, 2006). And how do people respond to their concerns? In the above mentioned paper Babbista tells a short story worth repeating:

In December 2014 I met with ... a middle-aged university professor and NGO consultant in forest management who works from the Angolan city of Huambo. During our two-hour conversation he used geospatial images, graphs, and satellite maps to support his knowledge of a forest located in Gove, about one hundred kilometers from Huambo. ... At one point, I asked him for photos from the forest. "I don't have [any]," he said, "because I was never there." He then continued: "The peasants living there cannot use the forest as theirs. Forests are a delicate matter." Alluding to the quality and usefulness of his work, Mateus concluded, "They have to be dealt with by experts who know them properly." He made it clear that he considered accurate forest knowledge to be possible when the knower is at some distance from the forest itself. (Baptista, 2017, p. 398)

Contemporary science has brought about a sea change, not only in people's knowledge but also in the reach of human agency, through the combination of science, technology and global business (von Wright, 1993). This union is so powerful that human activities are among the forces that shape the development of the entire planet, leading many scholars to describe the present epoch as "Anthropocene." This has given rise to the need for a sustainability science, i.e. science that is highly interdisciplinary in nature, global in reach, and with strong normative elements (Allenby, 2006). Geospatial images, graphs and satellite maps are certainly part of the data with which sustainability science works, for without them it would be impossible to see the "big picture". But seeing the big picture not only helps people to know and act, it also helps people—laymen, scientists and politicians alike—to expand their space of concerns from the local and narrow to the global. People become concerned about the lack of ice in the Arctic after seeing satellite images showing the rapid decrease in ice coverage over the last two decades or so. The same could be said about melting glaciers in the Himalaya, the increased desertification, the clear cutting of virgin rain forests, massive forest fires, and so forth and so on. From such concerns, many also become concerned about the wildlife that depends on these natural habitats for survival and about the ecosystem as a whole. Because of this vast scale of influences that humans have on the planet, Brad Allenby has argued for a need for a new kind of ethical theory, what he calls "macroethics".

This raises the possibility that a third level of ethics, "macroethics," requires development. This category would include the ethical dilemmas that arise as, for example, technological systems become embedded in, and adapted to, society. (Allenby, 2006, p. 9)

Because of the impacts of humans on the planet as a whole, such macroethics is not only necessary but also possible. However, the story that Baptista tells about the middle-aged university professor is not a story about an *expansion* of the space of concerns and practices (which is urgently needed) but a *replacement* of one kind of concerns for another. The concerns that the scientist in this case and those for whom he is working (in this case the local government) derive from their representable knowledge are different from and detached from the kinds of concerns that the local village people have when they see and sense the changing conditions in the forest. And, likewise, the responses that are suggested are *actions based on policy* which is supported by representable knowledge rather than action guided by sense perception and the lived presence of the forest. Furthermore, it is assumed that the success of a response can be measured in terms of consumption levels, as Bonnett notes (2002):

The environmentalist approach [to sustainable development in an educational context] assumes that it implies a systematic action policy developed by those who 'know' and imposed on those who don't. Furthermore it is assumed that its success can be measured in terms of consumption levels, that its underlying values are largely economic and unproblematic, that relevant knowledge is generated by subject experts and that its implications for the moral/social/political structure of society are basically consistent with the status quo. (Bonnett, 2002, p. 10)

Bonnett continues to claim that any policy development in this area must be based on an answer to the question: What constitutes a right relationship with nature? (Bonnett, 2002, p, 10). The problem for the kind of view expressed by the university professor who researched the forest without ever being there—or even intending to go there—is not the level of abstraction and generality which characterize his work, but the utter lack of connection and emotional attachment to both the forest and the people who live in and of it. It is for this reason that Bonnett suggests a notion of sustainability as an attitude of mind:

Sustainability as an attitude of mind seeks openness to as many facets and significances of nature as possible and thereby involves a certain basic *simpatico* with the non-human. (2002, p. 18)

The issues that Baptista and Bonnett raise are of crucial importance for those of us working in education, while also complicating our work considerably. Transmitting representable knowledge—and then composing final exams to check the success at the receptive end of the process—is a task that lends itself readily to such monitoring which is at the core of higher education. But cultivating “openness to as many facets and significances of nature as possible” and developing “*simpatico* with the non-human” is another matter. This is not something that can be transmitted, nor can its success be readily measured. Payne and Wattchott mention a similar worry when they criticize the demand for linguistic articulation of experience in outdoor education:

What then counts as experience, and learning, lies in a de-briefing immediately following the action component of the experience (often the activity-basis of outdoor education) is the rapid cognitive processing and accelerated on-site public acknowledgment of it that is made available primarily through talk. Here, we note the limitations of language and linguistic consciousness, as distinct from the embodied meanings, somatic understandings and kinaesthetic feelings of the more enduring experience within and in relation to ‘nature’ and, potentially, the ‘spell of the sensuous’ (for example, Abram, 1996). This deeper sensual and ‘practical consciousness,’ often perceptual, spatial, motile, intuitive, emotive and tacit, precedes, often defies or lacks correlation with the reductionisms of ‘discursive consciousness,’ talk, voice or language. (2008, p. 29)

The last night at the campsite, the mind of the students was set on the long hike the next day. We expected to be on foot the whole day, at times passing through difficult terrain. This night a passage from Gros’s book about slowness was read. Gros says that one of the good things about walking is how slow as a way of traveling it is; when driving in a car one passes *over* the land and the mountains come flying towards you, while on a walk one moves *in* the land with the environment taking slow and gradual changes. We also discussed the idea that slowness is not the opposite of speed but the opposite of haste (p. 36). And when in a haste, we lose sense of time, we don’t pay attention to ourselves, we get lost. The students engaged with the topic and after a while we came to the conclusion that a person who wants to live a long and fulfilling life should live slowly. Many years in a haste will only add up to a short life for time gets lost and life therewith. When we were taking off the next morning, several of the students—especially those less experienced—would recall the discussion from the night before, reminding themselves that during the hike it would be perfectly fine to go slowly.

During the long hike, the leaders of the course made sure we would go slowly, even if we had a long distance to cover. We would stop frequently, perhaps only to breathe in the smell, or look at flora, or take in the landscape and think about the impact we might have on the land across which we were passing, and the impact the land might have on us. After one such stop, one of the teachers got in front of the group, stretched out one arm, and said: “When you pass my arm, you shall not say a single word for one hour.” Some of the students looked in dismay, wondering how they could not say a single word for an hour. Then we walked on in complete silence. When that same teacher announced that an hour had passed and they were allowed to speak again, many were surprised that an hour had already passed.

5. Navigating over thin ice

Our cultural tools, whether concepts or customs, are like layers that we place over our lifeworlds to make them recognizable, understandable, predictable, and controllable. We need them, not to manage the planet but to manage our own living on the planet. Concepts are like signposts which we use to navigate through spaces which would otherwise appear to us as chaotic. So, we construct concepts such as ‘forest’, ‘lake’, ‘coast’, ‘sea’, ‘trail’, etc. All these are essential for our living in nature. But once we get used to these concepts—or rather, once the words become familiar and we become fluent in applying them while navigating the world—we risk inferring the quality of the real thing from the conceptual knowledge we have. We treat a forest just as a *forest*, as something general and lacking individual quality and character. Although we need the concept of a forest to talk about the forests—to express our concerns, celebrate its existence and make it present when it is far away—the representations themselves also allow us to keep a distance and make claims to knowledge when we have no direct experience of the real thing; the object loses its individuality and becomes a replaceable thing. Thus, our symbolic structures—our concepts, maps, signposts, and labels of great variety—which are so essential in our attempt to cut through the chaos and relate to nature may turn out to be double edged.

Hanna Arendt described Socrates’ method of philosophizing as a way of “unfreezing thoughts”. When words and phrases get converted into ready-made constructs (instant thoughts as it were) which people can grab and repeat over and over again, then thought becomes frozen. Socrates’ way of philosophizing was a reaction to such frozen thoughts; through his persistent questioning he forced his interlocutors to break through the thin ice of language and see what was below. And sometimes to see that below the surface there was actually nothing (Arendt, 1971). In a like manner, words, concepts and ready-made thoughts may blur our perception; we look around and see various *kinds* of things while not paying attention to the *particularity* of each of them. We may not see in the forest a whole world of its own, and we may fail to see how utterly different one forest is from another. That this is what Aldo Leopold was talking about when he said that the only true development in recreation would be the cultivation of the eye, i.e. the cultivation of the perceptual skills of people.

Perception is not a passive receiving of stimulus but an active engagement with the environment; it is not information received from a static point of view but information received and enacted within an environment (Ingold, 2011; Menatti & da Rocha, 2016). But how do we engage with the environment so as to perceive it? The question is not simply about how we come to form a relation to the world, but also what the nature of that relation is, how that relation affects us as perceivers, and to what extent we are able to understand it. Cultivating perception is both an important issue in education and one too often neglected (Östergaard, 2017). But it is not enough to attend to the perceptive faculties, for even the attentive, patient and open minded observer will fail to comprehend the manifold if she does not relate to nature; if nature does not stir in her the emotions of care and respect. As Merleau-Ponty argued, and Descartes long before him, the very possibility of meaningful experience presupposes “the affective bonds that tie us to the world” (Heinämaa, 1999, p. 54). In the introduction to his *Almanac* Aldo Leopold echoed what we might refer to as the primacy of affection:

When we see land as a community to which we belong, we may begin to use it with love and respect. There is no other way for land to survive the impacts of mechanized man, nor for us to reap from it the esthetic harvest it is capable, under science, of contributing to culture.

That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics. (viii-ix)

We often associate humanity—what makes us human—with our cognitive, creative, emotional and moral capacities; it may serve us well for living in a community with nature but only if it is fairly

balanced between those different aspects. Justice, as Plato maintained long time ago, is a matter of harmony, but not only harmony in the soul or the state, but also a harmony with nature (Jordan & Kristjánsson, 2016). We must be open to nature showing us something that we did not expect, something new and stunning and even uncomfortable. Our conceptual and practical tools which are the products of some of the most amazing human ingenuity have served us well in understanding nature and converting it into a human habitat. But we have also used these very same tools, in conjunction with the Protagorian idea that man is the measure of all things, to cover the rough natural world with a smooth human layer. We treat the world as given through our conceptualization of it, thus not realizing—as Merleau-Ponty would urge us to do—that the world so conceived is a mere abstraction. This layer is made of conventions, words, ideas, and thoughts which too often are frozen. And we skate along paying little attention to what is below.

In education, one role for philosophy is to unfreeze words, ideas and thoughts that have become so handy and common place that people forget that they may actually refer to a living world that exists independently of any human activities or ideas. By putting the world thus on display and appreciate it simply for what it is, not as a commodity but as an independent source of value and beauty, philosophy as a companion on a walk may actually help people see differently and to keep the wonder going, much as Merleau-Ponty thought of phenomenology:

The unfinished nature of phenomenology and its incohesive way of proceeding are not a sign of failure, they were inevitable because phenomenology's task was to reveal the mystery of the world and of reason. (Merleau-Ponty, 1995, xxi, quoted after Heinämaa, 1999, p. 59)

But this very role is not the ordinary role of a teacher, for it flies in the face of a tradition where education is increasingly described, practiced and defended as a hunt for trophies. When walking in the rain and storm, and also when just seeking refuge from those horrid conditions, we were hoping that we might support our students to take a step in a direction against tradition; support them in seeing differently and perhaps also feeling differently; move their hearts and minds towards a deeper connection with nature, and with each other and themselves.

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