

# In Search of an Ecological Approach to Research: A Meditation on Topos

Janet Pivnick, Earth Wise, Calgary, Alberta

## **Abstract**

*Ecophilosophers suggest that the achievement of environmental sustainability requires a transformation in worldview, from a modern to an ecological worldview. This suggestion poses a very interesting challenge for researchers in environmental disciplines. What would research look like that is grounded in an ecological worldview? What would it mean not simply to do ecological research but to do research ecologically? More critically, how can research that is focused on environmental concerns be conducted in a way that embodies the characteristics of an ecological worldview? This article outlines the way in which one researcher tangled with and came to terms with these questions and provides an overview of the resultant ecological approach to research.*

## **Résumé**

*Les écophilosophes suggèrent que pour atteindre l'objectif d'un environnement durable, notre conception du monde doit se transformer, passant d'une vision moderne à une vision écologique. Cette suggestion constitue un défi des plus intéressants pour les chercheurs évoluant dans les disciplines environnementales. À quoi ressemblerait la recherche qui s'ancrerait dans une vision écologique du monde? Que signifierait non plus seulement mener des recherches écologiques, mais aussi mener des recherches de façon écologique? Aussi, d'un point de vue plus critique, comment peut-on mener la recherche axée sur des préoccupations environnementales de sorte qu'elle incarne les caractéristiques d'une vision écologique du monde? Cet article résume comment une chercheuse a abordé et résolu de telles questions et donne un aperçu de l'approche écologique de la recherche qui en a résulté.*

How can we, as environmental educators and environmental researchers, undertake research that not only focuses on environmental topics but that lives out environmental understandings in the way in which the research is conducted? This article outlines an ecological approach to research which was developed and applied as part of a doctoral study in environmental education.

## The Research Challenge

My doctoral research focused on the challenges of living out an ecological worldview within a culture that is rooted in “modern” assumptions. Ecophilosophers suggest that “solutions to the grave environmental crisis require more than mere reform of our personal and social practices. They believe it requires a radical transformation in our worldview” (des Jardins, 1997, p. 202). The radical transformation to which ecophilosophers are referring is a shift from a modern<sup>1</sup> (also called western, scientific, or industrial) worldview to an ecological worldview (discussed below). This insight is extremely important and has significant implications for both the content of environmental education programs and the pedagogical approach that environmental educators take. If we are to accept the assertions of ecophilosophers, and if we are to assume that one of the prime goals of environmental education is to contribute to “solutions to the grave environmental crisis,” then logically, environmental education practice should have a strong focus on worldview change.

But switching worldviews is not like flipping a switch. Worldviews consist of deeply held and often transparent assumptions which are woven through our moment to moment existence. Even if shifting worldviews was a simple undertaking, an ecological worldview can seem challenging, alien, or even threatening for those of us raised with modern ideals.

If we accept the assumption that embracing an ecological worldview is essential for sustainability, and if, as educators, we wish to help students in this shift to a new set of assumptions about the world, then our work will be best served if we come to understand and work through some of the challenges that an ecological worldview holds.

My research sought to understand these challenges both for those people who eagerly embrace the tenets of an ecological worldview but find difficulties living it out within a society that does not support such a perspective, and for those people who find an ecological worldview to be strange and new. Using a classroom setting as the context for the research, I interviewed teachers who lived their lives and conducted their teaching through an ecological lens (that is, grounded in the assumptions of an ecological worldview) and their adult students who were, in many cases, experiencing this ecological perspective for the first time.

Doing this work held a challenge with regard to research method. In order to feel a sense of integrity in the work, I believed that there needed to be an alignment between *what* I was researching and *how* I was researching. That is, studying what it meant to live ecologically<sup>2</sup> by utilizing a research approach that was rooted in modern assumptions seemed inappropriate. I needed to find a way to live out the understandings of an ecological worldview in the way in which I conducted my research.

Taking on such an endeavour would also provide a side benefit. Since the purpose of my research was to understand the challenges of living out

an ecological worldview, if I conducted my research in a way that embodied an ecological worldview, my research itself would provide a case study to examine. How I researched would become part of what I researched and would lend a layer of richness to the study.

How could I go about conducting research in a way that lived out ecological understandings and what would such research look like? These questions held my attention as I conducted my doctoral research. The majority of this paper will lay out the foundation for, and particulars of, the ecological approach to research which I used for the research study, *Against the current: Ecological education in a modern world* (Pivnick, 2001). I will conclude by discussing some of the challenges and opportunities that are suggested by this research approach.<sup>3</sup> Before outlining this approach, however, it is necessary to take a small detour in order to lay out the characteristics of an ecological worldview as they apply to a research context.

### Research Grounded in an Ecological Worldview

The interpretations of an ecological worldview are many and varied. Depending on whether the writer is a philosopher, psychologist, ecologist, economist, educator, or theologian, the aspects of an ecological worldview that are highlighted will differ. (See Berman, 1981; Bowers, 1993; Devall & Sessions, 1985; Drengson, 1996; Næss, 1989; Pivnick, 2001; Sale, 1991; Skolimowski, 1981.) But perhaps, the most ubiquitous, and the most salient, aspect of an ecological worldview from the perspective of the discussion at hand is the notion that humans are not at the centre of the universe but rather are part of the web of life.

For most environmentalists and environmental educators such a statement is a truism. The challenge, however, does not arise in intellectually agreeing with this statement, but rather in the ways in which we must live life if we take this statement to be true. Not being at the centre of the universe requires taking ourselves out of the place of control. It requires listening to the world and acknowledging that we do not and will not know all. It means letting go of notions of expertise which in turn requires humility and the courage to be vulnerable. Existing as part of the web of life requires living with uncertainty and with constant change. It requires sitting awhile until we are sure that we are aligned with right action. It requires extending compassion and care and respect, and taking our own needs out of view for long enough to determine what is best for the whole.

These characteristics represent only a brief list of the challenges of living ecologically. Even this partial list, however, points to a difficult and different way of conducting ourselves within academic research. The difficulty that arises is not that there are no research methods in existence that have resonance with an ecological worldview. Indeed, I found a strong resonance between hermeneutics and ecophilosophy. Other researchers have likewise found

resonances between the understandings that ground an ecological worldview and phenomenology, participatory action research, feminist approaches, ethnography, and narrative inquiry to name a few.

Rather, the challenge is that applying *any* method to a topic is putting the researcher in a place of imposition. Even methodological suggestions such as “explicate assumptions and pre-understandings;” “bracket beliefs;” “use personal experiences as a starting point;” “trace etymological sources;” “search idiomatic phrases;” “obtain experiential description from others” (Van Manen, 1990, p. 46-62) as directed as they are towards understanding real-world, pre-conceptual, authentic experiences, and as much as they share an interpretive and humane bent with ecological perspectives, still provide a series of steps to *apply* to a topic. They are still techniques that are chosen from outside of the topic and arise before the topic comes into view. While the philosophy that grounds these suggestions may be strongly aligned with an ecological worldview, the researcher is still in the place of control and imposition.

What I was seeking was not to be guided by a method, but rather to be guided by the world; in this case, the world of my topic. I knew that I would still have to make methodological decisions: which research instrument to use, how to select participants, how to analyze the data. But I wanted these decisions to be appropriate to the topic and to arise from the topic itself rather than from a set of procedures which existed outside of the topic.

But what does a researcher actually *do* if s/he is to be guided by the topic? How does s/he make decisions? How does s/he know that the decisions made are good ones? How does s/he describe the research procedures in any sort of systematic way? Finally, how does s/he make decisions that are academically legitimate?

Although I was intuitively living out the tenets of an ecological worldview in the way in which I undertook my research, I wanted to have a way to conceptualize or systematize the approach that I was taking in a way that would have that sense of academic legitimacy. The idea that there might be such a thing as a framework for an ecological approach to research came as a moment of serendipity when two coincident paths merged.

### Basis for an Ecological Approach to Research: A Meditation on Topos

Initially, my sense in the approach that I was taking was that there was nothing systematic about it. I cared; I listened; I tried to do what was best for my topic. I came to think of my research approach as one of stumbling and bumbling, trying to remain open to what was coming at me, trying to remain responsive, always maintaining a fierce desire to do right by my subject. But stumbling and bumbling was hardly going to constitute a legitimate research approach. When I was in the midst of searching for some way to characterize the approach

that I was taking, guidance and a framework were provided for me from a most unlikely source, in the rediscovery of a book which I had read years earlier.

In Tom Brown's *Field Guide to Nature Observation and Tracking* (1983), I found suggestion after suggestion about ways to be a more keen observer of nature. Let your interests dictate your schedule and be open to what crosses your path. Slow down so that you can pick up subtleties. Don't analyze. See newness in everything: nothing is commonplace. Immerse yourself in nature. Ignore discomforts. Don't try so hard. Follow your heart. Quiet down. Look at details; look at the big picture.

While Brown was not offering a set of techniques that one could follow with methodological assurance, he also was not offering a philosophy devoid of pragmatic implications. Instead what he was offering was a set of guidelines for nature awareness, perhaps a checklist to which an observer could refer to ensure that s/he was on the right track.

The guidelines that he was providing were the same approaches that I had intuitively been taking to my research topic. My approach was one of "sitting still," which Sanders (1999) describes as "reverence, a respectful waiting, a deep attentiveness to forces much greater than our own" (p. 80). I had been engaged in attunement, at-one-ment, attentiveness; the same sort of attunement and attentiveness that Brown was suggesting were necessary for nature awareness.

Brown's suggestions did not, in themselves, provide a way to systematize the research approach that I was taking. The similarity between the two approaches, however, opened up a door to possibility. The parallels between Brown's approach to nature observation and my approach to my research were also rooted deep in etymology. *Topos*, meaning place, is the root of both the word topography (Brown's focus) and topic (my research focus).

I began to wonder if there was something about the way in which we come to know "place" which has a commonality whether it involves a naturalist's relationship with the land or a researcher's relationship with a topic. Is there a way in which naturalists come to know the land which could in fact form a framework for more broad forms of research?

There are, of course, many ways to get to know a piece of land and many ways to make decisions about appropriate action to take on that land. What I was seeking, however, was a way of learning about the land that was grounded in an ecological worldview. In searching for a framework for my research approach, the question that I needed to consider was: how would someone, who lived their life grounded in the understandings of an ecological worldview, go about learning about a place?

The answers to this question are many and varied. Readers of the *Canadian Journal of Environmental Education* are well-versed in techniques for knowing and assessing landscapes, understand at a deep level and in a rich way what it means to have intimate knowledge of a place and dedicate their lives to preservation and treating the earth with integrity. Asking this question in this particular venue

will, I hope, throw the door wide open to the possibilities of an expanding concept of ecological approaches to research. What I will elaborate here is the approach that emerged for me when the differing meanings of topos collided, and that guided my approach to research throughout my doctoral study.

## An Outline for an Ecological Approach to Research

When we make decisions about a piece of land—where to situate a building and whether to build at all, which kinds of plants would thrive in an area or would provide a helpful windbreak, whether our alterations of the landscape will result in run-off creating erosion and sedimentation of streambeds—the underlying question always is “what actions can be taken while still maintaining the integrity of this place?” Ultimately, an exploration of topos—whether of a geographical place or a research topic—must ask “what is right to do in this place?” But how do we know what is right to do in a particular place?

It seems to me that there are four tasks that are required in order to determine right action for a given place. First, we must listen to the land, observing it for a sufficient length of time to learn about wind patterns, to understand its response to cold, to watch the movement of water along its surface. This listening requires an immersion and an opening to what the land has to teach. Second, we must read the signs that the place is offering and we must come to the place with a knowledge that allows for a thorough and sensitive reading. Third, we must come to the place with questions, and with the tools to find answers. We must undertake a fact finding mission, learning the specific types of knowledge that would help us to make the best response. Finally, and underneath all of these tasks, is the requirement to care about and for this place. Love is required in order to “respond to the place as it really is” and “image possibilities that are really in it” (Berry, 1983, p. 70).

These four steps—opening and listening, reading the signs, fact-finding, and caring—are interwoven throughout an ecological approach to research. They are not carried out sequentially. Rather they weave back and forth over time, informing each other as they create the tapestry that the research eventually becomes. Each of these steps will be taken up briefly below, and illustrated with examples reflecting the ways in which they arise in a research context.

## Elaborating and Applying an Ecological Approach

### *Opening and Listening*

Perhaps our best guide to what it might mean to “open and listen” to a place would be found in the practice of permaculture. Permaculture is a design method that strives not only to know a place, not only to determine actions based on deep knowledge of that place but to model design features on the

natural processes that unfold in that place. A permaculture design process is based in using “protracted and thoughtful observation of natural systems rather than protracted and thoughtless labor” (Permaculture Institute of Northern California, n.d.). In other words, wait; sit still; don’t act; take in the knowledge that the land has to offer. A permaculture rule of thumb suggests that a designer should observe a site for two years through all seasons and all weather conditions before deciding right action to take in that place.

As we approach a research topic, if we can listen carefully enough, have patience, and peel back the layers, the necessities of the topic may be willing to reveal themselves to us. An ecological approach requires following the meanders that a topic suggests, however time-consuming, however frustrating, however much we are diverted from the path that we intended to follow.

There is a matter of trust which is an inherent part of “opening and listening.” That is, when we are “stuck” and no answers seem to reveal themselves, there needs to be enough faith in the topic to believe that if we stick around long enough and try to remain clear enough that answers will reveal themselves. This test of faith arose in my research most significantly with regard to data analysis. I had all of my interviews transcribed. I had read all of the various data analysis techniques that were threaded throughout the qualitative research literature. I knew what I *could* do. And I wanted to get on with things. But I didn’t know what I *should* do. I didn’t know how to analyze the interview transcripts in a way that would honour the integrity of my research participants, respect the demands of my topic, and uncover the truth that the work needed to speak. I sat in this stalemate with the data for several months before answers revealed themselves.

When right action *does* reveal itself, it is clear because there is a sense that the core has been reached and all the pieces fit together. In order to be able to hear that clarity though, a researcher needs to prepare him or herself by quieting the intellectual and emotional chatter that tends to accompany the research process.

During that time of waiting, even if faith exists, there can be a strong feeling of frustration and a desire to just do anything. Opening and listening does not necessarily mean sitting and staring at the walls until insight arrives. Sometimes action is exactly what is needed. But, that action has to occur as a dialogue with the research. When indications arise that the direction that a researcher is taking is not appropriate, then right action for topos may mean abandoning paths and starting all over again. My dissertation includes a section entitled “Abandoned Paths” for just this reason. This section outlines two approaches to data analysis that were abandoned altogether. The analysis method that eventually stuck was not straightforward but rather involved twelve separate steps. Each step brought the work closer to revealing itself but didn’t reveal the true core of the topic. So, I needed to go back to the data again and again until I finally hit what I believed to be right for this topic, in this circumstance, at this time, for this researcher.



## *Reading the Signs*

In the topos of nature, we don't ever actually just take in raw sense data. There is always an interpretive process which is occurring. Paul Shepard (1995) has said that "the world is all clues, and there is no end to their subtlety and delicacy. The signs that reveal are always there. One has only to learn the art of reading them" (p. 28).

Becoming proficient at the art of reading signs requires knowledge and experience. Three year olds can read signs. If they catch a glimpse of an animal moving swiftly through a forest, they know that the creature is likely not a whale. This may seem like an obvious interpretation, but this sign reading comes through learned knowledge of whale habitat. The more sophisticated our knowledge and the deeper our experience, the more able we are to read the signs.

In research, we need to know how to recognize the signs that this would be a good topic, an appropriate study participant, an important question to ask, a fruitful direction to take a conversation, a useful research instrument, a suitable way to turn the research results into writing. We read the signs to know how to interpret the words of study participants, to know which comments are critical, to know when we have just heard a comment on which our entire research will hinge or that will cause an abrupt turn in direction.

In order to develop the ability to read the signs, a researcher is required to engage in two tasks. First, we are required to do disciplined study. This task involves the rather ordinary procedure of knowing the body of knowledge very well. Second, we must come to understand the topic as someone who has lived in its midst. We must develop the tactile knowledge of someone who has taken risks and suffered on behalf of topos. Only when we have subjected ourselves to this level of experience can we truly hear the demands of the work and properly read the signs that are presented.

What living in the midst of a research topic means will vary from topic to topic. In my case, I needed to not just know the literature of ecophilosophy but to have made attempts to live out ecological understandings in my day to day life. Through this experience, I knew firsthand some of the challenges that arose in living a life that is grounded in an ecological worldview. This preparation enabled me to hear the signs of struggle in my study participants and to know which off-handed remarks might be worth exploring more deeply.

## *Fact-finding*

Once the immersion in the territory has occurred, once familiarity has been established, then we can turn to the process of active knowledge gaining. At this point, in the words of one of my study participants, we move from the process of searching to the process of re-searching. There is a re-entry into the territory, into topos. Having heard what the place has to tell us, we now return with specific questions in mind.



The role of the researcher changes at this stage of the work. No longer do we put ourselves out of play, hoping only to hear the demands of topos. Now we come to topos with our own demands and with expectations that topos will be up to the challenge. But the shift doesn't involve imposition and control. Rather the researcher is shifting from listener to partner in a dialogue.

Perhaps the best way to explain this shift in role is to turn to a researcher's relationship with the written text. When one reads to listen to topos, one reads widely and deeply, soaking in ideas and information, not necessarily ordering them, simply letting them accumulate and percolate. The purpose of this type of reading is to understand what the territory encompasses, what sort of ideas are "out there," what a particular author is thinking and trying to communicate.

Engaging with a text in order to prepare oneself adequately to read the signs is a detailed, meticulous endeavour. Differences between interpretations of a topic are noted, chronology is sought out, subtleties of argument are thought through.

The nature of reading when one is trying to learn about topos, is more purposeful and defined. One reads with specific questions in mind. Immersing oneself in the literature at the earlier stages of research, enables a researcher to become acquainted with the territory so that we know what questions to ask. But once the questions are asked, they require a turning back, a re-entry into the same territory, now with a purpose in mind, now with an investigation underway.

### *Caring About and For Place*

Care, in the sense intended in this context, is the desire to uphold the "integrity, stability and beauty" (Leopold, 1966, p. 262) of a place. When turned to the land, this type of care takes us beyond asking "what do *I* want to do in this place?" to asking "what would be the best action to take to maintain integrity of this place?"

This aspect of an ecological approach is our conscience. Care puts the demands and integrity of the topic ahead of our own desires. An ecological researcher needs to be sensitive to motivation, to ensure that actions are being taken on behalf of the best interest of the topic.

Wendell Berry (1983) suggests that "if we want to get safely home, there are certain seductive songs we must not turn aside for, some sacred things we must not meddle with" (p. 68). What seductive songs could possibly be calling to an academic researcher to entice one away from honouring topos? They are many: songs of expediency, songs of acceptability, songs of credibility, of precedent, of self-indulgence, of praise, of innovation, of panic and trepidation. This fourth component of ecological research keeps us honest, and ensures that we get safely home.

This aspect of an ecological approach was a constant companion throughout my research, but perhaps surfaced most strongly in the actual writing of my dissertation. Caring about the topic required me to determine whether the examples that I used to illustrate points were used because I had an axe to grind or in order to portray a certain image of myself or because the examples provided the strongest way to bring the topic to light for a reader. I needed to ascertain whether the stylistic choices that I made were made in order to be unconventional or because they were easier to do or because they best supported what the topic needed to say. Caring for the topic requires this vigilance at every step of the way.

### Hard Ground

An ecological approach to research as set out above provides a number of challenges to a researcher. First, this approach provides a polestar to guide us and signposts to ensure that we are on the right path, but it does not provide step-by-step procedures. Such an approach requires a researcher to live with uncertainty, to trust hunches, to sit with not knowing, and to become friends with ambiguity. None of these ways of being are particularly comfortable. So an ecological researcher must accept discomfort and take pleasure in an unmarked path.

Second, an ecological approach does not replace but guides the choice of a research instrument. We still must carry out and meet the demands of interviews, participant observation, surveys, or experimental research. This approach just helps us to ensure that we are making the right choice on behalf of the topic.<sup>4</sup>

Third, an ecological approach does take time in order to allow the meanders of a topic to properly unfold. Time is a limited commodity in many research situations, both for practical reasons (budgets) and for cultural reasons (a focus on productivity).

Fourth, an ecological approach can easily turn into “anything goes.” That is, since there are not strict procedures and since much is left up to the tact and intuition of the researcher, the temptations of self-indulgence are all too present. This difficulty is the reason for the fourth step of the ecological approach, to always ensure that the needs of the topic are put first. But, we are not always aware of when our own agenda is creeping in. Nor can we always see ourselves objectively. Vigilance, brutal honesty with oneself, or feedback from a trusted colleague are required.

Fifth, and spinning off of the fourth problem, is the challenge of determining what a topic requires. An ecological approach requires an ability to hear the call of the world in order to determine right action. For me, this process was akin to a spiritual practice such as meditation. For other researchers, creative and artistic processes may pave the path to hearing well.

The sixth problem is perhaps one of the most challenging within Western culture. In using an ecological approach, we are attempting to see familiar

ground, the ground of research, in a new way. Finding a way to redefine the commonplace is difficult because we are limited by the vision that already exists in our minds. Much more common is the desire to either embrace the research process as we know it, or to abandon the demands of traditional research altogether. An ecological approach requires us to move beyond either-or thinking to both-and.

Seventh, we need to find a way to define what rigor would look like within an ecological approach. That is, the goal is still to produce high quality, disciplined research. The approach outlined in this paper is based in a desire to meet the demands of both an ecological worldview and academic rigor. But more work is needed in order to come up with a set of criteria that would constitute rigor and that would help an outside party judge the quality of the research.

## Conclusions

Whether my particular elaboration of an ecological approach to research will stand the test of time, or will be useful for new applications is open to debate, and is not really the point. Certainly, I hope that my approach can provide guidance for other researchers. Even more importantly, I hope that the approach that I have outlined will provide fodder for discussion and provide the impetus for elaborations of new ecological approaches to research.

But beyond the pros and cons of this particular research approach, there are two points which I believe to be essential and to warrant further thought and discussion. First, in order to conduct research in such a way as to honour the tenets of an ecological worldview, we need to rethink the research process. Second, we may find a way forward in this endeavour through a meditation on topos, aligning the ways in which we come to know a topic with the ways in which we come to know the land.

## Notes

- <sup>1</sup> See Bowman (1990) or Taylor (1991) for a discussion of the tenets of modernity.
- <sup>2</sup> The terms “living ecologically,” “researching ecologically,” or “educating ecologically” which are used through this text refer to taking up these pursuits in a way that is grounded in the assumptions of an ecological worldview.
- <sup>3</sup> Due to space limitations and due to a desire to provide an overview of an ecological approach to research, the taking up of any one topic will necessarily be brief. Readers wanting more detailed information should turn to the aforementioned study or should contact the author.
- <sup>4</sup> Since an ecological approach does not replace methodological choices but rather provides a set of guidelines to help make methodological decisions, this approach can be applied to a wide variety of research studies using diverse research instruments.

## Notes on Contributor

**Janet Pivnick** holds a doctorate in philosophy of education from the University of Calgary and is a certified permaculture designer. She is the Director of Earth Wise ([www.earthwisehome.org](http://www.earthwisehome.org)), an environmental education company based in Calgary which focuses on worldview transformation.

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