brand of 'postmodern cultural studies' a rather thin broth. The small chunks of Marxism, feminism and social ecology that surface in Ross' narrative are thoroughly disintegrated, and there is no pretension to developing a coherent analysis. The rhetorical technique is rather repeated assertions from different contexts. For instance, one of the arguments that emerge continuously in the book is that the themes of scarcity and limits in environmental discourse intersect with 'austerity economics' which asks people to make sacrifices for the sake of government deficits and economic growth. The link to environmental issues helps to naturalize the need for these sacrifices, and presents them as a universal condition of scarcity, rather than the self-interested strategy of the capitalist class. However, the connection between environmental and economic discourse is usually assumed, rather than demonstrated. He seems to rely on a cultural version of the ecological maxim that 'everything is connected to everything else' so that any conceivable parallel between different discourses can be read as a determining influence. The problem is that one can only read of so many instances of the application of a 'cost-benefit budgetary logic' or 'evolutionary logic' before these terms start to sound rather vacuous and in need of some elaboration. But Ross seems to appropriate only discrete terms and categories from various theoretical discourses, and inserts them into his own narrative with little attention to the context of their origins.

Second is Ross' rather condescending attitude towards the environmental movement that serves as a foil for his critique. He doesn't appear interested in debates within these movements around the issues he is raising. At times he positions himself as a sympathetic critic, but more often he appears to find very little to his liking among the basic tenets of environmental and ecological discourse, especially when expressed in language too compatible with the dominant economic interests. There is actually very little direct analysis of the environmental movement in the book, instead the focus is on how ecological ideas are appropriated by other areas of popular culture. Without this grounding, his invocation of environmentalists appear as little more than attacks against straw people.

Environmentalists are often oblivious to such social milieux in presuming that the biological ethics governing their ideas and prescriptions are governed by (higher) natural, and not social, laws. To the contrary, ideas that draw upon the authority of nature nearly always have their origin in ideas about society. If this book's arguments had to be summed up in one sentence, that would be it. But there is still a great deal of cultural work and persuasion to be done before such an aphorism becomes common sense. Environmentalists need to be convinced that their arguments do not exist outside of the sphere of ideologies that governs our social reality; the way that we think about the natural world has more to do with our social world than anything else. The ecologically impaired need to be persuaded that ecology can be sexy, and not self-denying (15).

The level of generality involved here is symptomatic of Ross' frequent refusal to attend to social context. This is not to say that many of his comments are not valid, quite the contrary, but his positioning of himself as the white knight of enlightened social thought in a world of misguided dupes is hardly edifying. At a conference a few years ago, a participant commented that Ross didn't "sound like a fan" of the New Age movement which was the subject of the paper he had just presented. He replied: "I'm wary of giving up certain privileges that we have struggled to enjoy as polemical critics – the capacity to use our hard-earned public voices to intervene and to contest the shape of public thinking about countercultural communities and practices" (Ross, 1992:553). Ross certainly does not present himself as 'fan' of the environmental movement, at least as he now sees it. While this is, of course, part of his 'privilege' (as a prominent academic at an elite institution?), his readers would be better served if the objects of his rather off-hand critical remarks were presented as somewhat more than caricatures.

Finally, Ross' arguments about the nature of scarcity and limits seems to me ultimately unconvincing. While it is useful and valid to point to the constructed and ideological nature of 'natural' limits, his proposed solution doesn't seem much of an alternative. As an oppositional strategy, trying to get rid of the notion of scarcity in a capitalist society doesn't seem much different than the strategy of invoking scarcity and limits. Narratives of post-scarcity abundance are just as much a part of capitalist ideology and culture as limits, and it's hard to see his strategy as anything but substituting one pole of a binary for another. It might make affluent urbanites like Ross feel more comfortable about their standard of living, but in a country and a world of gross inequalities, and multinational corporations opposing any restrictions on their ability to convert more and more of the cultural/natural world into commodities, an outright rejection of limits is not the answer. There is little to distinguish this from Bush's proclamation just prior to the Rio environmental summit that the American standard of living was not up for negotiation. Contesting for the definition of limits, and the meanings and implications attached to them, yes, but the last thing the world needs is another masculinist narrative of unlimited freedom and unbounded consumption.

Ross, Andrew, 1992. "New Age Technoculture." *Cultural Studies*, (Grossberg et al, eds.), New York: Routledge.

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Rogue Primate: An Exploration of Human Domestication by John A. Livingston, Toronto: Key Porter Books, 1994.

Reviewed by Joanne Nonnekes

Rogue Primate: An Exploration of Human Domestication, written by one of Canada's most respected naturalists, John Livingston, has just been awarded the Governor General's Award for non-fiction. Livingston is well known for his previous books, *One Cosmic Instant* and *The Fallacy of Wildlife Conservation*, and for his work with the CBC television in bringing natural history programs to the earlier years of *The Nature of Things* and the series *Planet for the Taking*. As with his previous writing, Livingston has grounded this book firmly in his life long experience as a naturalist and has here provided us with a well-documented explication of the main arguments he has been putting forward in his teaching and writing throughout his career. Those familiar with his work will be treated to an enticing reminder and captivating exploration of human interaction with Nature as Livingston seeks to define the crisis of Nature. As Livingston frequently asserts in his lectures, "How can we pose solutions, when we haven't defined the problem?" Those new to Livingston's work will find this a provocative read as Livingston turns "the problem" around and around, looking at it from many different angles, challenging our assumptions about Nature, ourselves, and the relationship between them.

Rogue Primate is a passionate plea for the human species to awaken the long domesticated and repressed "wildness" that exists in each of us. For Livingston, this "wildness" is an untamed, undomesticated memory of an "at-one-ness" with Nature; a memory, perhaps from childhood, or, deeper still, a memory from pre-civilized human existence. The book is written with a sensitivity to the non-human that is rare and is the result of a committed naturalist having spent much time observing Nature, contemplating Nature, being in Nature, and struggling to become Nature.

Livingston begins with the suggestion that humans are no longer evolving biologically, but have been, and continue to be, evolving culturally. For Livingston, humans have "forgotten" the part of themselves that was Nature, and replaced it with what he terms a cultural prosthesis; "a substitute mode of approaching and apprehending the world" (10). What is this cultural prosthesis? According to Livingston, it is a form of domestication, an utter dependence on technology, defined as "how to do it," "storable, retrievable, transmissible technique;" and it is ideology defined as the system of abstract thinking which replaces an interdependence with Nature. "In human society ways of doing have supplanted ways of being" (12).

Following this line of thought Livingston suggests a comparison between animals domesticated by humans and humans themselves: like the domesticate who is entirely dependent on humans for its welfare, humans

have become dependent creatures. The most significant similarity Livingston draws between humans and domesticates is a pervasive "ecological placelessness:" they no longer belong anywhere in Nature; they can grow and reproduce in almost any environment; and they are generally destructive to the pre-existing natural environment. This placeless domesticate is often referred to in ecology as an "exotic," and nearly all exotics have been introduced either intentionally or unintentionally by human interference. According to Livingston, "we have reduced, simplified, homogenized and pauperized Nature everywhere on the planet to an extent that cannot be biologically recoverable"(51).

Livingston puts forward the hypothesis that Western civilization has imported its "exotic" ideology to every human society on the planet. This particular brand of "human cultural prosthesis," is "Baconian Conquest; its means is Cartesian rationality; its instruments are science and technology"(57). Here Livingston is careful not to fall into the trap of romanticizing pre-Western cultures' relationships to Nature. He points out that while human cultural evolution had harmful effects in all regions of the earth, causing large numbers of extinctions, each region seems to have "adapted" to each human culture and the number of extinctions of non-human species leveled off. Now however, as the "exotic" ideology becomes globalized, and the quest for industrialization, profit and progress "invades" the entire planet, extinctions have increased exponentially.

Essential to this "exotic" ideology, claims Livingston, is the meaning of "development". The "problem" is that:

The development ideologues do not hear the screaming of the buttressed trees or the wailing of the rivers or the weeping of the soils. They do not hear the sentient agony and the anguish of the non-human multitudes... torn, shredded, crushed, incinerated, choked, dispossessed. These are merely the external, incalculable, and incidental side-effects of the necessary progress of human civilization (60).

This kind of critique becomes increasingly important as "sustainable development" becomes the catch-phrase for the solution to environmental and development issues.

From his critique of the globalization of this "exotic" ideology, Livingston goes on to demonstrate the ways in which ecology and the natural sciences validate and reflect this dominant Western ideology in a chapter he titles "Nature's Marketplace." Beginning with Charles Darwin, Nature has come to be looked at entirely through the lens of a Western capitalist belief in the universality of competition. Livingston takes several examples from scientific studies on animal behaviour to demonstrate the reading of aggression, dominance and competition onto Nature: the "pecking order" observed in many bird species, and the dominant "alpha" males found in many species of animals, to name a couple. The paradox for ecology, the study of the inter-relationships between and within species and their environment, is that as a science, ecology has had a hard time giving up the competitive "survival of the fittest" model so entrenched in the discipline.

Along with many other thinkers in the field of deep ecology, Livingston looks at the way human culture is "read onto" non-human culture. Humans anthropomorphize, says Livingston, because they are human – what other choice have they? Livingston suggests that if we consciously decide to look at Nature through a lens of compliance, cooperation and participatory consciousness, a different scene emerges. "On this view, the Alpha males, so called, are not at the top rung of a hierarchical ladder; they are at the core of an encapsulating envelope around the social group" (88). What is perhaps a little disturbing here is that, while Livingston is very careful to point out that he is talking about looking at animal culture through a lens of compliance, and that human culture is the only one with hierarchical, dominance relationships, he does not discuss the implications of turning this kind of lens back on human culture. What if we were to look at human behaviour through a lens of compliance? Would abusive relationships still look abusive?

While Livingston does not deal directly with the socio-biological implications of his thought, he does speculate on the "self" in non-human species. He uses a very powerful description of a song bird whose calling in spring marks out a breeding "territory" which no other bird of the same species may share. Rather than seeing this as competition for resources, Livingston uses a concept from Neil Evernden (1993) to hypothesize an expanded "self" for the bird, one which now includes the flora, fauna and anything else inside the physical space of the territory. From here he moves on to postulate "group self" and "community self" for large groups of animals like shorebirds and fish, which fly or swim in apparent unison.

Livingston explores the possibility of a different sense of self for humans, using Paul Shepard's theory of human development. Humans, speculates Shepard, go through three phases of separation and three of bonding. Livingston focuses on the event of bonding to Nature, which for Shepard happens in pre-adolescence. During this stage, pre-adolescents have an amazing adeptness at the naming and labeling of plants and animals, and, they experience Nature phenomenologically; they crave the experience of Nature and beings different from themselves and gain a "sense of some profound continuity with natural processes" (130).

The fact that many children do not experience this bonding to Nature is, for Livingston, the result of modern human culture. Even for those children who do experience this bonding, "cultural indoctrination removes the memory" (133). It is Livingston's hypothesis that if we could hold the memory and experience of bonding to Nature, we wouldn't be able to treat it with such brutality, for that would mean self-mutilation.

But while a bonding experience with Nature during pre-adolescence may indeed make a huge difference in the relations between humans and the rest of Nature, Livingston has overlooked, or not adequately problematized, the question of social privilege and access. For most children in the world today, the problem is not too much time on computers and not enough time mucking around outside, it is rather that they are denied access to the natural environment by their living conditions. The struggle for them is often focused on survival, not on time spent in Nature.

But for Livingston this book is about describing "the problem" not offering solutions or "fix-its" to our modern alienation from Nature. He feels that perhaps we need to "think away" the current ideological prosthesis and reprogram it to include compliance with the rest of Nature.

In *Rogue Primate*, Livingston has laid out "the problem" facing Nature and human/non-human relationships. He has revealed what for him are the facets of "the problem," technology, ideology, prosthetic device, domestication, and industrialization. But while I appreciate his hesitance with quick fix solutions, and strongly admire the persistence with which he has pursued "the problem," I think we need to think about solutions or despair will overtake us. And while I thrill to read the sections of the book that are based on his years of experience as a naturalist, and his unique and wonderful way of conveying the beauty, mystery and connection with Nature, I balk at some of the consequences of his critique of humanism. Livingston's indictment of the "rogue primate (who) introduced an entirely new and unprecedented manner of being" (183) includes a reiteration of Malthusianism and its predictions of disaster if world human populations continue to expand. I found Livingston's Malthusianism, with its mathematical calculations of carrying capacity, ironic given his earlier rejection of scientific ecology's inability to see relations outside of those prescribed by the dominant, capitalist, Western ideology. Following his arguments, should we not be looking for a relational and participatory solution to human over-population?

While *Rogue Primate* does not offer solutions to the environmental and ideological crisis facing us today, it is an excellent description and analysis of the challenges we face as a species. How we stop the wanton destruction of Nature and go about restructuring our relationship to it is the challenge John Livingston leaves for the reader. What he has left us with in this book is a sensitivity to non-human life, non-human selves, and the possibility of reconnecting with the "wildness" he believes still lives in us all.

Neil Evernden, 1993. *The Natural Alien* (second edition). Toronto: University of Toronto Press.

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