Beyond Human, Beyond Words:
Anthropocentrism, Critical Pedagogy, and
the Poststructuralist Turn

Anne C. Bell
Constance L. Russell

Critical pedagogy, even as inflected by certain poststructuralisms, tends to reinforce rather than subvert deep-seated humanist assumptions about humans and nature by taking for granted the borders that define nature as the devalued Other. These assumptions are called into question by discussion of how relationships between language, communication, and meaningful experience are conceptualized outside the field of critical pedagogy. We deal constructively with some anthropocentric blind spots within critical pedagogy generally and within poststructuralist approaches to critical pedagogy in particular. We hope to illuminate places where these streams of thought and practice move in directions compatible with critical environmental education.

La pédagogie critique, même celle de quelques poststructuralismes, a tendance à renforcer plutôt que de mettre en doute certains postulats humanistes selon lesquels la nature est, pour les êtres humains, l'Autre dévalué. Ces postulats sont remis en question dans les analyses portant sur le mode de conceptualisation, en dehors du champ de la pédagogie critique, des relations entre le langage, la communication et l'expérience signifiante. Les auteures traitent de quelques présupposés anthropocentriques de la pédagogie critique, en particulier dans ses approches poststructuralistes. Elles espèrent ainsi éclairer des courants théoriques et pratiques compatibles entre la pédagogie critique et le respect de l'environnement.

For the largest part of our species' existence, humans have negotiated relationships with every aspect of the sensuous surroundings, exchanging possibilities with every flapping form, with each textured surface and shivering entity that we happened to focus upon. All could speak, articulating in gesture and whistle and sigh a shifting web of meanings that we felt on our skin or inhaled through our nostrils or focused with our listening ears, and to which we replied . . . (Abram, 1996, p. ix)

. . . it is language in the form of conflicting discourses which constitutes us as conscious thinking subjects and enables us to give meaning to the world and to act to transform it. (Weedon, 1987, p. 32)

Poststructuralist theories have provided a discursive framework through which to critique and contest many of the key tenets of humanism. In drawing attention to the cultural and historical specificity of all human knowledge, they have been used to disrupt assumptions about objectivity, the unified subject, and the universality of human experience, and thereby to expose the classist, racist, sexist, and heterosexist underpinnings of Western humanist thought. For this reason poststructuralism offers promising theoretical perspectives for educators who wish to challenge cultural representations and structures that give rise to inequities.

Although we acknowledge the important contribution of poststructuralism to analyses of oppression, privilege, and power in education, we believe that educators must continue to probe its limitations and implications. Accordingly, we consider here how poststructuralism, as it is taken up within critical pedagogy, tends to reinforce rather than subvert deep-seated humanist assumptions about humans and nature by taking for granted the "borders" (as in Giroux, 1991) that define nature as the devalued Other. We ask what meanings and voices have been pre-empted by the virtually exclusive focus on humans and human language in a human-centred epistemological framework. At the same time, we discuss how relationships between language, communication, and meaningful experience are being conceptualized outside the field of critical pedagogy (in some cases from a poststructuralist perspective) to call into question these very assumptions. Although we concentrate primarily on societal narratives that shape understandings of human and nature, we also touch on two related issues of language: the "forgetting" of nonverbal, somatic experience and the misplaced presumption of human superiority based on linguistic capabilities. In so doing, our intention is to deal constructively with some of the anthropocentric blind spots within critical pedagogy generally and within poststructuralist approaches to critical pedagogy in particular. We hope to illuminate places where these streams of thought and practice move in directions compatible with our own aspirations as educators.

To borrow from poststructuralism and yet remain within a critical pedagogy framework gives rise, of course, to inevitable tensions. Critical pedagogy continues earlier traditions such as "progressive," "radical," "emancipatory," and "liberation" pedagogies whose root metaphors are distinctly modern (see Bowers, 1993a, pp. 25–26.). Poststructuralism, however, brings into play postmodern perspectives and methods of analysis that challenge modernist notions of, for example, freedom, history and progress, rationality, and subjectivity. Nevertheless, poststructuralism has influenced critical theories of education for over a decade, generating fruitful discussions about epistemic certainty, master narratives, stable

signifiers, and essentialized identities. As environmental educators, we have found poststructuralism, in concert with the many other theoretical perspectives informing critical pedagogy (e.g., feminism, Marxism, antiracism, Freudian theory, popular education), to be useful in our efforts to come to terms with dominant assumptions about education.

We recognize, furthermore, that poststructuralism as it is taken up within critical pedagogy is only one manifestation of poststructuralist approaches in the human sciences. The term *poststructuralist* applies to a range of (not necessarily coherent) theoretical perspectives. The fact that the term is used differently in Australia, the United States, and Canada further complicates matters (Luke & Luke, 1995, p. 359). Despite important differences, however, forms of poststructuralism share certain assumptions about language, meaning, and subjectivity. A common factor is the analysis of language as "the place where social and political consequences are defined and contested" (Weedon, 1987, pp. 20–21).

GROUNDS FOR CONSIDERATION

We come to critical pedagogy with a background in environmental thought and education. Of primary concern and interest to us are relationships among humans and the "more-than-human world" (Abram, 1996), the ways in which those relationships are constituted and prescribed in modern industrial society, and the implications and consequences of those constructs. As a number of scholars and nature advocates have argued, the many manifestations of the current environmental crisis (e.g., species extinction, toxic contamination, ozone depletion, topsoil depletion, climate change, acid rain, deforestation) reflect predominant Western concepts of nature, nature cast as mindless matter, a mere resource to be exploited for human gain (Berman, 1981; Evernden, 1985; Merchant, 1980). An ability to respond adequately to the situation therefore rests, at least in part, on a willingness to critique prevailing discourses about nature and to consider alternative representations (Cronon, 1996; Evernden, 1992; Hayles, 1995). To this end, poststructuralist analysis has been and will continue to be invaluable.

It would be an all-too-common mistake to construe the task at hand as one of interest only to environmentalists. We believe, rather, that disrupting the social scripts that structure and legitimize the human domination of nonhuman nature is fundamental not only to dealing with environmental issues, but also to examining and challenging oppressive social arrangements. The exploitation of nature is not separate from the exploitation of human groups. Ecofeminists and activists for environmental justice have shown that forms of domination are often intimately

connected and mutually reinforcing (Bullard, 1993; Gaard, 1997; Lahar, 1993; Sturgeon, 1997). Thus, if critical educators wish to resist various oppressions, part of their project must entail calling into question, among other things, the instrumental exploitive gaze through which we humans distance ourselves from the rest of nature (Carlson, 1995).

For this reason, the various movements against oppression need to be aware of and supportive of each other. In critical pedagogy, however, the exploration of questions of race, gender, class, and sexuality has proceeded so far with little acknowledgement of the systemic links between human oppressions and the domination of nature. The more-than-human world and human relationships to it have been ignored, as if the suffering and exploitation of other beings and the global ecological crisis were somehow irrelevant. Despite the call for attention to voices historically absent from traditional canons and narratives (Sadovnik, 1995, p. 316), nonhuman beings are shrouded in silence. This silence characterizes even the work of writers who call for a rethinking of all culturally positioned essentialisms.

Like other educators influenced by poststructuralism, we agree that there is a need to scrutinize the language we use, the meanings we deploy, and the epistemological frameworks of past eras (Luke & Luke, 1995, p. 378). To treat social categories as stable and unchanging is to reproduce the prevailing relations of power (Britzman et al., 1991, p. 89). What would it mean, then, for critical pedagogy to extend this investigation and critique to include taken-for-granted understandings of "human," "animal," and "nature"?

This question is difficult to raise precisely because these understandings are taken for granted. The anthropocentric bias in critical pedagogy manifests itself in silence and in the asides of texts. Since it is not a topic of discussion, it can be difficult to situate a critique of it. Following feminist analyses, we find that examples of anthropocentrism, like examples of gender symbolization, occur "in those places where speakers reveal the assumptions they think they do not need to defend, beliefs they expect to share with their audiences" (Harding, 1986, p. 112).

Take, for example, Freire's (1990) statements about the differences between "Man" and animals. To set up his discussion of praxis and the importance of "naming" the world, he outlines what he assumes to be shared, commonsensical beliefs about humans and other animals. He defines the boundaries of human membership according to a sharp, hierarchical dichotomy that establishes human superiority. Humans alone, he reminds us, are aware and self-conscious beings who can act to fulfill the objectives they set for themselves. Humans alone are able to infuse the world with their creative presence, to overcome situations that limit them, and thus to demonstrate a "decisive attitude towards the world" (p. 90).

Freire (1990, pp. 87–91) represents other animals in terms of their lack of such traits. They are doomed to passively accept the given, their lives "totally determined" because their decisions belong not to themselves but to their species. Thus whereas humans inhabit a "world" which they create and transform and from which they can separate themselves, for animals there is only habitat, a mere physical space to which they are "organically bound."

To accept Freire's assumptions is to believe that humans are animals only in a nominal sense. We are different not in degree but in kind, and though we might recognize that other animals have distinct qualities, we as humans are somehow *more* unique. We have the edge over other creatures because we are able to rise above monotonous, species-determined biological existence. Change in the service of human freedom is seen to be our primary agenda. Humans are thus cast as active agents whose very essence is to transform the world – as if somehow acceptance, appreciation, wonder, and reverence were beyond the pale.

This discursive frame of reference is characteristic of critical pedagogy. The human/animal opposition upon which it rests is taken for granted, its cultural and historical specificity not acknowledged. And therein lies the problem. Like other social constructions, this one derives its persuasiveness from its "seeming facticity and from the deep investments individuals and communities have in setting themselves off from others" (Britzman et al., 1991, p. 91). This becomes the normal way of seeing the world, and like other discourses of normalcy, it limits possibilities of taking up and confronting inequities (see Britzman, 1995). The primacy of the human enterprise is simply not questioned.

Precisely how an anthropocentric pedagogy might exacerbate the environmental crisis has not received much consideration in the literature of critical pedagogy, especially in North America. Although there may be passing reference to planetary destruction, there is seldom mention of the relationship between education and the domination of nature, let alone any sustained exploration of the links between the domination of nature and other social injustices. Concerns about the nonhuman are relegated to environmental education. And since environmental education, in turn, remains peripheral to the core curriculum (A. Gough, 1997; Russell, Bell, & Fawcett, 2000), anthropocentrism passes unchallenged.[1]

ROOTS OF A CRITIQUE

Bowers (1993a, 1993b) has identified a number of root metaphors or "analogs" in critical pedagogy that reinforce the problem of anthropocentric thinking. These include the notion of change as inherently progressive,

faith in the power of rational thought, and an understanding of individuals as "potentially free, voluntaristic entities who will take responsibility for creating themselves when freed from societal forms of oppression" (1993a, pp. 25–26). Such assumptions, argues Bowers, are part of the Enlightenment legacy on which critical pedagogy, and indeed liberal education generally, is based. In other words, they are culturally specific and stem from a period in Western history when the modern industrial world view was beginning to take shape.

To be fair, Bowers understates the extent to which these assumptions are being questioned within critical pedagogy (e.g., Giroux, 1995; Peters, 1995; Shapiro, 1994; Weiler & Mitchell, 1992, pp. 1, 5). Nevertheless, his main point is well taken: proponents of critical pedagogy have yet to confront the ecological consequences of an educational process that reinforces beliefs and practices formed when unlimited economic expansion and social progress seemed promised (Bowers, 1993b, p. 3). What happens when the expansion of human possibilities is equated with the possibilities of consumption? How is educating for freedom predicated on the exploitation of the nonhuman? Such queries push against taken-for-granted understandings of human, nature, self, and community, and thus bring into focus the underlying tension between "freedom" as it is constituted within critical pedagogy and the limits that emerge through consideration of humans' interdependence with the more-than-human world.

This tension is symptomatic of anthropocentrism. Humans are assumed to be free agents separate from and pitted against the rest of nature, our fulfillment predicated on overcoming material constraints. This assumption of human difference and superiority, central to Western thought since Aristotle (Abram, 1996, p. 77), has long been used to justify the exploitation of nature by and for humankind (Evernden, 1992, p. 96). It has also been used to justify the exploitation of human groups (e.g., women, Blacks, queers, indigenous peoples) deemed to be closer to nature – that is, animalistic, irrational, savage, or uncivilized (Gaard, 1997; Haraway, 1989, p. 30; Selby, 1995, pp. 17–20; Spiegel, 1988).

This "organic apartheid" (Evernden, 1992, p. 119) is bolstered by the belief that language is an exclusively human property that elevates mere biological existence to meaningful, social existence. Understood in this way, language undermines our embodied sense of interdependence with a more-than-human world. Rather than being a point of entry into the webs of communication all around us, language becomes a medium through which we set ourselves apart and above.

This view of language is deeply embedded in the conceptual framework of critical pedagogy, including poststructuralist approaches. So too is the human/nature dichotomy upon which it rests. When writers assume that

"it is language that enables us to think, speak and give meaning to the world around us," that "meaning and consciousness do not exist outside language" (Weedon, 1987, p. 32) and that "subjectivity is constructed by and in language" (Luke & Luke, 1995, p. 378), then their transformative projects are encoded so as to exclude any consideration of the nonhuman. Such assumptions effectively remove all subjects from nature. As Evernden (1992) puts it, "if subjectivity, willing, valuation, and meaning are securely lodged in the domain of humanity, the possibility of encountering anything more than material objects in nature is nil" (p. 108).

What is forgotten? What is erased when the real is equated with a proliferating culture of commodified signs (see Luke & Luke, 1995, on Baudrillard)? To begin, we forget that we humans are surrounded by an astonishing diversity of life forms. We no longer perceive or give expression to a world in which everything has intelligence, personality, and voice. Polyphonous echoes are reduced to homophony, a term Kane (1994) uses to denote "the reduced sound of human language when it is used under the assumption that speech is something belonging only to human beings" (p. 192). We forget too what Abram (1996) describes as the gestural, somatic dimension of language, its sensory and physical resonance that we share with all expressive bodies (p. 80).

The vast forgetting to which these scholars allude is a culturally and historically specific phenomenon. In Western culture, explains Evernden (1992), it is to the Renaissance that we owe the modern conceptualization of nature from which all human qualities, including linguistic expression, have been segregated and dismissed as "projection." Once scoured of any normative content assigned to humanity, nature is strictly constrained, knowable, and ours to interrogate (pp. 28, 39–40, 48). It is objectified as a "thing," whereas any status as agent or social being is reserved for humans (Haraway, 1988, p. 592).

The language best suited to this cleansing of nature is that of the natural sciences. Scientific accounts, written in language "exclusively descriptive and avowedly neutral" (Evernden, 1992, p. 85), are widely regarded as factual and unbiased and thus are granted a privileged role in naming nature. As Haraway (1986) explains:

A scientist "names" nature in written, public documents, which are endowed with the special, institutionally enforced quality of being perceived as objective and applicable beyond the cultures of the people who wrote those documents. (p. 79)

According to Haraway (1986), the aesthetic of realism that underlies the truth claims of the natural sciences means many practitioners tend to see themselves not as interpreters but "as discoverers moving from description to causal explanation" (p. 89).

Haraway's analysis reminds us that poststructuralism can and should be used to call into question the universal legitimacy of science insofar as it is used to explicate not only the human domain but also the natural sciences. This questioning almost never takes place. Whereas accusations of reductionism have been levelled at the biobehavioural sciences when focused on humans (e.g., explaining behaviour solely in genetic terms), rarely are these accusations made against similar studies on nonhumans (Noske, 1997, p. 83). The reason, presumably, is that the sorts of questions that could be raised about how culture, class, race, and gender shape knowledge about human experience do not pertain to truth claims about the nonhuman. Humans alone are understood to have histories open to interpretation. Everything else is matter for measurement and prediction, physical stuff that can be described and classified once and for all.

To move beyond such taken-for-granted notions of human and nature, Evernden and Haraway suggest, we must admit into the conversation some "non-common-sensical insights" and some "unsettling possibilities" (Evernden, 1992, p. 102 and Haraway, 1988, p. 593, respectively). Haraway (1992) writes of "otherworldly conversations," a metaphor helpful in pointing to the possibility of conversants in a discourse in which all of the actors are not "us" (p. 84). To this end, we consider a few promising reconceptualizations of what might constitute language, agency, and meaningful existence beyond the human realm.

OTHERWORLDLY CONVERSATIONS

The human/nature dichotomy is not a frame of reference common to all cultures, and although it prevails today in Western societies, even here there are and always have been alternative ways of understanding and giving expression to a more-than-human world. These can be found, for example, in myth (Kane, 1994, p. 14), poetic expression, certain branches of philosophy and environmental thought, natural history, and children's literature and films (Wilson, 1991, pp. 128–139, 154).

Even within the natural sciences, voices attest to the meaningful existence of nonhuman beings as subjects (McVay, 1993). In animal behaviour research, for instance, numerous studies have challenged the assertion of human superiority based on a narrow definition of language that excludes nonhuman communication. Chimpanzee Washoe and orangutan Chantek use American Sign Language, and other primates, like bonobo Kanzi, are fluent in symbolic language, thereby altering the boundaries commonly drawn between language and mere communication (Gardner, Gardner, & Canfort, 1989; Miles, 1994; Savage-Rumbaugh, Shanker, & Taylor, 1998). And though the bilingual great apes may exhibit language patterns the

most similar to those of humans, there are many examples of sophisticated communication in other animals, including mammals, birds, and insects (Griffin, 1992).

Meeting the criteria of language implies, of course, that these studies compare and judge other animals against a human yardstick. In other words, a hierarchical divide is still assumed, although its position may shift somewhat to include, on humanity's side, some of the "higher" animals.

For a more radical reframing, one that seeks to acknowledge all life forms as subjects of significance, let us turn to the work of philosopher David Abram. Drawing from phenomenologist Maurice Merleau-Ponty, Abram (1996) argues that all sensing bodies are active, open forms constantly adjusting to a world that is itself continually shifting (p. 49). To demonstrate how all beings incessantly improvise their relations to other things he describes the spontaneous creativity of a spider:

Consider a spider weaving its web, for instance, and the assumption still held by many scientists that the behavior of such a diminutive creature is thoroughly "programmed in its genes." Certainly, the spider has received a rich genetic inheritance from its parents and predecessors. Whatever "instructions," however, are enfolded within the living genome, they can hardly predict the specifics of the microterrain within which the spider may find itself at any particular moment. They could hardly have determined in advance the exact distances between the cave wall and the branch that the spider is now employing as an anchorage point for her current web, or the exact strength of the monsoon rains that make web-spinning a bit more difficult on this evening. And so the genome could not explicitly have commanded the order of every flexion and extension of her various limbs as she weaves this web into its place. However complex are the inherited "programs," patterns, or predispositions, they must still be adapted to the immediate situation in which the spider finds itself. However determinate one's genetic inheritance, it must still, as it were, be woven into the present, an activity that necessarily involves both a receptivity to the specific shapes and textures of that present and a spontaneous creativity in adjusting oneself (and one's inheritance) to those contours. (Abram, 1996, p. 50)

An equally illuminating insect story, intended to evoke, once again, the subjective world of a nonhuman being, is found in Evernden's *The Natural Alien* (1985, pp. 79–80). Borrowing from the work of biologist Jakob von Uexkull, Evernden invites readers "to imagine that we are walking through a meadow and that we discern 'a soap bubble around each creature to represent its own world, filled with the perceptions which it alone knows' " (p. 79). He then attempts to describe what might be the world of a wood tick. The wood tick, he explains, is literally and figuratively blind to the world as we know it. What we readily perceive about our environment would be unknown, unknowable, and irrelevant to her. Her world is

composed of three elements: light, sweat, and heat. These are all that she needs to complete her life cycle. Light will lead her to the top of a bush, where she will cling (for as long as 18 years!) until the smell of sweat alerts her to a passing animal. She will then drop, and if she lands on a warm animal, she will indulge in a blood meal, fall to the ground, lay her eggs, and die.

Like Abram, Evernden (1985) challenges commonplace, mechanistic assumptions that reduce other life forms to programmed automatons and intimates instead a meaningful life-world completely unlike and outside our own:

To speak of reflexes and instincts is to obscure the essential point that the tick's world is a world, every bit as valid and adequate as our own. There is a subject, and like all subjects it has its world . . . The tick is able to occupy a world that is perceptually meaningful to it. Out of the thousands or millions of kinds of information that might be had, the tick sees only what is of significance to it. The world is tailored to the animal; they are entirely complementary . . . This is quite a different view of existence from our usual one in which the animal is simply an exploiter of certain natural resources. We are not talking just about observable interactions between subjects and objects but rather about a very complete interrelation of self and world, so complete that the world could serve as a definition of the self. Without the tick there is no tick-world, no tick-space, no tick-time, – no tick-reality. (pp. 80–81)

Evernden's remarks are significant for the possibilities they open up in our understanding both of the nonhuman and of ourselves. On one hand, they contest the limited notion that awareness is a specifically human attribute. On the other, they remind us that we humans too have bodies that respond to light, sweat, and heat; we too know the world through our bodies in a way that is not entirely dependent upon language; and this bodily knowledge plays an important role in defining our world and giving meaning to it.

SHARED CONVERSATIONS

In challenging anthropocentrism, the two of us find cause for hope in the fact that our critique can be seen as compatible with the work of many proponents of critical pedagogy. Specifically, attention to local contexts, lived relationships, and embodied learning within critical pedagogy matches similar considerations within environmental thought and education. The poststructuralist emphasis on societal narratives and language practices, already well developed in critical pedagogy, is likewise being taken up by environmental scholars and educators. What strikes us as most auspicious, then, is the potential for shared conversations, with insights

from one field sparking unasked questions and opening up unexplored pathways for another.

For instance, carrying forward the concerns and convictions of Dewey (1938/1963) and the progressive education movement, theorists of critical pedagogy have written extensively about the disjuncture between the kinds of environments and interactions necessary for active and transformative learning and the social relations we enter into through academic training (e.g., McKenna, 1991). They recommend practices situated in students' cultures (e.g., Shor, 1992, p. 44) and in the particular communities, schools, and other social groups of which students are a part (e.g., Walsh, 1991, p. 99). In so doing, they stress the importance of relationships, contexts, and local histories in defining who we are, calling into question the individualistic and universalistic narratives that shape curriculum and schooling generally (e.g., Giroux, 1991, p. 24; Weiler & Mitchell, 1992, pp. 1, 5).

So far, however, such queries in critical pedagogy have been limited by their neglect of the ecological contexts of which students are a part and of relationships extending beyond the human sphere. The gravity of this oversight is brought sharply into focus by writers interested in environmental thought, particularly in the cultural and historical dimensions of the environmental crisis. For example, Nelson (1993) contends that our inability to acknowledge our human embeddedness in nature results in our failure to understand what sustains us. We become inattentive to our very real dependence on others and to the ways our actions affect them. Educators, therefore, would do well to draw on the literature of environmental thought in order to come to grips with the misguided sense of independence, premised on freedom from nature, that informs such notions as "empowerment."

Further, calls for educational practices situated in the life-worlds of students go hand in hand with critiques of disembodied approaches to education. In both cases, critical pedagogy challenges the liberal notion of education whose sole aim is the development of the individual, rational mind (Giroux, 1991, p. 24; McKenna, 1991, p. 121; Shapiro, 1994). Theorists draw attention to the importance of nonverbal discourse (e.g., Lewis & Simon, 1986, p. 465) and to the somatic character of learning (e.g., Shapiro, 1994, p. 67), both overshadowed by the intellectual authority long granted to rationality and science (Giroux, 1995; Peters, 1995; S. Taylor, 1991). Describing an "emerging discourse of the body" that looks at how bodies are represented and inserted into the social order, S. Taylor (1991) cites as examples the work of Peter McLaren, Michelle Fine, and Philip Corrigan.

A complementary vein of enquiry is being pursued by environmental researchers and educators critical of the privileging of science and abstract

thinking in education. They understand learning to be mediated not only through our minds but also through our bodies. Seeking to acknowledge and create space for sensual, emotional, tacit, and communal knowledge, they advocate approaches to education grounded in, for example, nature experience and environmental practice (Bell, 1997; Brody, 1997; Weston, 1996). Thus, whereas both critical pedagogy and environmental education offer a critique of disembodied thought, one draws attention to the ways in which the body is situated in culture (Shapiro, 1994) and to "the social construction of bodies as they are constituted within discourses of race, class, gender, age and other forms of oppression" (S. Taylor, 1991, p. 61). The other emphasizes and celebrates our embodied relatedness to the more-than-human world and to the myriad life forms of which it is comprised (Payne, 1997; Russell & Bell, 1996). Given their different foci, each stream of enquiry stands to be enriched by a sharing of insights.

Finally, with regard to the poststructuralist turn in educational theory, ongoing investigations stand to greatly enhance a revisioning of environmental education. A growing number of environmental educators question the empirical-analytical tradition and its focus on technical and behavioural aspects of curriculum (A. Gough, 1997; Robottom, 1991). Advocating more interpretive, critical approaches, these educators contest the discursive frameworks (e.g., positivism, empiricism, rationalism) that mask the values, beliefs, and assumptions underlying information, and thus the cultural and political dimensions of the problems being considered (A. Gough, 1997; Huckle, 1999; Lousley, 1999). Teaching about ecological processes and environmental hazards in a supposedly objective and rational manner is understood to belie the fact that knowledge is socially constructed and therefore partial (A. Gough, 1997; Robertson, 1994; Robottom, 1991; Stevenson, 1993).

N. Gough (1999) explicitly goes beyond critical approaches to advocate poststructuralist positions in environmental education. He asks science and environmental educators to adopt skepticism towards metanarratives, an attitude that characterizes poststructuralist discourses. Working from the assumption that science and environmental education are story-telling practices, he suggests that the adequacy of narrative strategies be examined in terms of how they represent and render problematic "human trans-actions with the phenomenal world" (N. Gough, 1993, p. 607). Narrative strategies, he asserts, should not create an illusion of neutrality, objectivity, and anonymity, but rather draw attention to our kinship with nature and to "the personal participation of the knower in all acts of understanding" (N. Gough, 1993, p. 621).

We contend, of course, that Gough's proposal should extend beyond the work of science and environmental educators. The societal narratives that

legitimize the domination of nature, like those that underlie racism, sexism, classism, heterosexism, and so on, merit everyone's concern. And since the ecological crisis threatens especially those most marginalized and vulnerable (Running-Grass, 1996; D. Taylor, 1996), proponents of critical pedagogy in particular need to come to terms with the human-centred frameworks that structure their endeavours.

No doubt poststructuralist theory will be indispensable in this regard. Nevertheless, anthropocentric assumptions about language, meaning, and agency will need to be revisited. In the meantime, perhaps we can ponder the spontaneous creativity of spiders and the life-worlds of woodticks. Such wondrous possibilities should cause even the most committed of humanists to pause for a moment at least.

NOTE

1. Although the term *anthropocentrism* brings into play a hierarchical dualism that can mask the complexity of human relationships with other forms of life and de-emphasize the permeability of human/nonhuman borders, we find the word helpful, if not indispensable, in naming and resisting a way of being in the world that "places humanity and human interests at the center of value" (Katz, 1997, p. 122).

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