

# Animal Encounters in Environmental Education Research: Responding to the “Question of the Animal”

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## **Abstract**

*The “question of the animal” represents an area of emergent interest in the environmental education field, as researchers critically consider human-animal relations and animal advocacy in their work. Following a group discussion at the 10th Seminar in Health and Environmental Education Research, the authors of this paper share experiences, challenges, and insights related to disrupting the human/animal divide, conducting respectful research involving nonhuman animals, and producing research that moves beyond Western humanism and aims to make a difference to the more-than-human world.*

## **Résumé**

*La « question animale » constitue un nouveau champ d'intérêt dans le domaine de l'éducation environnementale, où les chercheurs examinent d'un œil critique les relations entre les humains et les animaux ainsi que la défense des droits des animaux. À la suite d'une discussion de groupe lors du colloque intitulé 10<sup>th</sup> Seminar in Health and Environmental Education Research (10<sup>e</sup> colloque sur la recherche en éducation relative à la santé et à l'environnement), les auteurs de l'article exposent expériences, défis et réflexions par rapport au bouleversement du clivage entre l'humain et l'animal, aux tests respectueux sur des animaux non-humains et à l'élaboration de recherches transcendant l'humanisme occidental et visant à améliorer la situation de ce monde qui est beaucoup plus que seulement humain.*

**Keywords:** animal studies, human-animal relations, environmental education research

## Ottawa River, Montebello, Québec



Figure 1. Canada goose.

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They numbered in the hundreds, and if you could count all of the migrants along the length of the Ottawa River, there were likely thousands of them. Canada Geese floated in rafts of dozens, some coming close to the side of the river, but most hundreds of metres away. The river here is more like a lake: over a kilometre wide, and seemingly endless in its length, giving the geese ample room to spread out. Regardless of their density, they could be easily heard: their characteristic honks permeated the air and collapsed the space between their physical presence and our own.

The geese were here, in early May 2009, as part of the migratory population of geese that overwinter in south-eastern North America and nest on the tundra of the eastern Arctic. Over the course of the three days spent beside the Ottawa River, the geese flocked up and dissipated; this morning, calls and the whooshing of wings grew in volume as a long line of birds approached and flew overhead, continuing their annual journey to breeding grounds.

In the same low morning sun alongside the Ottawa River and underneath the organic lines of departing birds, we, a group of environmental education researchers invited to the 10<sup>th</sup> Seminar in Health and Environmental Education Research, sat in a circle.<sup>1</sup> Eager to blur the lines that have so often been drawn between the human and more-than-human world (Abram, 1996)—and interested as well in enjoying the beautiful morning by the river—we opted to meet outdoors for our discussion. There, with geese honking overhead, we ruminated on a topic of interest to all of us: *How can we move beyond the human in environmental education research?*<sup>2</sup>

## Making a Difference

The theme of the three-day seminar was *Making a Difference: The Opportunities for and Challenges of Producing “Useful” Research*. The seminar call stated that “Ensuring our research makes a difference to others and to wider society is not a straightforward task,” and as participants, we were asked to contemplate how our contributions as researchers and practitioners could be useful to those outside a circle of like-minded academics. While the concept of making a difference and producing useful research is an important aim for all research endeavours, some tricky considerations emerge when this is considered in relation to nonhuman animals—beings who have so pervasively been positioned in the category “Other” in Western, Eurocentric systems of knowledge.<sup>3</sup>

The Othering of animals is being addressed in the emergent field of animal studies, where scholars from a variety of disciplinary backgrounds are engaging with the problematic ways Western culture has cast aside, first intellectually and then materially, the animal. Paola Cavalieri (2004) suggests that this core “animal question” equates to an interrogation of “more than twenty centuries of philosophical tradition aiming at excluding from the ethical domain members of species other than our own” (p. 3), while Cary Wolfe (2003) defines it as “the relationship between...the discourse of animality—the use of that constellation of signifiers to structure how we address others of whatever sort (not just non-human animals)—and the living and breathing creatures who fall outside the taxonomy of *Homo sapiens*” (p. xx). After a long-standing reluctance to question the barriers that have been erected between humans and other animals, the work of interrogating taken-for-granted assumptions has begun within, and outside of, environmental education research.

Historically, nonhuman animals were rarely studied outside of positivist, “objective” scientific frames (Noske, 1997). In recent years, however, scholarly work exploring the animal question has emerged from the social sciences and humanities, forming an animal studies network with trajectories across disciplines. As a field, animal studies cannot be defined along strict disciplinary lines, as theoretical work has been taken up in the fields of geography (Wolch, 1998), literary theory (Wolfe, 2003), history (Creager & Jordan, 2002; Preece, 1999, 2005), humane education (Kahn & Humes, 2009; Humes, 2008; Selby, 1995; Weil, 2004), feminism (Donovan & Adams, 2007), anthropology (Haraway, 2008; Knight, 2005; Noske, 1997), philosophy (Plumwood, 2002; Singer, 1975; Reagan, 1983), and cultural studies (Castricano, 2008; Fudge, 2002; Rothfels, 2002). What holds these works together is the shared belief that the clear-cut distinction between humans and animals is anything but precise.

Given the interdisciplinary nature of animal studies and the socioecological turn the general environmental education field has taken (Gruenewald,

2003), it is not surprising that environmental education researchers are also grappling with the animal question. Attempts to move beyond Western frames of anthropocentric humanism and toward non-dualistic modes of conceptualizing the more-than-human world are key concepts within the field, and this recent turn includes engaging with the complex set of relations we hold with other species. Nonetheless, our morning discussion at Montebello seemed to signal a deepening interest in the field in engaging with the implications of the shifting boundaries of the “animal.” In response to the conversation, Connie Russell noted:

As someone who has been working in environmental and humane education and human/animal relations for almost 20 years, I was delighted to see the level of interest in the session on the animal question in environmental education research at Montebello. For those who have attended numerous Seminars over the years, the response was striking and points to an area of emerging importance in our field.

At present, there is a range of ways that environmental education researchers are incorporating a critical consideration of other species in their work. Within the small circle of the nine authors of this paper, for example, research related to human-animal relations has included studies of the educational aspects of wildlife-focused tourism (e.g., Russell, 1995; Russell & Hodson, 2002), whale agency and human-dolphin relations in Sea World, Orlando (Warkentin & Fawcett, in press; Warkentin, 2009), musher-sled dog relations in Northwestern Ontario and Minnesota (Kuhl, in press), children’s ideas and stories of common, wild Canadian animals (Fawcett, 2002), anthropocentrism and animal dissection (Oakley, 2007; 2009), the role that wild animals play in the formation of a pro-environmental ethic (Watson, 2006), and critical reflections on pedagogical attempts to draw attention to the needs and perspectives of animals (Bell & Russell, 1999; Bell, Russell, & Plotkin, 1998; Fawcett, Bell, & Russell, 2002; Russell, 2009). While there is considerable diversity in the ways we are framing and approaching our research questions, we are connected by our overarching commitment to position other species as subjective stakeholders in our work and as beings for whom our research matters.

In this article we share themes, stories, and points of discussion that emerged from our conversation at the seminar. Each co-author contributed a written response to this paper, outlining some of the ways they are troubling the human/animal/nature divide, incorporating a critical stance on human-animal relations in their work, encountering the challenges of producing respectful research that involves the more-than-human world, and ultimately, aiming to make a difference.



Figure 2. The “flock” of authors and participants, reporting back to the larger group following our conversation.

### Troubling the Divide

How might we erase the dichotomy that plays the social against the environmental? One of the themes emerging from our discussion concerned the importance of blurring the boundaries between “human,” “animal,” and “nature,” as well as the need to question our own animality and the knowledge we (presume to) hold of animal others. The constructed dualism between humans and other animals—and more generally, between humans and nature—is pervasive in Western culture; through it, nature is positioned as separate and distinct from our everyday lives and experiences (Evernden, 1992; Plumwood, 2002). Neil Evernden (1992) referred to this as a form of “organic apartheid,” writing that once we recognize and accept that all life is organically and evolutionarily related, the core fiction of this dichotomy will be exposed.

For many scholars and practitioners in environmental education, this fictional divide is well-recognized and the field itself is, in part, a response to society’s impoverished understanding of the more-than-human world (Fawcett, 2002). For researchers engaging with the question of the animal, the need to problematize this division is prominent. Leesa Fawcett suggests the very assumption that we have stable knowledge about these categories and their dividing lines is problematic. She calls for a different ontological arrangement of the world, one where the boundaries are less strict than once imagined. Drawing on Donna Haraway’s (2008) understanding of “naturecultures,” she writes:

The thing about naturecultures is that it assumes humans-animals-cultures are not divided to begin with. We might be one glorious, endless continuity that allows seepage into each other, or that differentiates at points and breaks off abruptly, or swerves together connected but out of everyone’s sight over the horizon. I figure



we don't really know a whole lot about humans or animals yet, so my research and teaching starts with the premise that we need to wonder, and be curious about what we do know, would like to know, and are afraid to know. Henry David Thoreau (1862/1993, p. 115) got it right when he said we needed "a Society for the Diffusion of Useful Ignorance, what we will call Beautiful Knowledge ... for what is most of our so-called knowledge but a conceit that we know something which robs us of the advantage of our actual ignorance?"

To start with wonder, curiosity, and a willing recognition of our ignorance opens up possibilities for seeing anew. We spoke at Montebello of the ongoing dualism between "human" and "animal" and how we encounter this, at a basic level, with the English language choices we make. For many of us, language presents an opportunity to push back against the boundary policing that has worked to exclude humanity from the animal category, and vice-versa. We discussed some of the linguistic possibilities available to us—for example, do we use the term "animal" to homogeneously refer to all of the beings who are not human, or do we make a distinction with the term "nonhuman animal," or "other animals," or "animal others?" Or, do we invoke David Abram's (1996) more encompassing term of the "more-than-human world?" Participant Sue Hamel spoke of her efforts to distinguish humans as "human primates" in her writing, to remind us of our place in the animal order. Another participant, Joshua Russell, explained how he starts with the recognition that animality is *always* present in our research, regardless of the species with whom we are working:

As Paul Shepard (1978) notes, the human mind is borne of its own evolutionary and continuing animality-in-the-world, but it is different only in its mixture and composition, not in its ingredients.... Subsequently, each research subject—whether child, adolescent, or adult—I come into contact with in my research can be seen as an animal we name "human," with animal experiences, visions, and dreams of their own. What I put into language, what I share with others about my research is a specific, situated interpretation for other human beings about an experience of animal communication on some level.

Attempting to blur the divide between humans and other animals entails specific language choices and an openness to seeing beyond the borders of the characteristics that have hitherto been understood as the exclusive domain of humanity. The quest to arrive at a final distinction to divide humans from all other species has been a long-standing tradition, and many "markers of humanity" have been proposed to this end, including language, intelligence, rationality, tool usage, awareness of mortality, and culture. Yet, as much work in the animal studies field has shown—and in some instances, our own observations have verified—many species disrupt these "human-only" characteristics in their own ways.

Gavan Watson recounts one of his recent observations which demonstrated the falsehood of ascribing certain characteristics to humans alone. After pulling

a van into the queue to board an evening ferry to Skagway, Alaska, he watched as two Northwestern crows—known predominantly to be foragers along the edge of the Northern Pacific Ocean—began a cooperative effort to glean food in an unusual way:

With what I would describe as curiosity, the two crows began to inspect the grill of the camper van. It became clear what they were looking for: insects. Or, more correctly, they were searching out freshly-deceased insects that had stuck to the camper's metal and chrome. And so the metal grill became the shore: up these birds flew, gleaning the remains. Because of the lack of a good perch, they looked more like oversized Ruby-Crowned Kinglets (*Regulus calendula*) feeding in this way, with their wings quickly flapping to give them the purchase they needed to get their food. This was challenging work for the crows. After the “easy” carcasses were gone, it became a cooperative effort with each bird taking turns in one of two roles: one flying up to remove the insects and the other, after the insect hit the pavement, eating it up ...

He goes on to write that this unexpected experience highlights how some of the strictly patrolled borders between humans and other animals are, in fact, permeable:

My experience with the two crows neatly illustrates the plasticity in behaviour, lateral thinking and, frankly, creativity of these birds; adjectives, until recently, reserved to describe only our behaviour. Beyond my own anecdotal evidence, researchers contend that more species than just *Homo sapiens* are capable of language (Seyfarth, Cheney, & Marler, 1980), being self-aware (Plotnik, de Waal, & Reiss, 2006) and tool use (Krützen et al., 2005), all three classically-constructed hallmarks of human superiority. If, as suggested by these works, these previously clear distinctions are in fact not so, then falling out of this conclusion would be that we, as both humans and animals, need to examine and change accordingly our obligations and actions towards other animals. Thus, there is a moral dimension to all work in animal studies.

This moral dimension involves the recognition that our research can have a deep impact on other animals, despite it being an inherently human endeavour. As Connie Russell (2005) reminds us, the outcomes of our work extend concretely into the more-than-human realm: “Other beings are likely not remotely interested in our research and writing, busily getting on with their own existence, yet they are profoundly, materially, impacted by our inscriptions” (p. 435). In other words, what we write can determine their realities: the ways that we discursively frame nonhuman animals in our research and pedagogical efforts can rationalize, perpetuate, and/or challenge our relationships with them—be that through conservationist ideologies or the discourses that deny their subjectivity and leave unchallenged their instrumentalist use in laboratory or factory farm settings, to cite only two of countless possibilities. The work we therefore do—involving our language choices, our conceptual starting points, and our openness to disruptions in what is presumed to be known—are means of honouring the moral dimension to animal studies work.

## Challenges of Method, Discourse, and Representation

Incorporating nonhuman animals as stakeholders in our research raises particular challenges, of which there can be no guarantee of getting “right.” Putting animals on the agenda means asking questions on their behalf, with a recognition all the while of the messiness of the questions we will ask, the “answers” we might find, and the ways we will go about conducting our research and representing our findings. Three of the ongoing challenges we discussed concerned the problem of obtaining informed consent from nonhuman animals, the recognition that we are wading in the midst of multiple competing discourses about their ontological realities and “place” in the human order, and the ethics of representing the Other in our work. With no easy answers, working with these challenges requires ongoing awareness of the power we hold as researchers.

### *Method: The Problem of Informed Consent*

The humanism inherent in the research process raises a concurrent challenge of how we might devise and enact methods of inquiry that recognize the agency of other species. While we, as environmental education researchers responding to the question of the animal, may be thinking beyond traditional boundaries, we remain bound by institutionalized research protocols that in turn reflect the value systems of the larger Western culture. Traci Warkentin contemplates this dilemma as she shares her discomfort with the obvious power imbalance embedded in a system that positions the nonhuman as object, rather than participant:

How does one obtain informed consent from a whale? Pondering this question, while designing my doctoral research on ethical and educational dimensions of encountering whales in aquariums, shone a spotlight on the near total lack of institutional procedures for the ethical consideration of nonhuman participants. While my university had extensive protocol for “research involving human participants,” there was nothing for accommodating nonhuman participants apart from the “animal care protocols” which applied to scientific laboratories. The system assumed and maintained a fundamental dualism between human subjects and animal objects.

Warkentin’s methodological response involved a creative decision that moved away from giving primacy to human voices, and toward an observation-based mode of analysis that allowed her to consider the interactions of people and whales together:

I decided not to conduct formal interviews. My reasons were two-fold. Firstly, interviews would have privileged human language and voice over other modes of communication. They would also have shifted focus away from the immediacy of interacting with whales by enabling a distanced and decontextualized space for talking about them, a space in which their embodied presences could have been diminished or distorted through abstract representation. Secondly, formal interviews would have been the only aspect of my research that actually required informed



consent. In choosing participant observation as my primary form of data collection I came somewhat closer to evening out the playing field, so to speak. Everyone's participation in my research was unwitting.

As Warkentin's contribution demonstrates, efforts to take nonhuman animals seriously as stakeholders in our research can bring us up against institutionalized anthropocentrism, requiring us to adapt standard research methods. As we challenge humanism in our work, we must equally be prepared to seek out methods of inquiry that allow us to creatively reposition other species as actors and participants.

### *Discourse: Working across Epistemic Communities*

The interdisciplinary nature of animal studies opens up a range of discursive framings of the animal and epistemological positions regarding the ethics of human-animal relations. For example, within the collective group of the nine co-authors of this paper, we are working at the intersection of multiple theoretical frameworks including environmental ethics, critical pedagogy, natural history, humane education, feminism, poststructuralism, posthumanism, actor-network theory, animal welfare, animal rights, and various critical decolonizing and emancipatory pedagogies. We are also using diverse methodological approaches, ranging from the conceptual to the qualitative and quantitative. Further, we are a mix of vegetarian, vegan, and omnivorous people, with differing political perspectives and visions of what it means to "do" animal work effectively. Our discursive understandings of the "animal" are by no means monolithic, and our research questions are likely as diverse as our personal epistemological, ontological, and axiological commitments.

This wide-ranging diversity brings forth a few responses. First, the plurality of our approaches and the lack of a singular governing discourse suggests a lively conversation is taking place at the intersection of animal studies and environmental education. Far from pointing to an impasse, this diversity suggests vitality, growth, and the value of continued discussion. Second, it points to the importance of reflexivity in our work, as we cannot assume we are all proceeding from the same position or critical framework. This is especially key as we consider what it means to "make a difference" in our work. Third, we must recognize that this diversity can complicate research considerably, particularly when we are working across epistemic communities that espouse differing visions of human-animal relations in theory and practice.

Marlon van der Waal spoke of her experiences as a member of a Netherlands-based research institute, investigating how animal welfare is embedded in agricultural vocational education. Discussing the results of a pilot study held with teachers, she explains why she expects the political context in The Netherlands could make it complicated to broach the topic of animal welfare with those who work with animals as part of their livelihood:

My impression is that discussing and especially questioning “established” views on the way nature and the human species are ordered and which “function” each has in life, will be, to say the least, a tough nut to crack. In a recently completed pilot study I held among 16 teachers of cattle breeding and raising, participants were asked from which point of view they approached the issue of animal welfare in their work. The answer, not totally surprising, was that the issue was predominantly seen from the viewpoint of production and not from the viewpoint of intrinsic value of the animal (although no one denied that animals do have intrinsic value). The teachers also spoke about the great influence political parties and media have on the attitude of teachers and farmers towards issues of animal welfare. The Netherlands is the only country in the world that has an official political Party for the Animals in parliament. This party, coupled with radicals from movements such as the Animal Liberation Front, has fuelled anger among many and driven, according to the teachers, the agricultural sector into a defensive position. Even though this example is extracted from just a small pilot study, it does show the complexity of even *raising* the subject of animal welfare.

This complexity, and the sometimes-contrasting positions within animal studies work, suggests there is indeed much to talk about when it comes to the animal question. Working within and across differing worldviews and practices is part of this ongoing conversation.

#### *Representation: The Politics of Giving Voice*

How can we represent other animals, whose languages and inner worlds we often do not understand? The politics of giving voice and “speaking for” are complex, due in part to nonhuman animals’ radical otherness and the academy’s privileging of the written (human) word (Barrett, 2009). Gail Kuhl stresses that when conducting research involving the nonhuman, we must acknowledge that we are in at least a doubled position of power: once, as researchers, and second, as humans. Reflecting on the Montebello discussion, she writes:

The conversation made me think more critically about the process of research and representation and how it puts us, as researchers, in a position of power. As I listened to my fellow researchers talk I pondered: How had I represented the dogs in my research? How had I given voice to individuals of another species? Clearly, however we choose to represent the “other,” we are wielding power. Past practices of studying and representing the “other” have had devastating effects for groups of people and likely for other animals as well. Understanding that we have this power can lead us to be careful and deliberate as we strive to find ways to listen to the “voices” of our animal neighbours and represent them respectfully.

The lack of a common language and the modes by which we represent our work create an ongoing challenge to produce research that moves beyond talk and text. Kuhl continues:

Animal-others do not use (human) language to speak to us. How can we go beyond text to represent their embodied experiences, and our embodied experiences (as animals ourselves) with them? There seem to be more and more alternative approaches for research and representation available (e.g., narrative, arts-based educational research, a phenomenological method called kinaesthetic empathy, and hypertextual forms)—some of which my fellow researchers at Montebello have already explored and incorporated.

The politics of representation, and the other challenges discussed above, demonstrate that animal studies research can give rise to complex ethical issues for which there are no straightforward solutions. As we work to respond to these and other challenges inherent in this work, we invite continued reflection and conversation amongst critical colleagues.

### Remembering our Animal Relations

Presumably, for many of us in the field of environmental education, our lived experiences with the more-than-human world form personally important narratives. For some of us, past experiences with nonhuman animals have compelled us to find ways to recognize and honour their subjectivity and our interrelationships with them. While most authors of this paper contributed discussions of past and present research efforts, Amy Cutter-Mackenzie shared an autobiographical narrative exploring how her experiences with nonhuman animals have shaped her identity. In her current research she investigates children's and teachers' experiences and thinking in environmental education (Cutter-Mackenzie, 2009; Cutter-Mackenzie & Edwards, 2006; Cutter-Mackenzie & Smith, 2003), but she writes that the Montebello conversation prompted her to consider whether the animal question might figure more prominently into her future work. She recounts her story:

Since an early age, I have had a strong and personal affinity with animals. I grew up in Queensland on a small farm as part of a large family. Dogs and cats lived inside and slept in our beds, with a *mélange* of chickens, pigs, cows, goats, and sheep ranging free on our land. Alongside my parents and brothers and sisters, I raised and loved all the animals on our property. My parents did not sell their stock, rather attempting to live off the land to raise their family. I can remember becoming very distressed and often inconsolable each time one of our animals was to be slaughtered. It seemed beyond my comprehension. ...

My internal conflict never ceased and at the tender age of 15 I became a vegetarian after doing a school project on the environmental effects of beef in Australia. This was no ordinary school project. Uncle Toby's, a national food (cereal) company, sponsored me to investigate this research question such that I lived in Alice Springs (Northern Territory of Australia—some 3000 kilometres from my home at the time) for three months, where I visited abattoirs and lived and worked on multiple cattle farms. During my farm stays, my job was to milk the cows at 5 a.m. each morning,

which was followed by working the land (largely fencing and preparing animals for slaughter—it was that time of year). This significant life experience not only led me to make a decision to never eat meat again, but the process awakened the researcher within me as I witnessed the mass production of meat (from paddock to feedlot to market), where animals were treated as a commodity with no dignity, integrity, or compassion. This awakening led me to become a teacher and then later a researcher in the area of environmental education in the plight to make a difference to the environment, animals, and the way people live their lives. However, I have never seriously come back to the animal question ...

At Montebello when the flocks of geese passed over our small group honking to the point where we could no longer hear each other's voices, it became clear to me that my research efforts in environmental education quite earnestly had probably made very little difference to the more-than-human. This troubled me enormously. Perhaps their loud honk was a second awakening for me.

Cutter-Mackenzie's narrative reminds us how integral memory, identity, and passion is for all research (Richardson, 2001), including environmental education research that grapples with the animal question. Each of us are drawing on our personal and professional histories and disciplinary backgrounds; further, we can draw on the work that has already been done in environmental education to trouble the human-animal divide.

### Another Turn?

While the past decades have seen an outpouring of critical work devoted to the subject of the Other, far less theoretical attention has been paid to the nonhuman animal. Until recently, there has been a curious silence about animals in much of the emancipatory scholarship produced, which makes their critical consideration, at the Montebello seminar and beyond, an exciting opening in the environmental education field. The socioecological turn in environmental education asserts the importance of working in tandem towards social justice and environmental flourishing (e.g., Gruenewald, 2003), but as Richard Kahn and Brandy Humes (2009) assert, thus far “the majority of the socio-ecological turn ... has failed to integrate nonhuman animal advocacy as a serious educational issue” (p. 179). Perhaps we have found ourselves now at another turn?

### Notes

- <sup>1</sup> The participants in this conversation included all of the authors of this paper as well as Sue Hamel (Lakehead University), Philip Payne (Monash University), and Emily Root (Lakehead University). The conversation was facilitated by Leesa Fawcett, Jan Oakley, Sue Hamel, Gail Kuhl, Traci Warkentin, and Gavan Watson. For this paper, the first two authors solicited reflections from the other participants

and then wove them together with the assistance of the third author. The Canada geese, and all of the more-than-human world alongside the Ottawa River, also provided inspiration.

- <sup>2</sup> The term “more-than-human” is used in this paper in the spirit of David Abram’s usage in his 1996 book, *The Spell of the Sensuous: Perception and Language in a More-than-Human World*. This term is used as a reminder that we need to move beyond anthropocentric tendencies and recognize, always, that there are more subjects in the world than humans alone. The use of this term is not meant to reinforce a hierarchy or division between humans and other animals, or to evoke, in a transhumanist sense, the idea of transcending the biological limitations of the current human state.
- <sup>3</sup> While we are responding to the Western philosophical tradition in this paper, this is not to assume that this is the only discourse available to us, or the only means by which we can think of or relate to nonhuman animals. Aboriginal epistemologies, for example, offer perspectives and stories that transcend anthropocentrism, blur the divide between humans and other animals, value relationships over dichotomies, and see all of nature as infused with spirit and consciousness to form part of a larger, animate whole (e.g., Cheney, 2002; Cruikshank, 2004; Sheridan, 2001). A decolonizing approach toward environmental education (see Emily Root’s paper in this volume) speaks to the need to decolonize White Western systems of knowledge alongside relationships with many other beings in the world. Thank you to the reviewer who responded to our paper with this important observation.

### Notes on Contributors

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## References

- Abram, D. (1996). *The spell of the sensuous: Perception and language in a more-than-human world*. New York: Vintage Books.
- Barrett, M. J. (2009). Beyond human/nature/spirit boundaries: Researching with animate Earth. Doctoral dissertation, University of Regina, Saskatchewan. Available online at <www.porosity.ca>
- Bell, A. C., & Russell, C. L. (1999). Life ties: Disrupting anthropocentrism in language arts education. In J. Robertson (Ed.), *Teaching for a tolerant world: Grades K-6 essays and resources* (pp. 68-89). Urbana, Illinois: National Council of Teachers of English.
- Bell, A. C., Russell, C. L., & Plotkin, R. (1998). Environmental learning and the study of extinction. *Journal of Environmental Education*, 29(2), 4-10.
- Castricano, J. (Ed.). (2008). *Animal subjects: An ethical reader in a posthuman world*. Waterloo: Wilfrid Laurier University Press.
- Cavaliere, P. (2004). *The animal question: Why nonhuman animals deserve human rights*. New York: Oxford University Press.
- Cheney, J. (2002). The moral epistemology of First Nations stories. *Canadian Journal of Environmental Education*, 7(2), 88-100.
- Creager, A. N. H., & Jordan, W. C. (2002). *The animal-human boundary: Historical perspectives*. Rochester: University of Rochester Press.
- Cruikshank, J. (2004). Uses and abuses of 'traditional knowledge': Perspectives from the Yukon territory. In D.G. Anderson & M. Nuttall (Eds.), *Cultivating Arctic landscapes: Knowing and managing animals in the circumpolar north* (pp. 17-32). New York: Berghahn Books.
- Cutter-Mackenzie, A. (2009). Multicultural school gardens: Creating engaging garden spaces in learning about language, culture, and environment. *Canadian Journal of Environmental Education*, 14, 122-135.
- Cutter-Mackenzie, A., & Edwards, S. (2006). Environmental education as a content area in early childhood education and curriculum. *Australian Journal of Environmental Education*, 22(2), 13-19.
- Cutter-Mackenzie, A., & Smith, R. (2003). Ecological literacy: The "missing" paradigm in environmental education (Part one). *Environmental Education Research*, 9(4), 497-524.
- Donovan, J., & Adams, C. J. (Eds.). (2007). *The feminist care tradition in animal ethics*. New York: Columbia University Press.
- Evernden, N. (1992). *The social creation of nature*. Baltimore: The Johns Hopkins University Press.
- Fawcett, L. (2002). Children's wild animal stories: questioning inter-species bonds. *Canadian Journal of Environmental Education*, 7(2), 125-139.
- Fawcett, L., Bell, A. C., & Russell, C. L. (2002). Guiding our environmental praxis: Teaching for social and environmental justice. In W. Leal Filho (Ed.), *Teaching sustainability at universities: Towards curriculum greening* (pp. 223-238). New York: Peter Lang.
- Fudge, E. (2002). *Animal*. London: Reaktion.
- Gruenewald, D. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(4), 3-12.
- Haraway, D. (2008). *When species meet*. Minneapolis: University of Minnesota Press.

- Humes, B. (2008). Moving toward a liberatory pedagogy for all species: Mapping the need for dialogue between humane and anti-oppressive education. *Green Theory and Praxis: The Journal of Ecopedagogy*, 14(1), 65-85.
- Kahn, R., & Humes, B. (2009). Marching out from the Ultima Thule: Critical counterstories of emancipatory educators working at the intersection on human rights, animal rights, and planetary sustainability. *Canadian Journal of Environmental Education*, 14, 179-195.
- Knight, J. (Ed.). (2005). *Animals in person: Cultural perspectives on human-animal intimacies*. New York: Berg.
- Krützen, M., Mann, J., Heithaus, M. R., Connor, R. C., Bejder, L., & Sherwin, W. B. (2005). Cultural transmission of tool use in bottlenose dolphins. *Proceedings of the National Academy of Sciences*, 102(25), 8939-8943.
- Kuhl, G. J. (in press). Human-sled dog relations: What can we learn from the stories and experiences of mushers? *Society and Animals: Journal of Human-Animal Studies*.
- Noske, B. (1997). *Beyond boundaries: Humans and animals*. Montreal: Black Rose Books.
- Oakley, J. (2007). *The human-animal divide: Anthropocentrism and education*. Unpublished master's thesis, Lakehead University, Thunder Bay, ON.
- Oakley, J. (2009). Under the knife: Animal dissection as a contested school science activity. *Journal for Activist Science and Technology Education*, 1(2), 59-67.
- Plotnik, J. M., de Waal, F., & Reiss, D. (2006). Self-recognition in an Asian elephant. *Proceedings of the National Academy of Sciences*, 103(45), 17053.
- Plumwood, V. (2002). *Environmental culture: The ecological crisis of reason*. London: Routledge.
- Preece, R. (1999). *Animals and nature: Cultural myths, cultural realities*. Vancouver: UBC Press.
- Preece, R. (2005). *Brute souls, happy beasts, and evolution: The historical status of animals*. Vancouver: UBC Press.
- Regan, T. (1983). *The case for animal rights*. Berkeley: University of California Press.
- Richardson, L. (2001). Getting personal: Writing stories. *Qualitative Studies in Education*, 14(1), 33-38.
- Rothfels, N. (2002). *Representing animals*. Bloomington: Indiana University Press.
- Russell, C. L. (1995). The social construction of orangutans: An ecotourist experience. *Society and Animals*, 3(2), 151-170.
- Russell, C. L. (2005). 'Whoever does not write is written': The role of 'nature' in post-post approaches to environmental education research. *Environmental Education Research*, 11(4), 433-443.
- Russell, C. L. (2009). Living and learning on the edge: Class, race, gender, animals and the environment in a university community outreach program. *Our Schools, Our Selves*, 19(1), 109-112.
- Russell, C. L., & Hodson, D. (2002). Whalewatching as critical science education? *Canadian Journal of Science, Mathematics and Technology Education*, 2(4), 485-504.
- Selby, D. (1995). *Earthkind: A teachers' handbook on humane education*. Staffordshire, England: Trentham.
- Seyfarth, R. M., Cheney, D. L., & Marler, P. (1980). Monkey responses to three different alarm calls: Evidence of predator classification and semantic communication. *Science*, 210(4471), 801.

- Shepard, P. (1978). *Thinking animals: Animals and the development of human intelligence*. New York: Viking Press.
- Sheridan, J. (2001). Mythic ecology. *Canadian Journal of Environmental Education*, 6, 197-208.
- Singer, P. (1975). *Animal liberation: A new ethics for our treatment of animals*. New York: Random House.
- Thoreau, H. (1862/1993). Walking. In S. Armstrong & R. Botzler (Eds.), *Environmental ethics: Divergence and convergence* (108-118). Toronto: McGraw-Hill.
- Warkentin, T. (2009). Whale agency: Affordances and acts of resistance in captive environments. In S. McFarland & R. Hediger (Eds.), *Animals and agency: An interdisciplinary exploration* (pp. 23-43). Leiden: Brill.
- Warkentin, T., & Fawcett, L. (in press). Whale and human agency in world-making: Decolonizing whale-human encounters. In R. Acampora (Ed.), *Zootopian visions of animal encounters: Farewell to Noah*. Lanham, MD: Lexington Books.
- Watson, G. P. L. (2006). Wild becomings: How the everyday experience of common wild animals at summer camp acts as an entrance to the more-than-human world. *Canadian Journal of Environmental Education*, 11, 127-142.
- Weil, Z. (2004). *The power and promise of humane education*. Gabriola Island, BC: New Society Publishers.
- Wolch, J. R. (1998). Zoöpolis. In J. Emel & J. R. Wolch (Eds.), *Animal geographies: Place, politics, and identity in the nature-culture borderlands* (pp. 119-138). New York: Verso.
- Wolfe, C. (2003). *Zoontologies: The question of the animal*. Minneapolis: University of Minnesota Press.