

## Real Animals? An Inquiry on Behalf of Relational Zoöntology

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### *Abstract*

*The intelligibility of certain environmentalist critiques and animal advocacy positions is underwritten by a realist ontology of animality (or 'zoöntology'). Various constructionist commentaries in human ecology and allied fields tend to undermine this foundation. The present article seeks to defend an intermediate stance ontologically and epistemologically, so as to preserve the significance of eco-critical theories while allowing concerns of contextuality due entry into such analyses. Particular attention is paid to the ontic and epistemic standing of animate entities.*

**Keywords:** realism, constructionism, zoöntology, animals, eco-criticism

*. . . we may yet learn to perceive animals as we ought to: as they really are . . .* (Russow 1989, 38)

*...our spirit protests against the artificiality of outward show; it demands 'essentials' instead of 'facades' . . . [yet] we shall perceive that the appearance which meets the eye is something of significance and shall not allow it to be degraded to a mere shell which hides the essential from our glance* (Portmann 1967, 34f.).

*Do animals exist for us as meaningful entities only insofar as each may be thought to manifest or exemplify an ideal type constituted within the set of symbolic values making up the 'folk taxonomy' specific to our culture? Or do we perceive animals directly, by virtue of their immersion in an environment that is largely ours as well, regardless of the images that we may hold of them, or of whether we hold such images at all?* (Ingold 1988, 12)

Critiques of various wildlife protection measures, such as the establishment and maintenance of zoological gardens and parks, are sometimes mobilized by consideration of authenticity factors. For example, are we really saving the wild in conditions of captivity or sanctuary? Is the refuge not in effect a prison that changes the 'true nature' or autonomy of

its keep? Framing this kind of query implies a criterion of judgment, which has been phrased so that "a wild animal achieves a state of authentic well-being when it survives and reproduces offspring, based on its own genetic abilities and behavioral adaptations, in a truly natural (as opposed to [merely] naturalistic) environment" (Wuichet and Norton 1995, 239ff.). To assess the legitimacy of this type of criterion, ecophilosophers need to deal with the issue of what a 'real animal' might be, of whether any such entity exists or is knowable. At the other end of the ontological spectrum, social constructionists dispute realist authenticators of animal nature by making claims like the following: "Once brought to human attention an animal is no longer an animal in itself — it can only be that away from human sight, experience and thought" (Mullan and Marvin 1987, 3). Neo-Kantian remarks of this sort raise the specter of what we might call zoological idealism. Consequently, in this essay, I want to compare the phenomenal and biological notions of animality: Is it possible to discover that elusive beast — the 'noumenal organism'? If not, can we rehabilitate the idea of biotic authenticity — a notion crucial to the intelligibility of preservation as such — without resting on essentialistic illusions?<sup>1</sup>

To begin, let us look at a specific illustration of the problem. Two sociologists I have already quoted, Mullan and Marvin, risk confusion when they set out to critique the zoo while simultaneously maintaining allegiance to a constructionist stance. They say that "the human experience of a [captive] creature destroys its authenticity (a quality which is linked to its independence) as a wild animal" and yet insist that "the notion of a 'real animal' makes no sense" because "animals are human constructions" (Mullan and Marvin 1987, 73, 6, 3). How can their charge of inauthenticity be sustained, given their eschewal of a realist zoöntology?<sup>2</sup> One way Mullan and Marvin (1987, 3) attempt to salvage coherence is to soften their anti-realism into an epistemological position so as to rule out the implication that animals "are not real physical entities living in a real physical world, but rather to emphasize they are also man-made in the sense that they are thought about by man, and it is the animal as it is thought about rather than the animal itself which is of significance." However, *metaphysically*, this retreat from hard-core constructionism flirts with neo-Kantian dualism (with its concomitant dilem-

ma between perspectivalism vs. two-world ontology) and, hermeneutically, it borders on tautology (insofar as significance as such must be thought — i.e., to be at all).

The conceptual knots in which these sociologists tie themselves are emblematic of a larger problem regarding the ontological status of nature. Metaphysically speaking, many if not most environmentalists are naive naturalists in the sense that they believe in the ‘objective outdoors’ — an external world existing beyond human edifice and mentality, upon which our buildings and theories are based. Some ecophilosophers, however, have rejected this mainstream conviction in favor of a constructionist stance. So, for instance, Roger King (1990, 102) tells us that “nature is not something in itself, but rather an artifact of human cultural life.” Yet, it is unclear whether this claim is meant to express an actual ontology or an epistemology instead, because King (1990, 104) also holds that “*our understanding of Nature is a product of cultural institutions and the plurality of interpretations of the natural world which they make available.*”

Now the ambiguity between ontological claim and epistemological deliverance is a typical feature of constructionist positions. In a generic study of constructionism, Ian Hacking (1999, 68) flags just this aspect in asking, “When we say ‘X is socially constructed’, are we really talking about the idea of X, or about an object in the world?” It is hard to get, and no doubt difficult to give, a straight answer to Hacking’s question. Returning to my example, King (1990, 102) offers the following clarification: “To say that Nature is an artifact is to say that we have no access to a Nature in itself; our interpretation of Nature can never be independent of the intellectual, artistic, emotional, and technological resources available to us.” Here the latter statement may be read as a reminder that the ineluctable hermeneutic circle binds our construals of the natural world, but the former statement seems to imply a rather radical (and notoriously dubious) species of idealism.<sup>3</sup>

Yet, perhaps some ecophilosophers are prepared to bite the idealist bullet. Steven Vogel (1998, 175), for instance, comes quite close to embracing a quasi-pragmatist, neo-Hegelian idealism when he claims that human “practice doesn’t constitute [just] some social part of the world — it constitutes the environing world as such, the world of real objects that surround us, a world that is quite literally ‘socially constructed’.”<sup>4</sup> What would tempt anyone to adopt such a robustly constructionist stance? I suspect it is the conviction, voiced by Vogel and others, that there is “no access” to the natural world that does not involve some human/social practice.

Here my realist compunctions kick in and I part company with constructionism: obviously our interaction or dialogue with nature is socially constructed (what else could it be?) — yet recognition of that does not automatically commit

us to believing nature itself is made up by us. Of course, I cannot express anything about that bare world without dressing it up in language; nonetheless, the assumption that another reality — besides myself or us — is subject and party to (not merely an object in or construction of) my/our discourse and deeds is more plausible than the idea that I/we make the world entirely out of words and actions. One reason this is so is because the latter proposition implies an untenable interpretation of scientific and technological successes and failures (Sismondo 1996, ch. 5). Thus, if we want to come to terms with the many instances of common experience in which people staking a cognitive claim are able (by applying their knowledge) to gain pragmatic results that we who lack that knowledge cannot achieve, then we will abandon full-blown idealism (and its postmodern variant of ‘textualism’) in favor of some form of realism (however weak).<sup>5</sup> Why? Because the realistic notion that pragmatic coping is explainable in terms of our epistemic beliefs adequately describing enough of the actual world to get by (not necessarily enough to set up a complete correspondence theory of truth). This notion, I hold, is to be preferred over any of the standard options open to idealists: confessing ignorance and calling pragmatic success a miracle, or making appeals to supernatural principles such as pre-established harmony or divine occasionalism.

With the provisional ontological commitments explicated above, let us now return to the topic of immediate concern — nature and animals. The naturalistic realism of Holmes Rolston III is instructive at this point. Here is a thinker who reminds us, “There is always some sort of cognitive framework within which nature makes its appearance, *but that does not mean that what appears is only the framework*” (Rolston 1997, 43, *italics added*). What is salutary about Rolston’s approach is his willingness to forego the polemical pendulum swing between foundationalism and relativism. “We may not have noumenal access to absolutes” he admits, and yet “we do have access to some remarkable [natural] phenomena that have taken place and continue to take place outside our minds, outside our cultures” (Rolston 1997, 49). This access is not pure — neither purely objective nor purely subjective. It is a transactional dynamic of interrelationship; as such, it is best understood not as impossible transcendence or as stultifying solipsism but rather as taking place *between* knower and known and capable of yielding *enough* awareness of the latter by the former to enable a negotiation, or better a navigation of what phenomenologists call the “lifeworld” — a domain or zone of experience shared with other forms of life (in both the cultural and biotic senses of the term).<sup>6</sup>

So where does this insight leave us with respect to knowing other animals? Rolston readily appeals to the life sciences for reliable knowledge, undaunted by sociologies or

histories of science that cast suspicion on the scientific enterprise as such.<sup>7</sup> In confrontation with contextualist accounts of science — such as, for example, Donna Haraway's *Primate Visions* (1989) — his reliabilist epistemology can be defended by pointing out that critics like Haraway are either uncovering *mis*-representations (which only makes sense if some idea of truth or its pursuit is still operative) or else their critiques are rendered otiose (for want of a critical foil or fulcrum).<sup>8</sup> Even if all epistemic sites are built (i.e., no knowledge is simply given), not anything can count as a cognitive structure and some building methods are better than others. In the case of understanding different animals, then, the choice to characterize other organisms as say 'merely machines' or as 'feeling flesh' does not reduce to rhetorical strife between metaphors or political struggle among their arbitrary adherents.

Why not? For instance, Rolston (1997, 60) would have it that "there is a chimpanzee self out there which can be known not entirely, not 'absolutely', but sufficiently so that we find that the intrinsic chimpanzee [or any animal?] self-integrity ought not to be lightly sacrificed." Now, though sympathetic to the idea of integrity, I feel compelled to qualify Rolston's siting of an animal-self "out there." If this phrase means "external to me or us," then fine — I do believe personal and cultural horizons are often transcended (in communication, for example); but if the term could be construed to mean "outside the nexus of the knowing process," then I must move more toward the constructionist or pragmatist side of the road: all (at least finite) knowledge is relational, because cognition itself constitutes a relation(ship). It is important — as a matter of cognitive conscience, in order to accept the responsibility of knowledge — neither to underplay nor to overstate this point. Indeed, as ecopolitical theorist Kate Soper (1995, 173, 133) puts it, "in any understanding we bring to other animals we need to be aware of the limits of our understanding;" nonetheless, we must not deny an element of zoöntic discovery — otherwise we risk sliding into species-solipsism, "nor would it make sense to challenge the effects of the imposition of any specific cultural 'norm' or discipline upon their [living bodies'] experience" (as social critics and animal advocates wont to do).<sup>9</sup>

Does this epistemology undermine the notion of ontological authenticity? No, although it does alter our conception of the authentic's locus. Even without determinate knowledge of a 'real' animal behind its appearances (which would ground authenticity-as-origin), it is still possible to evaluate for honesty within the relational horizon of consciousness (which can float a notion of authenticity-as-integrity).<sup>10</sup> There is already precedent for the latter approach in the literature of animal studies: in her endeavor to develop "A Taxonomy of Knowing: Animals Captive,

Free-Ranging, and at Liberty," Vicki Hearne (1995, 442, *italics original*) emphasizes that "my terms describe not so much various conditions in which animals in *themselves* might be as conditions we are in *with* the animals, social and grammatical conditions and circumstances." Briefly, captive animals are those kept under direct control (think of lab specimens), free-ranging ones are those beyond human confinement, and those at liberty are paradigmatically working animals (dogs and horses, e.g., under conditions of training that enable the flourishing of species-being and individual excellences).<sup>11</sup> Leaving aside the tricky boundary issue between the categories of free-ranging and 'at liberty', notice nevertheless that judgments of inauthenticity are permissible operating on the basis of a relational system such as Hearne's.

Thus, coming around to the contexts cited at this paper's outset, the promotion and indulgence of the zoo presents its keep as wild in the ordinary sense of free-ranging when the relation of keeping itself falsifies this very representation. Likewise, the structure of the zoo's entertainment value plays off a feeling of closeness to 'the wild' in the form of dangerous creatures; yet it generally is not zoo inhabitants' endogenous ferocity that makes them risky relations for human contact, but rather (circularly) their very conditions of captivity. Talk about constructions! As Mullan and Marvin (1987, 4f.) point out, the 'danger' is not so much inherent as it is "a product of the animal's predicament in being forced to be in undesired and unnatural proximity to man." Inasmuch as zoos trade on the allure of such danger, while occluding their role in bringing it about, we can again judge the institution's portrayal of animality to be less than genuine. Finally, note that this judgment does not depend on discovering deviation from an originary truth of animal essence, but is due rather to a structural set-up that disallows acknowledgment of its own preconditions.<sup>13</sup>

My conclusion, then, is that the notion of a noumenal organism is not required for authenticity critiques of conservation institutions such as zoos. Beyond environmental criticism, though, am I recommending that ecologists never refer to 'animalness'? Well, certainly not in a metaphysically presumptuous tone of voice; more modestly, however, it may be possible to limn the contours of constraint on our perception of animality: as one researcher puts it, "because of their distinctive properties of transformational growth and non-repetitive motion, we see animals as such, irrespective of how we might come to describe and classify them."<sup>14</sup> Yet even this kind of claim is more controversial than any I have sought to defend above; if true, though, it would enable condemnation of captivity itself (insofar, that is, as repetitive movement is a behavioral by-product of zoo-keeping). Obviously, therefore, I regard zoöntology as a field far from fully harvested and would encourage its further cultivation within and beyond human ecology.

## Coda: An epilogue as dialogue

*Logos*: So that's it? Seems he just gives up the root notion of autonomy, and replaces it only with a shadow concept in the idea of relational authenticity. In that case zoos, for instance, don't violate the inherent nature of animals (because there isn't any intelligible) — they just misrepresent *themselves to us*, not really the *animals as such*.

*Hermes*: I think there's more to it than that. His position appears also to be a stance against the kind of biotic idealism that could lead to (at least species, if not subjective) solipsism. I mean if we actually bought into hardline constructionism, then wouldn't we have to regard other animals as being produced by us — not indeed from nothing, but still only and entirely from our own cultural resources?

*L*: I don't deny the implication, but the way to avoid it is to posit a *really* real animal — you know, something 'out there' in the manner of objective realism.

*H*: Of course, there are the oft-rehearsed constructionist objections to such a belief. But maybe we don't need objectivism, after all: might not his emphasis on (inter)relationships be enough to avoid the sort of solipsism at stake here?

*L*: I'm not sure I follow; please spell it out.

*H*: Even if your zoological awareness is not of some essential animal *out there*, isn't it still the case that one's natural experience occurs *with others beside oneself*?

*L*: Maybe, but your articulation is spare and leans heavily on unexplicated connotations of certain phenomenologically murky prepositional phrases.

*H*: One could, at this point, have recourse to the Marxian discourse on the "transindividual." Would you prefer that?

*L*: Please no, thank you, not at this time.<sup>15</sup>

*H*: Just let me mention that Marx thematized a felt space of intersubjectival or better interstitial (and I dare say now ecological) reality which, were we to rehabilitate it carefully, could allow us to circumvent the reductionist difficulties both of monadology and nodal ontology — to thread a path, as it were, between the shoals of solipsism and the hollows of holism respectively.

*L*: Come again? I'm afraid you've lost me in your penchant for flowery alliteration.

*H*: I'm talking about the way traditional metaphysics of subjectivity never seem to reconnect sufficiently with the social and the natural, whereas newer process or Gestalt-type ontologies appear to reduce us to mere points in a weblike flux of interactivity. Perhaps a doctrine like Marx's transindividualism could help us get beyond that sort of dilemma — a happy result, I might add, for bioethical ecosophies caught up in the debate between individualism and holism.

*L*: Okay, I'm prepared to say I'd be interested in seeing something like that develop. But for now, before departing, I'd like to return to the core issue of autonomy. So far, you've only enhanced the plausibility of the thesis that the world contains more than one subject or species. That quantitative result hardly excites. Don't you have any-thing else to say, qualitatively, about the independent status of nature or animality?

*H*: No and yes: no, because talk about the "independent status" of reality belies the whole notion of lifeworldly hermeneutics; yes, because even within the latter horizon of conversation we can yet say something substantive about the kind of entities populating our environmental philosophy. Basically, it comes down to a recognition that the (relative) dependence of a being's meaning on something or someone else does not nullify that being's existence or autonomy. Influencing an entity, in other words, is equivalent neither to extinguishing nor to controlling it.

*L*: You mean we don't have to choose between viewing a natural entity either as absolutely autonomous or else as completely inert?

*H*: That's it! I hope that we can make room in ecophilosophy for acknowledging the multiple agencies of natural and cultural forces — because agency itself does not have to be conceived on the model of consciously self-produced freedom of individual will. It can be thought of instead as occupying permeable centers of power or moving through flexible vectors of force.

*L*: And thereby we permit a measure of construction to coexist with a degree of autonomy?

*H*: If you want to put it that way. What I'm getting at is that the authentic need not be *sui generis* to count as having an (however impure) identity of its 'own.' If it had to be so, we'd have landed in the odd situation that to escape inauthenticity an animal (or any other natural feature of the world) must be divine. Surely, though, creatures count — ontologically and axiologically — even if they're not themselves gods!

*L*: I should hope so, yes indeed.

## Endnotes

1. The conceptual dialectic that drives this debate is not unlike that of the controversy in environmental ethics and ecopolitics surrounding the issue of ecosystem or habitat restoration. Like advocates of pristine land, biotic purists insist that (only) the truly wild animal is the 'real' animal (q.v. Paul Shepard, some deep ecologists, et al.); like the restorationists, on the other hand, zoo directors and wildlife rehabilitators are wont to defend the legitimacy of reintroduction and even 'reconstruction' schemes. See, e.g., Claude Guintard and Jacek Rewerski's (1999) "The Disappearance of the Aurochs (*Bos primigenius*) in Poland during the XVIIth Century and the 'Reintroduction'

- Project of this Reconstituted Animal in the Mazury Region”: working on the basis of an ‘inverse’ breeding program to re-establish the external appearance of the European domestic cattle’s lost ancestor, “an original project combining tourism, nature and tradition (‘T.N.T.’) is currently being developed to *install* the so-called ‘reconstituted’ aurochs in the northern part of the country” (abstract, *italics added*).
2. There can be no appeal here to biology as arbiter, because “this [scientific] form of seeing and understanding is itself cultural and in a sense is not more a true picture of the animal than any other” (Mullan and Marvin 1987, 8).
  3. Again, King is not alone in this regard. Similar issues arise in others’ application of constructionism to nature — see, e.g., Evernden (1992). It is my impression that such thinkers do not want to embrace full-blooded idealism — I know that King (personal communication), at least, does not — but my point is that their writings invite if not entail it. For those unfamiliar with the “hermeneutic circle” mentioned in the main text, the reference is to the feature of interpretation that it has to start somewhere and yet that starting point must itself be interpreted at a later stage in the process of interpreting; this reflexivity is ongoing but virtuous, because each circuit of interpretation reveals new angles of a given text or phenomenon (i.e., articulation ‘spirals’ informatively).
  4. Cf. Lawrence Hazelrigg’s (1995, 12, *original italics*) even more emphatic stance in *Cultures of Nature*, where he endorses the position that “nature is a product of human making. Not merely ‘the idea of nature’ or ‘nature as we think it is’ or ‘nature experienced’ ...but the concrete practical materiality, the substance and support, the actual and potential plenitude of the reality of nature — in sum the whole of the given being and being-giveness of nature as it is — is a concrete production in/by human labor in the activity of making life.” More cautious, Vogel (1998, 177) is careful to recoil from the furthest extremity of such views — by allowing that “the claim that the environing world is socially constructed does not mean that somehow we build it *ex nihilo*.”
  5. Here I concur with Kate Soper’s (1995, 134-145) position that full-blown constructionism is incoherent. I see myself as supplementing her political argument on this point with an epistemological rationale.
  6. Like Hume and a host of American philosophers, I am convinced that stable praxes trump the global doubts of Cartesian-type skepticism. As Rolston (1997, 53) puts it, “One doesn’t have to know it all to know something.” My own metaphors are those of love- or war-making — even if done in the dark, with your partner or enemy out of full view, there’s pretty little room to think you’re alone. See also David Abrams’ (2000, 9, *italics original*) remarks in his “Language and the Ecology of Sensory Experience: An Essay with an Unconstructive Footnote,” for example: “the ‘society’ which constructs this indeterminate world is much vaster than any merely *human* society — it includes spiders and swallows and subterranean seepages along with us two-leggeds . . . we humans are by no means the sole, or even the primary, agents of the world’s construction.”
  7. Rolston (1997, 56) sheds scientism by acknowledging that “biological claims do not try to get underneath to some noumenal realm”; but he views science as no worse off for that, because “biology claims that these [life] phenomena are given in themselves.” In effect he thus collapses the biological into the phenomenal, trusting with an almost Husserlian faith that noumena are not necessary for reliable cognition.
  8. Some commentators, in fact, think that postmodern ecosophy may have already hung itself on the latter horn of this dilemma. E.g., see John Visvader’s (1998,32) “Environmental Activism in an Age of Deconstructionist Biology”: “The net effect of ‘demythologizing’ biology and social constructionism is to make environmental values appear to be subjective and relativistic.”
  9. “For if there are, indeed, no ‘natural’ needs, desires, instincts, etc., then it is difficult to see how these can be said to be subject to the ‘repressions’ or ‘distortions’ of existing norms” (130). These latter remarks Soper makes in relation to human sexes, but her comments apply equally well to the reality of other species (an application in keeping with the argument she develops throughout the book as a whole).
  10. Even after foundationalism, in the absence of solid ‘grounding,’ there remains an option for ‘flotational’ knowledge: speaking figuratively of our cognitive condition, we can yet build and sail a water-worthy ship — even without plumbing the sea’s depths or combing the ocean floor.
  11. Cf. Thomas Sebeok’s (1988, 68ff.) nine-fold relational taxonomy - which includes categories of predation, partnership, amusement, parasitism, conspecificity, reification, taming, and training. “‘Animal’ in Biological and Semiotic Perspective.” See also Ted Benton’s (1993, 62-68) schema (likewise of nine, albeit different categories) in *Natural Relations: Ecology, Animal Rights, and Social Justice*.
  12. Interestingly, this example also illuminates the issue of whether the subjects of life sciences’ studies are material objects or social objects. Hacking (1999, 72) has it that a characteristic property of the latter is their amenability to feedback loops (whereby the object’s behavior is reflexively shaped by subjection to a self-fulfilling regimen of study) — but his dichotomy between physical and human sciences leaves biology unaccounted for. In this light, then, Mullan and Marvin furnish zoological testimony that captive animals are indeed social beings.
  13. Imagine what would happen if zoos (and their visitors) were honest about themselves, that what they keep (or see) are captive animals (who do not necessarily display the attributes of free-ranging ones) — this would erase one of their quintessential reasons for being/ watching!
  14. Edward Reed, as paraphrased by Ingold (1997, 12).
  15. See Howard L. Parsons’ *Marx and Engels on Ecology* (1977, 32, 121).

## References

- Abrams, David. 2000. Language and the ecology of sensory experience: An essay with an unconstructive footnote. *Call to Earth* 1.1 (March).
- Benton, Ted. 1993. *Natural Relations: Ecology, Animal Rights, and Social Justice*. London: Verso.
- Evernden, Neil. 1992. *The Social Creation of Nature*. Baltimore: Johns Hopkins University Press.
- Guintard, Claude and Jacek Rewerski. 1999. The disappearance of the aurochs (*bos primigenius*) in Poland during the XVIIth century and the “reintroduction” project of this reconstituted animal in the Mazury region. In Liliane Bodson (ed.), *Animaux Perdus, Animaux*

- Retrouves:Reapparition ou Reintroduction en Europe Occidentale d'Espèces Disparues de Leur Milieu d'Origine.* Belgium: University of Liege.
- Hacking, Ian. 1999. Are you a social constructionist? *Lingua Franca* 9.4 (May/June). Excerpted from *The Social Construction of What?* Cambridge, MA: Harvard University Press.
- Haraway, Donna. 1989. *Primate Visions*. NY: Routledge.
- Hazelrigg, Lawrence E. 1995. *Cultures of Nature: An Essay on the Production of Nature*. Gainesville: University of Florida Press.
- Hearne, Vicki. 1995. A taxonomy of knowing: Animals captive, free-ranging, and at liberty. In *the Company of Animals*, special issue of *Social Research* 62.3 (Fall).
- Ingold, Tim. 1988. *What is an Animal?* London: Unwin Hyman.
- King, Roger. 1990. How to construe nature: Environmental ethics and the interpretation of nature. *Between the Species* 6.3 (Summer).
- Mullan, Bob and Gerry Marvin. 1987. *Zoo Culture*. London: Weidenfeld and Nicolson.
- Parsons, Howard L. 1977. *Marx and Engels on Ecology*. Westport: Greenwood.
- Portmann, Adolf. 1967. *Animal Forms and Patterns: A Study of the Appearance of Animals*. H. Czech, trans. New York: Schocken Books.
- Rolston, Holmes III. 1997. Nature for real: Is nature a social construct? In T.D.J. Chappell (ed.), *The Philosophy of the Environment*, 38-64. Edinburgh: Edinburgh University Press.
- Russow, Lilly-Marlene. 1989. Changing perceptions of animals: A philosophical view. In R.J. Hoage (ed.), *Perceptions of Animals in American Culture*. Washington, D.C.: Smithsonian Institution Press.
- Sebeok, Thomas. 1988. "Animal" in biological and semiotic perspective. In Tim Ingold, *What is an Animal?* London: Unwin Hyman.
- Sismondo, Sergio. 1996. *Science Without Myth: On Constructions, Reality, and Social Knowledge*. Albany: State University of New York Press.
- Soper, Kate. 1995. *What is Nature?* Oxford: Blackwell.
- Visvader John. 1998. Environmental activism in an age of deconstructionist biology. *Human Ecology Review* 5(1), 31-34.
- Vogel, Steven. 1998. Nature as origin and difference: Environmental philosophy and continental thought. *Philosophy Today* 42 (suppl.). L.M. Alcoff and M. Westphal (eds.), *Conflicts and Convergences: Selected Studies in Phenomenology and Existential Philosophy*, Vol. 24.
- Wuichet, John and Bryan Norton. 1995. Differing conceptions of animal welfare. In B. Norton et al. (eds.), *Ethics on the Ark: Zoos, Animal Welfare, and Wildlife Conservation*. Washington, D.C.: Smithsonian Institution Press.