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The Representation and Domination of Nature

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ARTWORK

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All of the above are currently Masters candidates at the Faculty of Environmental Studies at York University.

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Introduction

Welcome to Undercurrents. The papers in this year's volume converge on the theme of the representation and domination of Nature in Western culture. This theme reflects on the problem of how representational thinking, in the form of language, ideology, beliefs, or technology, mediates and filters the experience of the relationships between humans and the rest of Nature. When re-presented, Nature becomes separated, bounded and objectified, and therefore gives itself up as an object for domination.

To begin this issue, Mark Meisner explores some of the historical relationships of language forms to human perceptions of Nature. He attempts to reconstruct the changes in language from oral to literal forms, and explains how the printed word has lent itself to the reification of Nature. Next, in his paper, Darryl Lee deconstructs the dominant conceptualization of the ecological crisis using it as a mirror of our own social condition. As such, he maintains that in order to come to terms with our current relation to Nature, we must first untangle the myths and language that surround it. Working on an ironic analysis of the better bathroom as a surrogate for the experience of Nature, Andrew Sattherwaite helps us to understand how we reconstruct and therefore distance Nature by representing it in this cultural form. Using the example of 'animal war heros,' Gary Genosko examines the anthropocentric bias inherent in how we anthropomorphize animals. Although perhaps unavoidable, Gary argues that we should aim to be more critical of our anthropomorphic relations with nonhumans. In her paper, Margot La Rocque offers some criticisms on the idea and practice

of wildlife cinematography. She argues that instead of helping to preserve wild Nature, this genre merely records and represents wilderness, thereby transforming it into an object of manipulation for and by a consuming public. Craig Naherniak's paper uses the example of biotechnology to caution us against the paradox inherent in domestication. The paradox lies in that in attempting to dominate Nature, through its re-presentation as material for technological manipulation, the technology of domestication, in turn, threatens to 'engulf' and dominate humankind as well. Finally, through the example of modern forestry practices, rolf struthers creatively challenges the danger inherent in representational and technological modes of thinking.

Each of these papers, on their own, embrace the theme of this particular volume, and the mandate of the journal in general. Despite this, the selection of this year's papers was, nonetheless, a difficult task. In previous volumes, the editors felt that the process involved in publishing Undercurrents was significant to the social vision we wished to articulate. It was decided, therefore, that a discussion of the process be included in the introduction. This year, the emphasis on process was no different; indeed, at times it seemed to take precedent over the more 'pragmatic' function of actually putting this volume together. Ideally, process concerns are shared, and understood to carry a weight equal to that of publishing. In our process we aim to operate without any hierarchy of responsibilities and on the basis of group consensus in decision making. These principles however seemed to engender their own set of problems. Without an editor-in-chief, incongruities associated with normal functioning can become intensified. Without a fully articulated framework in place to deal with discordances, we spent much time deliberating on the appropriateness of style and content of each paper. Though it was often tense and difficult, the editors felt that the process should not be compromised. With this volume, we believe that we have succeeded in publishing Undercurrents while at the same time working toward our desired forms of organization and decision making.

We would like to thank a number of people who in different ways contributed to the publication of this year's volume. First of all, we would like to extend our appreciation to all of our funding sources, including the Faculty of Environmental Studies, the Faculty of Graduate Studies, the Graduate Student Association and the Environmental Studies Students Assoc. Also, we would like to thank our printers, the people at Our Times, Anita McBride for her continued support and Frances Chan for her computer expertise. We look forward to a continued friendship with all of you.

Of course, we would like to thank you for reading Undercurrents. In the past, we have received letters of support and criticism from some of our readers: your thoughts help guide our vision of what is relevant and accessible to activists and scholars alike. We would like to hear from other voices across the country. Graduate students interested in contributing to Undercurrents should consult the editorial policy in the inside back cover.

We hope that you enjoy this issue. Please tell your friends and colleagues about us.

The Editors

Words And Worlds:

Language and the Perceived Separation of Humans From Nature

*by Mark Meisner**

Introduction

Cultural representations of the world permeate much of human experience of that world. In this society, it seems increasingly unlikely that there can be experience that is **not** somehow overlaid by representation. Under such circumstances, it is our forms of representation that have the greatest impact on how we understand, give meaning to, and value this place in which we live. Perhaps the most significant of those forms is language, for it is both the most pervasive and the one through which the others are most often interpreted.

Given its centrality in our lives, it is not surprising that "language" is often deemed to be what distinguishes humans from the rest of Nature. What is meant by this assertion seems to be that humans have "language" whereas other species do not, and this somehow makes us exceptional and superior. While I disagree with both the logic and the implications of this claim, it suggests a curious irony that I would like to explore in this paper.[1] That irony is in the prospect of a relationship between human language and the type of worldview that would lead us to believe that somehow our language makes us an exceptional species.

This paper, then, is an enquiry into another sense in which language "distinguishes" humans from Nature, namely the possibility that, in the West, it has historically contributed to the increasing human *perception* of separation from, and domination of, non-human Nature. In other words, I would like to explore how historical changes in the *form* of language (ie. speech, writing, printing), by shifting human consciousness[2] away from immediate experience and into a linear world of symbolic representation, may have resulted in an intensification of the belief that humans are separate from, and able to control Nature. In turn, those changes made possible certain uses of language, uses which, in enabling a measure of actual control over aspects of Nature, may have had the effect of reinforcing this belief.[3]

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When I say language, I simply mean words and ways of combining them. However, language must be understood as more than just that. It is a way of, and a capacity for, symbolically representing experiences, things and phenomena. But, language does not simply re-present; it also helps to shape and give meaning to our experiences. In other words, language is not a neutral set of labels for describing the world in objective terms. Rather, because it is imbued with cultural assumptions and values, with connotations as well as denotations, with multiple meanings and ambiguities, and with particular ways of seeing the world, language is an active element of perception.

To understand this, we need to understand the idea that realities are multiple and constructed; there is no one "objective" reality. What we take as reality, and assume to be independent of our perceptions, is actually more of a product of the interactions of our experience of the physical and social world with the conceptual and ideological artifacts that we bear. However, in general, humans in the West tend to think of reality as objective, and this is largely because of language, as Peter Berger and Thomas Luckmann explain:

> I apprehend the reality of everyday life as an ordered reality. Its phenomena are prearranged in patterns that seem to be independent of my apprehension of them and that impose themselves upon the latter. The reality of everyday life appears already objectified, that is, constituted by an order of objects that have been designated *as* objects before my appearance on the scene. The language used in everyday life continuously provides me with the necessary objectifications and posits the order within which these make sense and within which everyday life has meaning for me.[4]

In this way, language becomes a sort of imperceptible lens through which the world is understood, and not simply a neutral means by which we describe, communicate and give meaning to our experiences.[5] Thus, in moving from the domain of pure experience (if there is such a thing) into the

* *Mark Meisner is an environmental thought student at York University and is presently writing his Master's thesis on language and nature.* *He thanks members of the editorial board for their helpful comments on an earlier version of this paper.*

domain of representation of that experience through language, we begin to "construct" reality.

While this paper does not, for the most part, address the content of language, or the ways in which words and grammar work upon us, this concept of the social construction of reality is nevertheless significant. This is so because the form that language takes also affects how it works and what we are able to do with it. The form of language has a relationship to the way in which the world is perceived through it, as I will suggest in this paper. "Reality," for people living in oral cultures, is different from "reality" for people living in literate cultures, and in part, this is because the form of language is different.

So, in order to better understand human relationships with non-human Nature, it seems sensible to explore the possible links between the changing form of language and the increasingly abstract and detached view of Nature which now characterizes Western industrial society and which lends itself to a growing human imperialism towards non-human Nature. However, in this paper I will be highlighting one particular interpretation of language, namely its disjunctive characteristics.[6] Furthermore, I will be emphasizing language as a general capacity for communication and action, in its different forms, as distinguished from (but not unrelated to) the uses that are made of language or language behaviour.[7]

The Beginnings of Language

It is impossible to say exactly where, when or how language as such emerged. In all likelihood it was neither an isolated nor a clearly identifiable event. Language has been changing, and when the sounds and gestures of prehistoric peoples became a language is a matter of speculation. What is interesting to ask is whether the advent of spoken language may have influenced human perceptions of, and relationships with, non-human Nature.

In **Technics and Human Development** Lewis Mumford suggests that in the absence of language there is a significance to the world such that "the concrete experience of every animal including man [sic] 'makes sense' without the intervention of symbols, if the creature is alert and responsive."[8] In this way humans already lived in a meaningful environment prior to the establishment of language. Things, beings and phenomena were what experience of them said they were. There may not have been the symbols, or the possibility for discussing experience, but there was some form of experiential meaning.

It is thought that prior to the advent of spoken language, humans acted out gestures in the repeated context of events in such ways that the gestures eventually took on symbolic meaning; they became rituals. It is most likely from the symbolism of such rituals, including those between mother and child and those of the hunt, that language eventually emerged. What type of language emerged at that time is unknown. Andrée Collard feels that the "collective nurturing and the play element involved in the caring of the young is likely to create a language rich in emotional nuances and a vocabulary far more imaginative, complex, and affective than the language derived from the hunt."[9] What she seems to mean by this is that the act of nurturing and caring would seem to promote a more relational and evocative language, whereas the act of hunting would promote more of an instrumental, control-oriented language. Given the type of language we in the West have today, it is quite possible that the hunting-oriented version largely crowded out the nurturing version.

From the beginning, language helped humans to express the meanings they felt in their existence and experience. However, according to Mumford, it was also used in "the disciplining of the unconscious, the establishment of a coherent and stable social order, [and] the perfection of the social bond,"[10] all of which may be seen as part of the process of human self-domestication, or of distancing ourselves from the world of Nature.[11] Furthermore, according to Mumford, language created a symbolic world that was more compelling than the world it was attempting to model. "The world that was symbolically organized, mainly in language, became more significant, more essential to all specifically human activities, than the raw 'outer' world mutely taken in by the senses, or the private inner world of dream."[12]

Early language also allowed for the creation of new ideas and situations in the mind, simply through the use of symbols:

> That abstract sounds could bring to mind actual people, concrete places and objects, was the fundamental magic property of speech: but there was even more potent magic in the fact that these same or similar sounds, differently organized, might bring into the mind events that had ceased, or project entirely new experiences.[13]

In this way, part of the magic of words was to transform human perceptions of the world in such a way that it gave the impression that, through language, humans could control aspects of their environment.

To understand this, we need to consider the centrality of myths in oral cultures. Myths were a vital part of the meaning frameworks of early

human societies, and language was the principal medium through which myths were created and passed on. In discussing the work of Ernst Cassirer, Harold Innis suggests the following relationship of language, myth and thought:

> Mythology reflected the power exercised by language on thought. The word became a primary force in which all being and doing originate. Verbal structures appeared as mythical entities endowed with mythical powers.[14]

In particular, myths could be used to serve as a source of power "over" Nature, as suggested by Mircea Eliade:

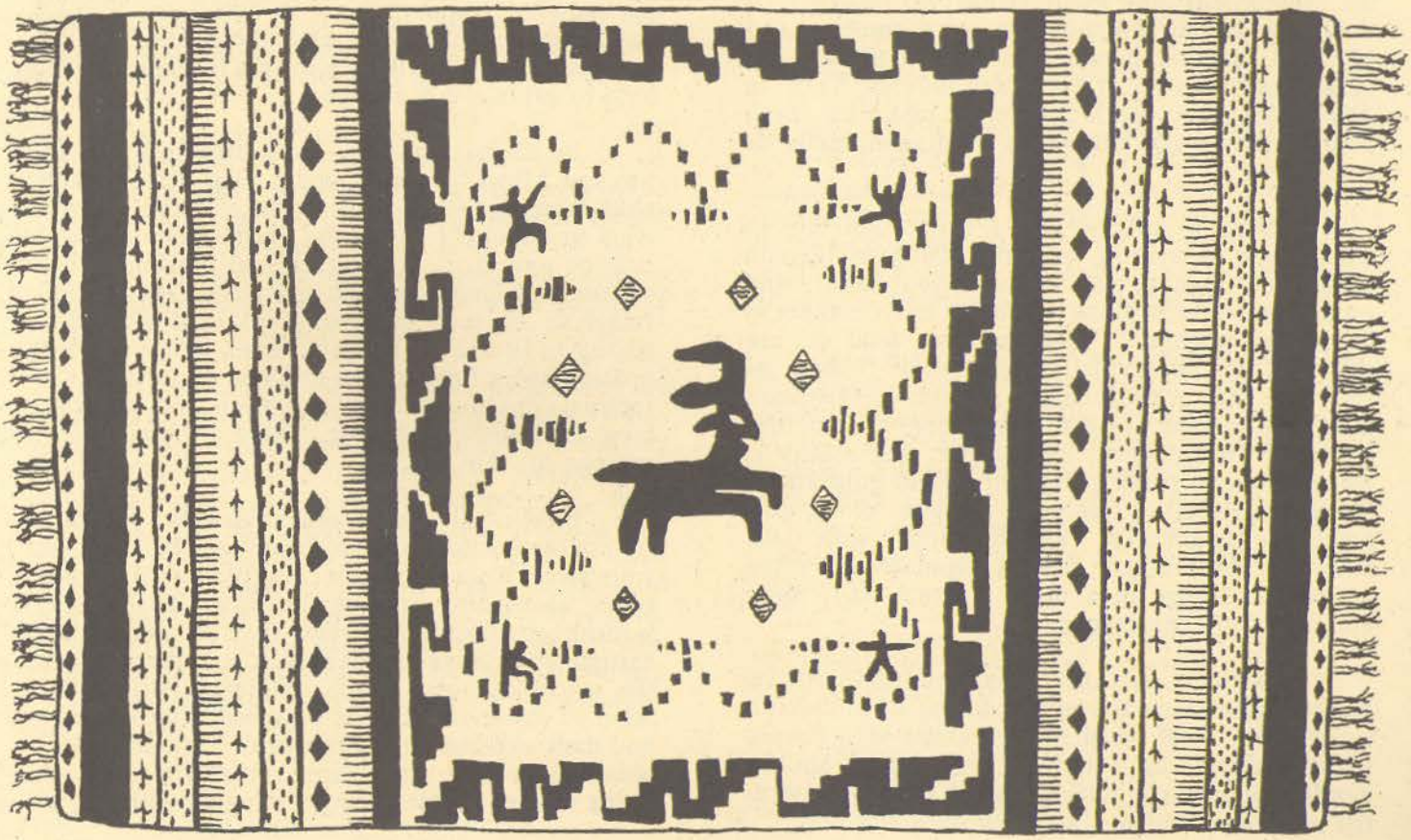
> We see, then, that the "story" narrated by the myth constitutes a "knowledge" which is esoteric, not only because it is secret and is handed on during the course of an initiation but also because the "knowledge" is accompanied by a magico-religious power. For knowing the origin of an object, and animal, a plant and so on is equivalent to acquiring a magical power over them by which they can be controlled, multiplied, or reproduced at will.[15]

In addition to the possibility that the advent of language changed human perceptions of the world, with its refinement, early humans were able to use language in an instrumental way to actually affect the physical world. For example, language permitted early hunters to strategize and coordinate with each other, thereby improving their effectiveness. It was also refined by those who did the food gathering, for that was an activity that required identification by naming.[16] "Oral peoples commonly think of names (one kind of words) as conveying power over things."[17] Thus the idea of controlling Nature was enhanced through the use of language to help in the actual realization of a measure of control. Furthermore, language's facilitation of such instrumental tasks may have further reinforced the perception of separation from Nature.

Orality and Literacy

In this section of the paper I would like to speculate further on language, specifically on some of the differences between orality and literacy as forms of language, and on how those differences might help to explain the modern Western view of Nature.

It is difficult for us literate folk to imagine what it is like to live without any form of writing or even the knowledge of such a possibility. The fact of being literate changes our whole worldview to such an extent that we simply cannot comprehend the centrality and importance of the spoken word in oral cultures, nor can we fully understand what sorts of meanings the world resonated with in such cultures. Nevertheless, despite uncertainty about the



details, it appears that literacy has had significant implications for how humans perceive the world. It has even been suggested that writing, "more than any other single invention,...has transformed human consciousness."[18]

To begin with, the aural world of orality was perceived as a more dynamic and alive place than our literate world. This is because in an oral culture, the form of language (speech) is an event. "Sound exists only when it is going out of existence...there is no way to stop sound and have sound."[19] In this way, spoken words were not perceived as things, since they were never static.[20] Indeed, in orality, words, as such, were not perceived; there were only utterances (which we *now* see as being made up of words). "Only the alphabet has the power to create "language" and "words," for the word does not emerge until it is written down."[21] Furthermore, in order to have sound, there must be life. Whereas it is possible to smell, see, touch and taste something that is dead (a buffalo, for example), it is not possible to hear it.[22]

Because in orality the form of language is speech, by necessity it is always used (regardless of the use) in direct relation to other people. Even sustained analytic thought was always done with at least one other person, so that the listener could stimulate and ground the process.[23] This is because the thinker had only their memory to record their thoughts, and if the thoughts were complex and involved, another person was needed to help the thinker maintain her or his line of thought. Thus, in orality, language use is inherently relational, even though it may not have been used relationally or connectively.

Related to this is Ong's suggestion that in comparison to writing, oral expression, at least in form, is "close to the human lifeworld," and grounds thought in close proximity to its context of human experience.[24] "Oral cultures tend to use concepts in situational, operational frames of reference that are minimally abstract in the sense that they remain close to the living human lifeworld."[25] Furthermore, he suggests that orality is empathetic and participatory in that to gain knowledge of something one must achieve "close, empathetic, communal identification with the known."[26] In contrast, literate peoples most often understand things in a more abstract way, more detached from experience.

In addition, oral discourse depends heavily on non-verbal and paralinguistic forms of communication. "The oral word...never exists in a simply verbal context, as a written word does. Spoken words are always modifications of a total, existential situation, which always engages the body."[27] Such communication blends speech and body movements, and our embodiment is the most obvious indication that we are part of Nature.[28]

The final characteristic of orality that is of interest here is the fact that it manifests language as sound, rather than as visual representation, as writing does. Ong suggests that hearing is a unifying sense whereas sight is an isolating sense. As he puts it:

> Vision comes to a human being from one direction at a time: to look at a room or a landscape, I must move my eyes around from one part to another. When I hear, however, I gather sound simultaneously from every direction at once: I am at the centre of my auditory world, which envelops me, establishing me at a kind of core of sensation and existence.[29]

Thus there is the sense of being immersed in the world of sound, whereas in a world dominated by sight, one cannot feel immersed.

While the oral form of language is undoubtedly a partial abstraction from experience and therefore seems to be an initial step in the process of the reification of Nature, all of these characteristics of it still seem to indicate a mode of perception that is dynamic, relational, experiential, empathetic, embodied and unifying.[30] It is perhaps significant that these are in opposition to the modern scientific way of knowing Nature which is detached, abstract, theoretical, manipulative and "objective." An understanding of how literacy differs from orality may help to explain this change.

In discussing **The Domestication of the Savage Mind** by Jack Goody, Ong notes that the shift from orality to literacy is closely related to what are thought to be the shifts from magic to science and from "prelogical" to "rational" consciousness. Goody argues that those shifts ought rather to be seen and explained as a shift from orality to literacy.[31] Literacy, then, is seen to have precipitated a further step towards abstract logical-rational conscious thought and away from participatory, experiential knowing. There are a number of reasons for this.

First of all, while oral discourse, supported by non-verbal forms of communication, is but one step away from experience, writing is a second-order abstraction from experience. In this way, writing establishes a context-free discourse; texts assume an independent existence, and perception of the world changes. Once completed, writing is a form of expression that is detached from its author and their experience of the world. "Writing fosters abstractions that disengage knowledge from the arena where human beings struggle with one an-

other. It separates the knower from the known."[32] Since writing is a detached and disembodied form of language, it is less able to convey the fullness and subtlety of experience. Whereas in orality meaning is always contextual, in literacy meaning is largely seen to be concentrated in language itself; it is "autonomous."[33] Accordingly, as Harold Innis says, "writing *enormously enhanced* a capacity for abstract thinking which had been evident in the growth of language in the oral tradition." [emphasis added][34]

Secondly, by isolating words in a visual space, writing emphasizes sight as a way of knowing. As I have already mentioned, sight is a disjunctive sense when compared to hearing. In **The Natural Alien**, Neil Evernden suggests that the emphasis on vision as a way of knowing is partly responsible for our perception of being separate from Nature. "Vision permits us the luxurious delusion of being neutral observers with the ability to manipulate a distant environment."[35] Furthermore, the visual form of language initiated the perception that words are things in and of themselves. "Writing makes 'words' appear similar to things because we think of words as the visible marks signaling words to decoders: we can see and touch such inscribed 'words' in texts and books."[36] By beginning to reify the words with which Nature and experience were talked about (the representation), writing may have enhanced the reification of Nature already begun by naming aspects of it. It seems possible, then, that literacy was partly responsible for humans seeing the world reduced to elements and discrete entities.

This perceptual process would have been enhanced by the fact that in freeing the mind from its memory task, writing permits language to be used in the organization of elaborate reductionist analyses, and the creation of linear sequences of causality. Indeed writing itself seems to foster a comparatively atomistic and linear view of things and events set in neutral space.

Finally, writing seems to have fragmented the understanding of the self in the community. Since sustained analytic thought could now be a solitary activity, with the thinker engaging in a dialogue in her or his mind, and with the written word, there was less need for social interaction. Reading and writing are solitary activities. Indeed, as Ivan Illich and Barry Sanders put it, "the idea of a self that continues to glimmer in thought or memory, occasionally retrieved and examined in the light of day, cannot exist without the text."[37] Literacy, then, may have been the catalyst for the idea of the discrete, autonomous individual.

Changing Perceptions of Nature

Parallel to the shift from the dynamic relational character of orality to the comparatively static detached world of literacy, people have increasingly come to view the world and Nature as a static place of discrete objects, rather than a dynamic field of relationships. The evidence suggests that these changes were not simply coincidental to each other.

Carolyn Merchant describes an example of where the advent of literacy changed the fundamental relationship of a culture with its natural world by emphasizing a visually-biased way of knowing. In this case she is referring to the experiences of North American Natives with European cultural imperialism in what is now New England. She begins by describing the consciousness of oral Native cultures:

> For Native American cultures, consciousness was an integration of all the bodily senses in sustaining life. In that mimetic consciousness, culture was transmitted intergenerationally through imitation in song, myth, dance, sport, gathering, hunting and planting. Aural/oral transmission of tribal knowledge through myth and transactions between animals, Indians, and neighbouring tribes produced sustainable relations between the human and the non-human worlds....For Indians engaged in an intimate survival relationship with nature, sight, smell, sound, taste, and touch were all of equal importance, integrated in a total participatory consciousness.[38]

This participatory consciousness, which Merchant says characterizes the oral life of the Native peoples, and which many ecophilosophers present as an alternative to Cartesian resourcist thinking, is described in more detail by Morris Berman in **The Reenchantment of the World**. Essentially it is a mimetic consciousness "in which the subject/object dichotomy breaks down and the person feels identified with what he or she is perceiving."[39]

Merchant goes on to describe how when Europeans invaded the Native communities during what she calls the "colonial ecological revolution," vision became the dominant sense within the Indian culture, thus breaking the participatory consciousness. This was because of the subtle effects that lay-literacy brought about through the focus on "God's word" as *written* in the Bible. Merchant explains:

> Alphanumeric literacy became central to religious expression, social survival, and upward mobility. The Puritan imposition of a visually oriented consciousness was shattering to the continuation of Indian animism and ways of life. With the commercializing of the fur trade and the missionary efforts of Jesuits and Puritans, a society in which humans, animals, plants, and

> rocks were equal subjects was changed to one dominated by transcendent vision in which human subjects were separate from resource objects.[40]

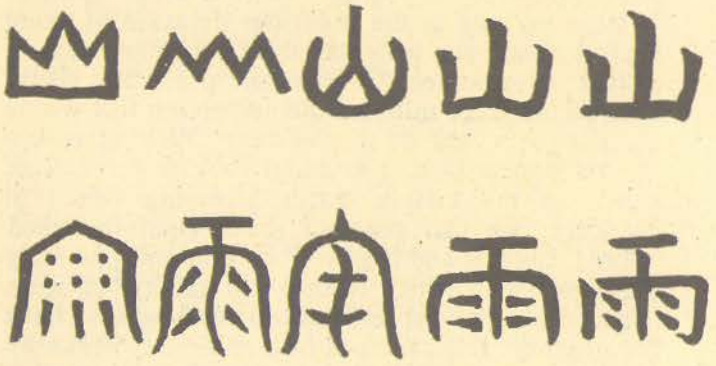
While literacy was subtly changing human consciousness and perceptions of the world, it was also a key element in the concentration of material/technical power and the building of military and political empires.[41] We know that such empires are also dependent on exploitation of the natural world and that they often cause the degradation of Nature. In this way literacy seems to have been a catalyst for the accumulation of material and technological powers "over" Nature. As Mumford says, "the 'myth of the machine' [his phrase for the almost religious belief in technological salvation] would have been inconceivable, and its operations impracticable, without the magic of language and the formidable increase in its power and scope through the invention of writing."[42]

The Greek Alphabet

While writing seems to have generally changed the way humans perceive and experience the natural world, its most significant form may have been the Greek alphabet. This is because the "alphabet" was (and still is) a unique way of visually coding language. What makes the Greek alphabet unique is the fact that it was the first truly phonetic alphabet, in contrast to other writing systems which used syllabic, ideographic or pictographic codes or alphabet-like systems without vowels. The Greek alphabet was a way of visually coding the spoken sounds of any language with a small number of totally abstract symbols. It was only through the recording of those sounds that it provided meaning. It did not directly record ideas or images.[43] In contrast, the symbols of most other writing systems were meaningful in themselves, since they were usually visually derived from things in the environment.

In their paper "Alphabet, Mother of Invention," Marshall McLuhan and R.K. Logan outline how the Greek alphabet developed and how it differs from other writing systems. They argue that as a result of the invention of the Greek alphabet, Greek consciousness and the consciousness of those cultures whose writing systems developed from the Greek (including ours) were significantly altered. They further suggest that the uniquely abstract character of the Greek alphabet was partially responsible for the formation of the dominant Western worldview and the enhancement of abstract ways of thinking. "The effects of the alphabet and the abstract, logical, systematic thought that it encouraged explains why science began in the West and not the East, despite the much greater technological sophistication of the Chinese."[44]

Both McLuhan and Logan, and Dolores LaChapelle use the Chinese way of writing as a contrast to the Greek alphabet in order to suggest the profound effects it may have had on Western epistemology and perceptions of Nature. LaChapelle's contribution is especially interesting in that she is coming to the issue from the perspective of deep ecology. The difference is essentially that whereas the Greek alphabet is entirely abstract and detached from the lifeworld, Chinese retains meaning within each of its over 40,000 characters, as it is a pictographic and ideographic form of writing. "Their written script grew directly out of the drawings of actual physical things in the environment...Thus in the Chinese language, the human cannot get himself [sic] out of the total picture--nature and human are always interconnected."[45]



Two Chinese characters as they changed over the years from pictographs to their contemporary forms: mountain and rain.
Source: Edoardo Fazzioli, **Chinese Caligraphy** (New York: Abbeville Press, 1987)

With any writing system, the written symbols are an abstraction of the spoken word which is, in turn, an abstraction of experience. With the alphabet, however, the abstraction is even greater because of the fact that the characters are arbitrary and have no meaning in themselves. This, argue McLuhan and Logan, encouraged the creation of conceptual abstractions, classification schemes and atomistic thought within Greek society. Furthermore, they suggest that as a result of the alphabet, a new way of knowing emerged:

> With writing, what is recorded or remembered becomes separate from the writer, existing in a book or a scroll. Knowledge takes on objective identity, separate from the knower. The Greek, in this way, developed the notion of objectivity and detachment, the separation of the knower from the object of his [sic] awareness. This was the beginning of the scientific method and the source of the dichotomy the Greeks created between subjective thinking as found in art and poetry, and objective thinking as exemplified by philosophy and science.[46]

This points directly to the alphabet and the shift it brought about in Greek thought as a source of our current worldview. In particular we can see here the origins of the scientific epistemology that now dominates contemporary assumptions about how we ought to know the world. As Morris Berman, Carolyn Merchant and others have pointed out, this epistemology bodes ill for Nature.

Another passage from McLuhan and Logan's paper is particularly revealing of the literate Greek's idea of "nature." It further suggests that present views may be seen to be partially rooted in ancient Greece:

> The Greeks invented "nature" (*phusis*) which is their classification of the objective external world. "Nature" does not include man [sic] or any of his [sic] artifacts such as the alphabet, which may explain why the Greeks never studied the *effects*, even of their own technology, a radical flaw in their objectivity. It was the separation of man [sic] from nature, perhaps, that allowed Western thinkers to consider nature as an object to be studied, or a resource to be exploited.[47]

Overall then, the invention of the Greek alphabet seems to have represented a significant turning point in Western thought. It seems to have enhanced the linguistic basis for a linear, abstract and analytical mode of thought, and for a detached view of Nature. It therefore may have further contributed to the domination of Nature because, in lending itself to rational, scientific and technical thinking, it allowed for further inventions that could be used to control and exploit Nature. The Greek alphabet becomes even more significant when we consider that all Western alphabets are descended from it. So, even though the languages differ, the ways of visually coding them are similar in their abstract character, and perhaps the ways of thinking about the world are also similar.

Printing

In terms of the historical changes in the form of language, there is one other invention that deserves comment in this context. That is the advent of mechanical printing. Essentially print extends and heightens the process already begun with writing. It suggests even more than writing that words are things; it reifies words.[48] This is because it is much more precise at controlling the visual presentation of words and because it more effectively locks them into space. In doing so, it not only reifies them, but also further eliminates the need to sound words out as one reads them.[49] This takes the user one step further away from the aural world where words are sounds and events. As Walter Ong suggests, print completed the process of the technologizing of the word. Furthermore, mechanical printing was a manufacturing process, and by putting language into that process, words were commodified.[50] All of this suggests a further perceptual distancing and separation of language from its grounding in experience, and perhaps of humans from Nature as well. I think ecophilosopher Alan Drengson sums up well the impact of printing on the human participation in the processes of life:

> The hazard of print culture, and the modern industrial technology that goes with it, is that all of our thoughts and perceptions will become structured according to modes of organization that these technologies make possible. This has a powerful effect on our own dimensions of creative intelligence and flexibility. It tends to constrict our openness to Being.[51]

As with all of these changes in the form of language, both the form itself and the uses which it makes possible, intertwine with each other to further perceptually separate humans from non-human Nature.

Conclusion: Language and Nature Today

This paper has been an exploration of how some of the historical changes in the form of language may have affected human perceptions of non-human Nature. In particular, I have suggested that language may have been a catalyst for a perceived separation of humans from the rest of Nature. This process seems to have begun with the advent of language, become intensified through writing and then printing, and been especially evident in the West where our alphabets are descended from the original Greek alphabet. Furthermore, language seems to have enhanced the ability of humans to manipulate and control aspects of the world, and in doing so, may have further reinforced this initial perception of separation. I realize that this has been somewhat of a preliminary consideration of these questions, for they probably deserve a more detailed analysis than space has permitted me here. Nevertheless, in outlining them I have hopefully been able to contextualize the current issues we must face and added to our understanding of how we got here.

Language remains a critical issue in today's context of the domination of humans and Nature, for in a number of different ways, it continues to order and shape the meanings we give to our experiences. In both its form and its content, it continues to be a powerful force in shaping human consciousness. Just one example of this is the fact that many of the names we apply to aspects of Nature seem to reinforce a detached and use-oriented view of it. Consider the ubiquitous label for valued aspects of the natural world: "natural

resources." The implication of this phrase is that the sole purpose of non-human Nature is to benefit humans. This term is a symbol for the anthropocentric-resourcist view of Nature that permeates Western society. By using the label "natural resources" we may not be intending to promote such a view, but the fact is that that view is implied in the choice of words. There is a sort of incidental persuasion in the way that the label acts to reinforce the values and attitudes associated with the dominant view of Nature. The same may be said of such terms as "environment," "our land," and perhaps even "nature."

These are not isolated examples; in all cases where we talk about Nature, our experience of it or how we relate to it, we are actively constructing an idea or view of what it is. In this way we can say that we linguistically construct "Nature," and the way we construct it has direct implications for how we act in relation to it. As Carolyn Merchant puts it,

> a society's symbols and images of nature express its collective consciousness. They appear in mythology, cosmology, science, religion, philosophy, language, and art....Ideas, images, and metaphors legitimate human behaviour toward nature and are translated into action through ethics, morals, and taboos.[52]

This idea that our representations of non-human Nature affect not only how we see it, but also how we act towards it, applies to all forms of discourse that use language, including, and perhaps especially, science.[53]

In this paper I have emphasized those characteristics of certain language forms that seem to have had a bearing on human perceptions of Nature, particularly those that may have had a disjunctive influence. However, I do not mean to suggest that the history of language has been simply a history of its having caused humans to see themselves as separate from Nature. In many ways language has enhanced our understanding of the world and of ourselves. Furthermore, I believe that it is possible to think of, and use language in ways that can overcome its disjunctive influences. For, as Lewis Mumford reminds us,

> the very qualities in language that offend the logical positivists--its vagueness, its indeterminateness, its ambiguity, its emotional coloring, its reference to unseen objects or unverifiable events, in short its 'subjectivity'--only indicate that from the beginning it was an instrument for embracing the living body of human experience, not just the bleached articulated skeleton of definable ideas.[54]

Thus, language can be used in a more evocative and relational way, but we must learn to use it that way if we hope to bring about a change in our relationship to the rest of Nature. To do this, we first need to explore how our existing language is contributing to the problem and how it may provide opportunities for change. This involves questioning both its appropriateness and its adequacy. Secondly, we need to re-understand language in a non-anthropocentric and non-utilitarian way, and find new ways of talking that will promote new ways of thinking. We need now to regain a sense of wonder in our language and to use our voices to speak within our species about how we feel about Nature. I am hopeful that just as feminists and other social justice advocates are now finding their proper voices, Nature advocates will as well.

Notes

1. As with other rationalizations for human specialness, this is based on an arbitrary definition of the characteristic in question, and is symptomatic of an anthropocentric worldview. Human language is but one form of communication among the many that exist in Nature. Human beings are unique, but that does not make us more special, since all species are unique and special in their own ways. For an analysis and critique of the view that sees human language as our unique quality see Harvey Sarles, **Language and Human Nature** (Minneapolis: University of Minnesota Press, 1977).

2. Consciousness is used here to mean the general perceptual orientation and awareness of one's environment, which includes oneself.

3. By no means am I suggesting that language is the only factor that may have contributed to this perception or to the existing ways in which humans dominate non-human Nature, for there are a number of others, including agriculture, patriarchy, and science, that have been or need to be examined.

4. Peter Berger and Thomas Luckmann, **The Social Construction of Reality** (Harmondsworth, U.K.: Penguin Books Ltd, 1966), pp.35-36.

5. David V.J. Bell, "Political Linguistics and Political Education," **Teaching Politics** 6 (1977), p. 222.

6. Contrary to historical tendencies, language need not be made an instrument of separation and control, for there is a connective or relational quality to it that has been historically muted. Despite the fact that this is an important concern in the context of human interaction with non-human Nature, I will not really be addressing it here. For an evocative discussion of the connective aspects of language see Erazim Kohák, **The Embers and the Stars: a philosophical inquiry into the moral sense of nature** (Chicago: University of Chicago Press, 1984).

7. The role of language in society is far more complex than I can put it here, especially when it comes to historical interpretations, so it is important to say that this paper should be seen as both a speculative venture, and as a particular slice into the larger pie.

8. Lewis Mumford, **The Myth of the Machine. Vol.1. Technics and Human Development** (New York: Harcourt Brace Jovanovich, Inc., 1967), p.75.

9. Andrée Collard with Joyce Contrucci, **Rape of the Wild** (London: The Women's Press, 1988), p.43.

10. Mumford, p.84.

11. On the idea of humans as a self-domesticated species see John A. Livingston, "Ethics as Prosthetics," in **Environmental Ethics: Philosophical and Policy Perspectives**, ed. Philip Hanson (Burnaby: Simon Fraser University Publications, 1986), pp.70-71.

12. Mumford, p.78.

13. Ibid., p.83.

14. Harold Innis, **Empire and Communications** rev. ed. (Toronto: University of Toronto Press, 1972), p.18n.

15. Mircea Eliade, **Myth and Reality** (New York: Harper and Row, 1963), pp.14-15.

16. Mumford, pp.80-81.

17. Walter Ong, **Orality and Literacy: The Technologizing of the Word** (London: Methuen and Company Ltd., 1982), p.33.

18. Ibid., p.78.

19. Ibid., p.32.

20. Even though in orality words were not reified, that is not to say that those things which the words represent are not partly reified, for they are. That is the difference between orality and the absence of language.

21. Ivan Illich and Barry Sanders, **A.B.C.: The Alphabetization of the Popular Mind** (New York: Vintage Books, 1988), p.7. This is a difficult idea to comprehend. As literate people we are accustomed to thinking of language as being made up of words, which we see as things. In an oral culture, however, there are only sounds--phonemes--that make up utterances. The concept of "word" did not exist in orality, even though we habitually now refer to "words" when discussing it.

22. Ong, p.32. Even such entities as rivers and rocks are seen, in an animistic worldview, as alive.

23. Ibid., p.34.

24. Ibid., p.42.

25. Ibid., p.49.

26. Ibid., p.45.

27. Ibid., p.67.

28. For more on this see Sarles.

29. Ong, p.72.

30. It is not clear how far those oral modes of perception extend beyond human societies to include Nature. Most likely, the relationship to Nature was already somewhat disjunctive, but not to such an extreme as it now is.

31. Ong, p.29. The shift from a magical worldview to one of scientific rationality is discussed in detail in Morris Berman's **The Reenchantment of the World** (Ithaca: Cornell University Press, 1981).

32. Ong, pp.43-44. Ong's use of the word struggle is part of his reference to the agonistic tone of oral discourse.

33. Not surprisingly, within a literate worldview there is a tendency to believe that words are carriers of meaning--dictionaries are the best indication of this--rather than the truth which is that human beings create meanings.

34. Innis, p.10.

35. Neil Evernden, **The Natural Alien: Humankind and Environment** (Toronto: University of Toronto Press, 1985), p.84.

36. Ong, p.11.

37. Illich and Sanders, p.72.

38. Carolyn Merchant, "The Theoretical Structure of Ecological Revolutions," **Environmental Review** 11 (Winter 1987), pp.272-273.

39. Berman, p.346.

40. Merchant, p.273.

41. On this subject see, for example, Innis.

42. Mumford, p.95.

43. Illich and Sanders, p.9.

44. Marshal McLuhan and R.K. Logan, "Alphabet, Mother of Invention," **et cetera** 54:4 (December 1977), p.375. While McLuhan's work is often highly ambiguous, and his apparent technological optimism needs to be critically challenged, this paper seems well developed with the exception of his well known assertion that somehow television and "electric process" will allow us to recover the participating consciousness of the oral tradition.

45. Dolores LaChapelle, **Sacred Land, Sacred Sex, Rapture of the Deep** (Silverton: Finn Hill Arts, 1988), p.24.

46. McLuhan and Logan, p.378.

47. Ibid.

48. Ong, pp.118-119.

49. For the most part, words were "strung together without any physical definition," and writing was "an unbroken series of letters" until roughly the seventh century, according to Illich and Sanders, p.46. See also pp.119-123.

50. Ong, p.118.

51. Alan Drengson, "Introduction to this Wilderness Issue," **The Trumpeter** 3:2 (Spring 1986), p.2.

52. Merchant, p.272.

53. For an interesting discussion of the social construction of Nature in scientific discourse see Elizabeth Ann R. Bird, "The Social Construction of Nature: Theoretical Approaches to the History of Environmental Problems," **Environmental Review** 11 (Winter 1987), pp.255-264.

54. Mumford, p.73.

Rethinking the Ecological Crisis

*by Daryl Lee**

The stories we tell about nature reveal a great deal about how we think about ourselves, our society and the world in which we live. Nature is one of those potent cultural spaces within which a society plays out its dreams and fears, its ambitions and anxieties. As John Rodman reminds us, "just as our statements about other people tend also to be concealed statements about ourselves, so statements about nonhuman nature tend also to be concealed statements about the human condition."[1] Constructed through our various discourses, ideas of nature can be read as maps of our historically and culturally-constituted consciousness.

One of the most compelling modern-day stories we are writing about nature tells us that our activities are putting nature at risk. This troubling narrative warns us that our current practices threaten to cause massive ecological disruption if we do not soon change our way of life. Certainly enough, all of the elements of this story exist in the world around us as empirical realities. Each of these elements--instances of pollution, deforestation, species extinction, etc.--have their own contexts and thus are meaningful to certain communities of people in certain ways. Yet it is only relatively recently that these individual instances have taken on a more commanding authority as they are woven together into a master narrative called the Ecological Crisis.

History reminds us of how concepts of nature have been closely intertwined with ideas about society. And despite our own positivistic assurances, mapping the social onto the natural continues to be an activity we unconsciously engage in. Thus decoding our constructions of nature tells us much about what we consider to be the good society, and about how we draw the boundaries between order and disorder, balance and imbalance, and stability and instability. From this perspective, the ecological crisis tells a story about a society that has managed to violate its own boundaries.

The ecological crisis tells another story--one with a more discomforting message. All crisis discourse plays upon a textual field of culturally-generated authority. Its power derives from its ability to reconstruct the past and future, thereby delimiting the possibilities available to the present. In structuring events into a crisis, we reveal a great deal about ourselves, most of it not very flattering. As we will see, the ecological crisis is woven into a morality play of biblical proportions. The language, as befits such a play, is one of morality and temperance versus disease and despoliation. Using the world as its stage, crisis discourse foretells apocalypse.

Ecology as (science) fiction

Scientists tell stories about the world. Despite claims to value-neutrality, the laboratory isolates neither scientists nor their work from the contamination of their social context. Scientists are human beings and members of various communities; as such, the questions they ask and the answers they seek are framed by their existential and social worlds. With this in mind, I intend to approach scientific knowledge as if it were literature. Both science and fiction are exercises in story-telling. To read science as literature is to acknowledge that scientific knowledge responds to the world around it; that it does not progress only through some intrinsic logic of discovery. Scientists' narratives, constructed out of the resources of their disciplines, are inextricably woven together with the other discourses of society. Together these form the fabric of our culture.

Reading science as literature enables us to break down the precariously-maintained boundaries between fact and value, description and prescription, and reality and imagination. The literary strategies scientists use--analogy, metaphor and narrative--should not be read as merely helpful explanatory devices. Rather, these strategies are essential for defining, explaining and giving meaning to the objects of scientific inquiry. Drawing upon a potent metaphorical language, the discourses of scientific ecology are extraordinarily rich in meaning. The proliferation of popular ecologies attests to the numerous interpretive possibilities offered by scientific ecology.[2] Reading ecology as

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(science) fiction shows us how the discourses of scientists are also commentaries on society, and how ecologists are implicated in the social construction of the ecological crisis.

Reading ecology as literature reveals just how deeply the human practice of science is embedded in the cultural world. Perhaps more explicitly than any other science, ecology weaves together the growing concerns of what people in western industrial societies call the human condition.[3] Ecology has developed as the focal point for anxieties expressed about unrestrained economic growth, the accelerating rate of industrial and technological change, increasing environmental degradation and the breakdown of social cohesion.

One of the most potent ecological storytellers is Eugene P. Odum, a central figure in the development of the New Ecology--the ecosystem-centred, bioeconomic paradigm that has dominated post-World War II ecology.[4] When we read his discourses as literature, Odum becomes a most lyrical scientist. Ecosystems are communities with specialists and generalists engaging in mutually-beneficial relationships, "just like well-ordered human societies."[5] The nature-society analogy is illuminating, but just as significant is the underlying conviction that order is a natural and positive quality in both the human and natural worlds. In dialectical fashion, social concerns are written into nature, and natural orders become privileged guides for restructuring society. In a world where the social and natural orders are so closely interwoven, threats to one order are immediately translated into threats to the other.

Odum serves us well as a paradigmatic figure who embodies the tensions inherent in the practices and discourses of ecological science. As a natural science, ecology is framed by a familiar set of dichotomies: fact/value, objectivity/subjectivity, science/politics, etc. Scientific authority, founded on the claim of access to the "real," is exercised only within the discursive field of science itself. Science intrudes into politics only as an arbiter of the real. Yet environmental discourses show how difficult it is to maintain these distinctions. This is illustrated in Odum's recent introductory textbook on ecological principles, **Ecology and Our Endangered Life-Support Systems**. Scattered throughout this book are what Odum calls his "personal views" on various environmental problems.[6] These are placed in boxes, spatially and symbolically severing them from the author(ity) of the scientific text. **Ecology and Our Endangered Life-Support Systems** stands as a symbol of the unstable, volatile division between science and politics, and nature and society.

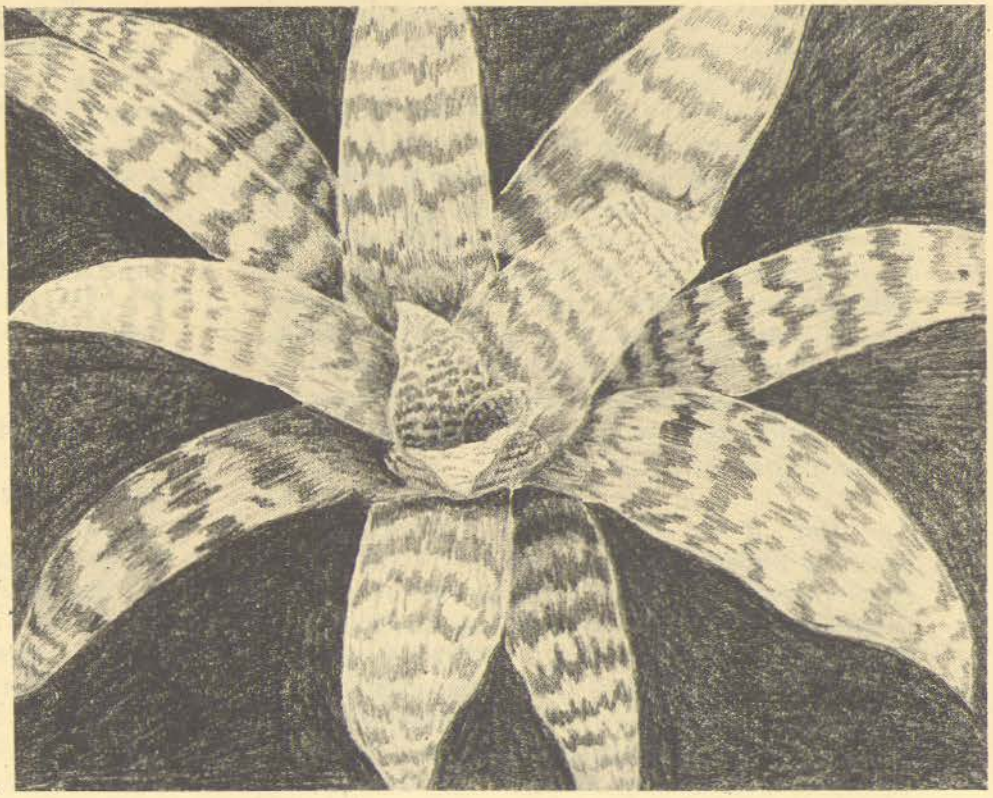
These boundaries between fact and value and science and politics break down if we allow for the idea that scientists actively participate in the construction of the world they seek to know. What is the object to be studied? How is this object to be defined? What questions are to be put to this object? How are the answers to be interpreted and explained? In asking and answering these questions, scientists embed their values into the world they study. Ecology, as Carolyn Merchant points out, "is a particular twentieth-century construction of nature."[7] There is a great deal of twentieth century history embedded in one of ecology's most potent constructions of nature: the ecosystem.

Produced through the practices and discourses of ecology, the ecosystem is a relatively new object of scientific inquiry. Although the term was first coined in 1935, the ecosystem did not become a significant organizing concept until the ascendancy of the New Ecology after World War II.[8] Continuing debates on what criteria are appropriate for categorizing and classifying ecosystems suggest that the concept has not yet stabilized.[9] Given the historical genesis of the ecosystem, it seems reasonable to expect that the concerns of post-war American society--a time and place imprinted with the image of the atomic cloud--are coded into this recently-constructed object of nature.

Ecology in the Nuclear Age

The metaphor of The Bomb serves as a powerful representation of the anxious and ambiguous tensions of post-World War II society. The Bomb is a fusion of order and disorder; in Cold War discourse it is both the guardian of, and greatest threat to human survival. The Bomb, along with its hyper-technological delivery systems and infrastructure, embodies the pinnacle of achievement for a dynamic, energetic scientific-technological culture. It is also an ironic, nightmarish symbol of growth and progress gone out of control, manifested in the escalating insanity of the arms race. As a metaphor, The Bomb serves us well as a potent symbol for the anxieties, tensions and ambiguities experienced by those who live in the nuclear age.

Written into the troubled history of The Bomb is the desire for creating stability in an age when accelerating change is perceived to be an essential, defining feature. Both metaphorically and literally, The Bomb is the most potent creator of order; ironically it does so by threatening disorder. Out of the chaos of World War II emerged a precipitous world order of nuclear nations, maintained by the threat of global atomization. At the same time, technological and industrial change, environmental transformation and sexual and racial challenges to existing social and political structures contributed to the general societal discourse concerning order, disorder and the possibilities for reordering. This is the turbulent social context in which the New Ecologists worked--coding what they experienced as the human condition into their own construction of nature.



The post-war concerns over order and stability in a time of disruption and change are woven into the fabric of nature by ecological science. The legacy of evolutionary theory was to bequeath ecology a dynamic, changing conception of nature. The natural world is a messy affair, full of genetic variance and biological noise. The quest of New Ecology is to find an ordered, underlying structure within this world of change and disorder. Thus, Odum tells us that "the principle function of an ecosystem is to make possible the orderly cycle of life."[10] It is no surprise that his texts are filled with intricate but tidy flowcharts--schematics of the underlying order of the natural world.

In the rarified world of scientific metaphysics, change is strictly a quantitative phenomenon.[11] In a universe of pure matter and motion, change is an alteration of states from one moment in time to the next. Within this metaphysical system, the role of science is to catalogue, explain and predict change. Science is outside the world of values, thus scientists make no judgments as to whether change is good or bad. Reading the story of ecology, however, shows us that the anxieties of post-war society are coded into its construction of nature, and are revealed in its own troubled discourses concerning the nature of change.

In the ecological construction of nature, change is not merely quantitative. Rather, ecosystem change is coded as good or bad in a way that reflects our own particular cultural and social experiences of change. Ecosystem succession is referred to as maturation and development--western codes for personal and societal growth, progress and transformation. The modern western concept of history as progression is replayed in the arena of ecosystem evolution. Self, society and nature are woven together by a common natural impulse for development.

Referred to positively as maturation and development, ecosystem change is intertwined with an underlying commitment to the notions of order and stability. Left undisturbed, ecosystems move towards a relatively balanced climax state. As one biologist notes, "the idea of an unbalanced, stochastically driven natural community inspires distrust."[12] But change that is predictable and which leads to stability is considered, and coded, positively.

That which is considered negative change is coded into the construction of the ecosystem as stress. In ecology, stress is "any environmental influence that causes a measurable ecological change."[13] But as Donna Haraway has noted, over the past half-century stress has emerged as "a dominant integrating concept for post-war social and personal life....In an evolutionary context, stress idiom was part of an anxious discourse about nuclear war, environmental destruction, unprecedented population growth, sexual and racial conflict."[14] In human affairs, stress idiom is used to express the concern that individuals and social systems are ill-equipped to deal with the demands of modern-day existence. External factors are beyond control; the management of stress requires better, more accurate information about unfolding situations. In ecological discourse, stress is a sign that western society is maladaptive. Alleviating stress is about determining and setting limits to human influence on the environment; overshooting these limits threatens unpredictable, disruptive change.

Thus the concept of stress effectively weaves together the anxious post-war concerns with human, societal and natural adaptability in a time of unprecedented change. The Bomb stands at this unstable boundary where order becomes disorder. It is a powerful symbol of progress spiraling out of control and becoming stressful. Coded negatively, stress is translated into environmental discourse as chaotic and thus unpredictable change. Within this frame of discourse, stressed systems lead to ecological disruption, collapse and crisis. Thus stress discourse implies a normative state of nature, captured as the orderly cycle of life revealed by the science of ecology. Stress, and thus (modern industrial) human existence, is abstracted out of this ecological norm. Integrating modern society into nature means successfully adapting it to the constraints of the normative ecosystem. There is no place for stress in an ecological future.

Global Cancers and Social Surgery

In post-war environmental discourse, perceptions of growth and development are intertwined with ideas of order and disorder. The socio-cultural boundary between order and disorder is transcribed onto our perception of growth, yielding two opposing concepts. Healthy growth--both individual and societal--is orderly and self-regulating. Unhealthy growth is growth which spirals out of control, generating disorder and chaos. In a modern fusion of biological and social discourses, runaway growth is captured in a powerful, ominous and potentially dangerous metaphor: cancer.

In the minds of twentieth-century industrial peoples, cancer is a most insidious disease. It symbolizes the body in revolt; it is about the loss of control. Technically, cancer is caused by cells which have lost the ability to regulate and restrain their growth. Metaphorically, cancer is about the body destroying itself from inside. Inscribed into the bodies of society and nature, the metaphor mutates into a disturbing biosocial discourse about undesirables such as "population overgrowth, social disorder, pollution, and other forms of societal and environmental cancer."[15]

In a culture that fears mortality, disease metaphors are especially powerful. Disease is something that is out of balance; it is an affront to the purity of the body. Illness is closely associated to immorality; disease is often considered a punishment for moral weakness. Susan Sontag points out that "cancer is a metaphor for what is most ferociously energetic; and these energies constitute the ultimate insult to the natural order."[16] Once likened to cancer, disruptive changes--in nature and in society --are coded as unnatural and potentially lethal.

Cancer, in a culture closely associated with death, is a crisis disease. Once it corrupts the bodies of society and nature, it is imperative that severe action be taken. Treating cancer is akin to waging warfare of the most drastic kind; chemical and radiation treatments allude to the most frightening weapons ever conceived. Tumours are surgically removed, an expression that has found its way into the euphemisms of modern warfare. To call something a cancer is to advocate taking drastic action against it. To label human beings and human practices a disease is to effectively remove any vestiges of humanity from them. To abstractly dehumanize a situation by likening it to cancer and then suggesting performing social surgery is an incredible act of violence against the person.

As Georges Canguilhem has observed, disease is envisioned as a polemical situation between oppositions--"a battle between the organism and a foreign substance, or an internal struggle between opposing forces."[17] The cancer metaphor lies at the intersection of a number of such oppositions: order and disorder, purity and pollution, the natural and the unnatural. Once translated into the master

opposition of health/disease, there can be no synthetic, dialectical resolution to these oppositional pairs. Framed by the limits of binary categories, disease must be cured, or the patient dies. A person who lives with a disease is considered to be unhealthy and handicapped--i.e. less than a full person.

However, coding health and disease as an oppositional pair is misleading. While disease is defined in reference to a norm, and sickness does imply a state of health, exactly what health is, however, remains open. Canguilhem reminds us that "in order to discern what is normal or pathological for the body itself, one must look beyond the body. With a disability like astigmatism or myopia, one would be normal in an agricultural or a pastoral society but abnormal for sailing or flying."[18] What is considered healthy is dependent upon the context of a particular mode of human existence.

Thus to talk, as Odum and others do, of maintaining "healthy ecosystems" is problematic.[19] Health is a relative concept which cannot be determined outside of the context of human practices. But in environmental discourse, the idea of healthy ecosystems implies a normative, decontextualized state of nature. Framed by binary opposition, ecological discourse is trapped into oscillating between two absolutes: the healthy and the unhealthy. The healthy is modelled after the normative ecosystem: the natural community uninfluenced by human activity, the ecosystem free of stress, the ecosystem that allows for the orderly cycling of life. If an ecosystem is not healthy, then by definition it must be unhealthy. An unhealthy ecosystem is a sign of disease. It is an indicator of unhealthy human practices--activities that are considered disruptive to order, out of balance, unnatural, polluting, immoral--i.e., human practices that do not conform to the limits of the normative ecosystem. Health discourse, like stress idiom, is about socially constructing "objective" limits to human activity.

Ecological Crises and Salvation Mythology

Read as literature, the ecological crisis and its associated discourses are all about negotiating what we consider to be the good life and the good society. Crisis, stress, disease, health--we embed each of these notions with ideas about what counts as order, balance, stability and harmony. These ideas, coded into our constructions of nature, become the guardians and enforcers of the social order. The ecological crisis exists because we collectively adhere to a normative state of nature all the while we engage in practices which disrupt this socially-constructed norm. Ecology inscribes the cultural boundary between order and disorder onto the natural ecosystem. Ecological disruption tells us we have crossed that boundary.

From one perspective, Eugene Odum's **Ecology and Our Endangered Life-Support Systems** is an introduction to ecological principles. From another, it is a story about the loss of innocence and the promise of redemption. Odum's narrative begins with a parable: the ill-fated flight of Apollo 13. Technological Man, ever striving for knowledge and betterment, sets his sights on reaching the heavens. His spacecraft is a tiny, simplistic replica of the Earth; once it leaves the safety of the life-giving biosphere a crisis intervenes. A short circuit causes an explosion, critically damaging the earth-surrogate's life-support systems. The lives of the astronauts are threatened and the mission must be abandoned. Survival is the only imperative. Happily, with the ingenuity of the astronauts and a massive collective effort on Earth, the spacecraft is safely maneuvered back to the life-sustaining womb of the planet.

The remainder of Odum's book is essentially a reprise of this parable, authoritatively couched in the language of scientific discourse. Humanity, unable to restrain itself, is threatening the biosphere with rampantly out-of-control industrialization and population growth. Ecological collapse is inevitable if human beings do not end this unnatural and unhealthy behaviour. Ecology, the arbiter of what is natural, shows us how we are to act and what limits we are to obey. Either we heed this warning and outgrow our immature ways, or we face certain doom. "The Transition From Youth to Maturity" is the title of the epilogue; its allusion to the metaphor of orderly growth, development and transformation hints at both the cultural imperative and biological necessity of social reordering along ecological principles.[20] Society, like human beings, must grow up.

Environmental and ecological discourse is this salvation myth writ large. An extraordinary number of these discourses follow the narrative sequence of the fall and redemption. Man (that western symbol for the collectivity of human be-

ings) begins in a state of harmony and equilibrium with Nature.[21] Through some series of events or misfortunes this equilibrium is upset and Man leaves the Garden to begin a new kind of existence. Man's new life, so seductive at first, begins to spiral out of control, increasingly upsetting the delicate balance of Nature. This headlong spiral reaches a point of crisis, presenting Man with a decision. Either he renounces his unnatural existence or he faces the apocalypse. Choosing--hopefully--to return to his origins, Man is welcomed back into the Garden, reintegrating into a peaceful co-existence with Nature. The front cover of a well-known alternative magazine captures the essence of this salvation narrative: "Paradise Found: How the environmental crisis can improve our lives."[22]

Read within the context of the salvation narrative, the ecological crisis is a way of structuring and giving meaning to the present. The present is constructed as a particular time within the historical-narrative sequence; this time is called a "crisis" (literally, a turning point). Framed by the possibilities of salvation mythology, the present is constructed as a binary opposition. A crisis requires resolution. Either we take drastic action and save ourselves and nature, or we face imminent destruction. As prophecy, crisis discourse attempts to control the present by creating the future.

Like stress idiom and cancer metaphors, crisis discourse straddles the precarious boundary between order and disorder. Crises are situations out of control; the response is to exercise even greater control over whatever it is we define to be the problem. In environmental discourses, the problem is usually associated with some state of human affairs--often economic insanity or reproductive fecundity. These are situations that are out of control; they are sources of disorder. Crisis discourse is about identifying pockets of disorder and advocating that they be reordered. In chaos lies the potential for remaking a new order.

Through narrating the story of the ecological crisis, I have hoped to rewrite it as a problematic. The ecological crisis is just one out of an indefinite number of stories we can write about nature. Along with the rest of the stories we write, the ecological crisis offers itself as a discourse out of which we construct our versions of reality. The narrative I have written about the ecological crisis tells a story about how we construct the world we live in; it suggests that in constructing the world we both create and limit our horizon of possibilities.

As Mary Douglas has pointed out, the control of time is a most effective way of generating a moral consensus. "Time is like all the other doom points in the universe. One and all are social weapons of control."[23] And perhaps she is right when she suggests that "we must talk threateningly about time...if we hope to get anything done. We must believe in the limitations and boundaries of nature which our community projects."[24] Yet, I hope that no one can use this doom point without it weighing on their conscience. For just as the ecological crisis is an effective tool for provoking action, it also radically forecloses the realm of possibilities. And I cannot help but think that in this sense, constructing an ecological crisis is an act of violence against our vision of ourselves.

Notes

1. John Rodman, "The Liberation of Nature?," **Inquiry** 20 (1977), p. 105.

2. For example, Murray Bookchin, **The Ecology of Freedom** (Palo Alto: Cheshire Books, 1982); Bill Devall and George Sessions, **Deep Ecology: Living as if Nature Mattered** (Salt Lake City: Peregrine Books, 1985); Warwick Fox, **Toward a Transpersonal Ecology** (Boston: Shambhala, 1990).

3. Resisting the convention of capitalizing "western" is intended to oppose the notion that there is any one thing that can be called the West. On this point, Edward Said has been instrumental in rendering the identity of the "West" problematic. See Edward W. Said, **Orientalism** (New York: Vintage Books, 1979).

4. Donald Worster, **Nature's Economy: A History of Ecological Ideas** (Cambridge: Cambridge University Press, 1985), p. 311.

5. Eugene P. Odum, **Ecology and Our Endangered Life-Support Systems** (Sunderland, Massachusetts: Sinauer Associates, 1989), p. 30 and p. 52.

6. Ibid., p. ix.

7. Carolyn Merchant, "The Theoretical Structure of Ecological Revolutions," **Environmental Review** 11:4 (Winter 1987), p. 267.

8. Robert P. McIntosh, "Ecology Since 1900," in **Issues and Ideas in America**, eds. Benjamin J. Taylor and Thurman J. White (Norman, Oklahoma: University of Oklahoma Press, 1976), p. 362.

9. Odum, p. 58.

10. Bernard C. Patten and Eugene P. Odum, "The Cybernetic Nature of Ecosystems," **The American Naturalist** 118:6 (December 1981), p. 890.

11. On the metaphysics of modern science, see Alfred North Whitehead, **Science and the Modern World** (New York: Macmillan, 1925).

12. David Simberloff, "A Succession of Paradigms in Ecology: Essentialism to Materialism and Probabilism," **Synthese** 43 (1980), p. 30.

13. Bill Freedman, **Environmental Ecology: The Impacts of Pollution and Other Stresses on Ecosystem Structure and Function** (San Diego: Academic Press, 1989), p. 4.

14. Donna Haraway, **Primate Visions: Gender, Race, and Nature in the World of Modern Science** (New York and London: Routledge, 1989), p. 224.

15. Eugene P. Odum, "The Emergence of Ecology as a New Integrative Discipline," **Science** 195:4284 (March 25, 1977), p. 1289.

16. Susan Sontag, **Illness as Metaphor and AIDS and Its Metaphors** (New York and London: Anchor Books, 1990), p. 68.

17. Georges Canguilhem, **The Normal and the Pathological** (New York: Zone Books, 1989), p. 41.

18. Ibid., pp. 200-201.

19. Odum, **Ecology and Our Endangered Life-Support Systems**, p. 271. See also Don E. Marietta Jr., "The Interrelationship of Ecological Science and Environmental Ethics," **Environmental Ethics** 1:3 (Fall 1979), p. 201.

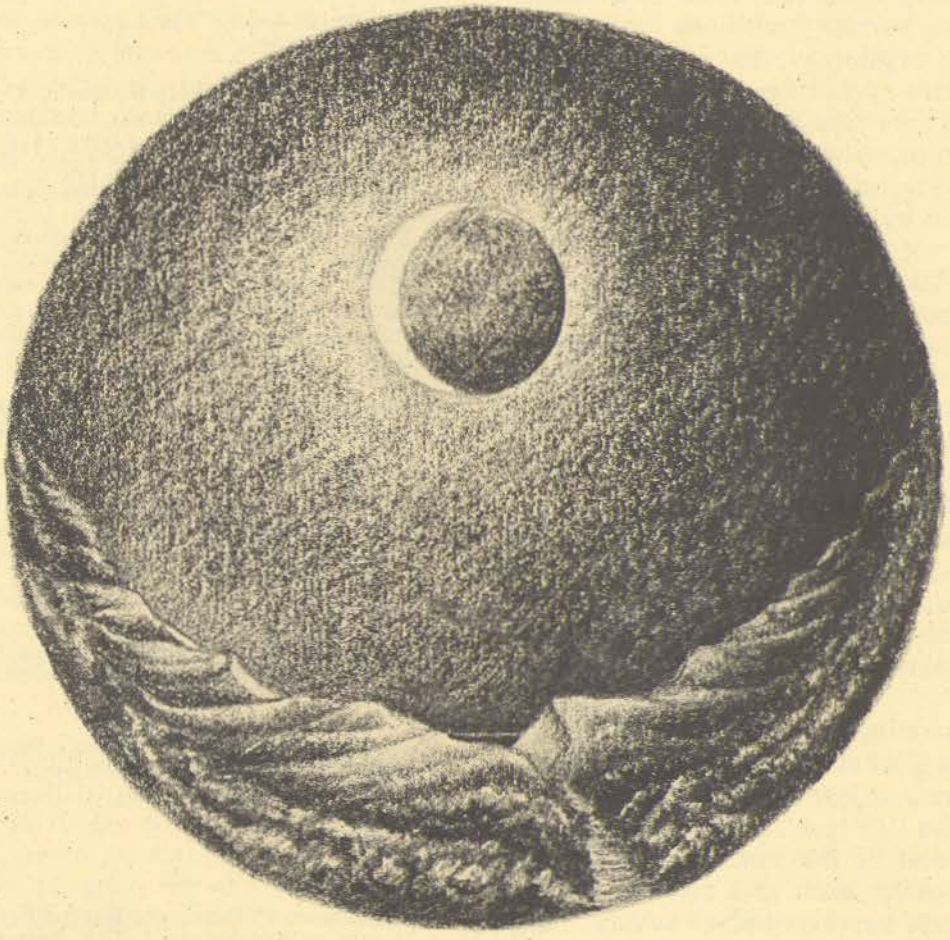
20. Odum, **Ecology and Our Endangered Life-Support Systems**, p. 271.

21. Feminist scholarship has made it impossible to maintain the fiction that "Man" speaks for all persons. Here, Man, Nature and Garden are advanced ironically (and thus are capitalized) to draw attention to the role these totalizing fictions continue to play in structuring the discourses of the ecological crisis.

22. **Utne Reader** 36 (November/December 1989).

23. Mary Douglas, "Environments at Risk," in **Ecology, The Shaping Enquiry**, ed. Jonathan Benthall (London: Longman, 1972), p. 136, 142.

24. Ibid., p. 52.



The Better Bathroom:

A Spiritual and Political Landscape

*by Andrew Satterthwaite**

Introduction

Imagine this scene: luxuriant broadleaf greenery, ferns and verdant mosses. Perhaps a rock or two poking through. A pool, perhaps with clear water, but obviously deep, and a waterfall, flashing and tumbling, soothing to the ear, and lending the air a tangible humidity. Filtered sunlight dapples the waters.

The image is familiar: it is a preferred advertising backdrop because it is exactly a cultural idyll-/idol.[1] We see it in advertisements for cigarettes, for all kinds of detergents, for cars and all other types of environmentally-adverse consumer goods. In advertising it is a manipulated image, but it can only be manipulated because it already has cultural standing. The image also appears on the big screen, as a background to positive action, to romance, to private scenes, and resolution of tragedy. It is our entertainment and solace.[2]

Other landscapes have cultural standing. The French hold the American desert as the proper ground for inner exploration; the British have a pastoral ideal. Mountains have acquired a special place in Anglo-American culture. We go into the mountains to be away from people, to escape the urban world. It was not until the urban world existed that mountains acquired their cultural value, as a place to get in touch with the soul, without the commotion of the city.[3] Appreciation of landscapes is not simply at the level of seeing the objects that comprise the view: landscapes are also the fields in which spiritual reflection takes place, and as a consequence landscape can never be completely described in the absence of human aspirations. The human aspiration that has become attached to mountains in North America is that of self-discovery: here the receptive individual finds the unity between their singular being and that of the rest of the cosmos. In the mountains and the forests one finds oneself, composes oneself, is constituted. These were the terrains of Thoreau and Muir, American transcendentalists of the last century. It is in the grandiose spaces of mountains that, paradoxically, we find the intimacy of our own being.

The positivity of the woodland glade with waterfall also resides in its potential for intimacy. This, like the mountains is not a place for crowds. This is nature stripped of awesome grandeur, possessing a *directly* personal quality that is surely important. There is room for a closer ex-ploration of this more intimate side to the nature idyllic. But let me expand the image I started this paper with. Imagine where the stream is going: things get more difficult here, for the image is not so fixed in modern culture - perhaps it just goes down a dark hole, with a gurgle at the end. In a bygone age doubtless this dark hole would be gaping and mysterious, and perhaps it still is. But then it went down to Hades, and the realms of the dead, and the stream was variously the Styx, the Lethe, the Jordan, the Ganges, etc.[4] Now in our mind's eye it might as well go down the plughole, to end up in the sewage plant or the septic tank, for we have already lost our paths to Heaven and Hell. As Ivan Illich notes in **H_2O and the Waters of Forgetfulness**, the water that goes down the plughole is no longer magical.[5]

Illich was concerned with water that ran through pipes, and did not reflect too much in his book on how we think of the water before it is let out of the bath. He especially did not think of the space in which we find that water. And here we come to the central motif of this article: that small room in which we take our privacy. Specifically I am concerned to explore the cultural place of the modern bathroom within our practice and metaphysics. I am concerned to explore the way in which we, as individuals and as a culture, reformulate, rethink, ourselves in the bathroom. We apparently do this by a strange cultural metamorphosis that in part entails redefining the bathroom, and redefining nature at the same time, as well as many of the precepts that inform our sensibility of what constitutes nature, and what constitutes a bathroom.

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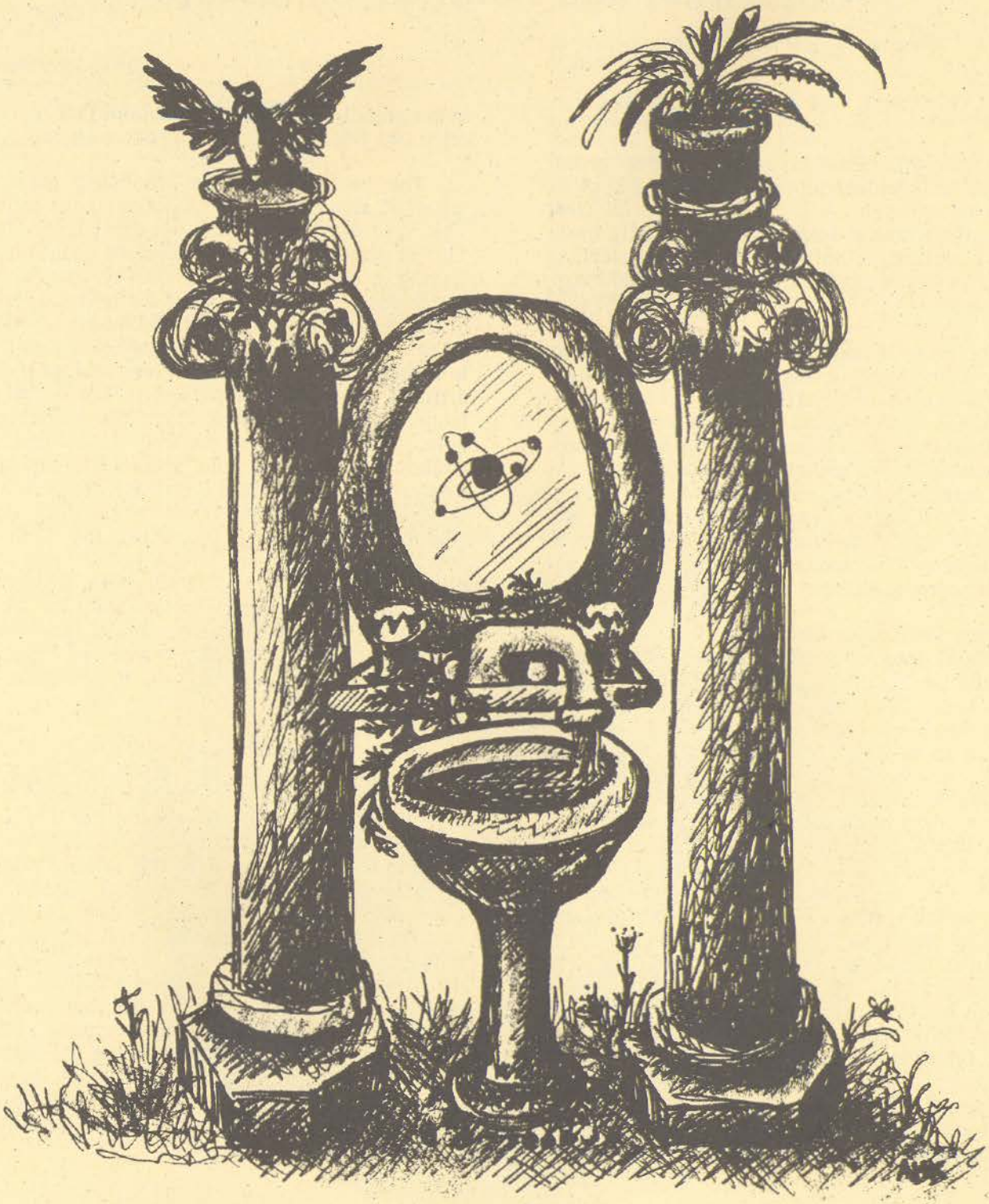


The relations between nature, culture and self are the relations of our everyday being. These relations are defined in part by our practices, and in part by our beliefs. The analysis of these relations, always dynamic in themselves, is not always as simple as marking out the physical boundaries between city and trees, between animals and humans. Oftentimes these relations are extraordinarily subtle, not least because they are the most basic to any civilization.[6] Tracing the relations that obtain at any given time, in any given culture, is in its entirety an obviously impossible task. What can be attempted, mostly by way of providing the merest outline, is a sketch of some small part of these relations, and this is what I hope to accomplish here. By focusing on a single locus, in this case the bathroom, I may be able to sketch out the sort of interactive relations that obtain between our concepts of nature, culture, and self.

The bathroom itself may at first glance appear to be an odd choice, and an exploration of these issues around this locus seem an exercise in obscurity. But this is not the case. The bathroom as a collection of ideas sits exactly at the inter-section of the conceptual fields delineated by nature, culture and self, and affords a good vantage point from which to view the interaction between these fields. Let me briefly explain why this is the case. 'Culture', or 'civilization', as a concept, can loosely be defined as the practices that set humans apart from nature. 'Nature' is the collection of objects that are not specific to cultural practice. 'Self' is one way of identifying the natural object that takes part in culture. These definitions are necessarily vague because they are constantly changing, necessarily inter-referential because they define the totality of a dynamic human experience. They are made up as they are required: we compose, or constitute, the basic elements of our world.

Self for the most part is a concept that is defined within culture.[7] The selves so defined are not wholly cultural beings however: they still have biological functions. Historically this has been problematic for the maintenance of order. Some cultures have resolved this problem by denying the fact of defecation: although in Hindu society it is common practice to squat and defecate anywhere, this is never spoken of, never written about; Chagga men pretended at initiation the anus was permanently plugged.[8] In contemporary North American households, the bathroom is the most biologically-oriented room, and at least as regards elimination functions, at the farthest end from civilization. It is where we are most like animals. The categories break down.[9] For this reason, the bathroom is an interesting crucible for the present exploration.

But I should be clear about motivation: this article is a reaction to the **Better Homes and Gardens** approach to bathrooms (and to rooms generally). **Better Homes and Gardens** features the homes of the rich. Because rich people are seen to have a leadership role in North American society, the rooms displayed become the objects of desire, come to represent the aspirations of the not-yet-wealthy.[10] In the social context the objects of desire are laden with symbolic associations, and at the level of this symbolic association, I think a distinct pathological tendency can be detected. A society made aware of unconscious movements may be inclined to change directions. What is required is an exploration of the symbolic content, and how it affects the larger ordering of human experience.

The 'Better Bathroom'

Let me sketch what I am after. The pool with waterfall and ferns that was conjured up in the opening paragraph is one archetype of nature out there. Within the cities, and most especially within our homes, the space that increasingly bears the closest resemblance is the bathroom. Perhaps not exactly the bathroom you have in your house right now. But our next bathroom will be like that, the bathroom we dream about, especially if we happen to read **Better Homes and Gardens** or some other such magazine. And there are many of these magazines, with very high readerships, so I assume the image of the 'better bathroom' has some currency. It is the 'better bathroom' that is dealt with in this paper.

Bathrooms have not always been accorded attention. Until quite recently in North America the privy was outside, and the bathtub was made of tin and hauled out and filled once a week. As the bathtub was made progressively of cast iron, and later pressed steel, the bathroom evolved into a separate room within the house. As the privy moved indoors, it occupied a separate room, the water closet. Later, in tract housing, the bathroom typically conformed to a 5' x 7' plan, containing both the water closet and bathtub. Today's better bathroom is larger, and almost certainly has a ceramic tile floor. Marble is used in the better bathroom with large mirrors, and the truly wealthy use opulent gold plated faucets, sleek pedestal sinks and toilets, enclosed shower stalls, and high volume bathtubs with whirl-pool attachments. The small frosted window that gave privacy is replaced in the better bathroom with picture windows and an expansive view. The world outside is invited in as a large painting. That painting is the painting of Nature. The appearance of plants in the bathroom creates an apparent botanical connection between the space outside and the space inside.[11]

When Gaston Bachelard first engaged in **The Poetics of Space** the phenomenological geometry of the house, he discussed the verticality implied by attic and cellar, the intimacy of small places, and their archetypes of shell and nest. What Bachelard demonstrated was the imme-diacy of symbolic content. Within the created structure, symbolic relations are set up that are at once deeper and richer and more basic to our understanding than the structures itself. The walls, in essence, speak to us.[12] Ivan Illich compared how many lavatories there were in America a hundred years ago and now, and reflected on how the increase had affected our appreciation of what came out of the tap, till the 'mercurial healing liquid' was rendered mere 'stuff'. He ably demonstrates that the myriad symbolic attributes of water are subject to historical change.[13] But neither of these authors consider the spiritual and political landscape of the bathroom, although their analyses set the stage for such consideration.

To begin this task, first consider what makes the idea of bathroom unique, what distinguishes it from other rooms in the house. Our houses are built to resist the vicissitudes of weather, to shelter us from air and water. Water however comes into houses in many places: the kitchen, the laundry room, but most especially in the bathroom, where we duplicate rain in our showers, refreshing ourselves as the rain refreshes the wild things outside, and where we duplicate the lakes and streams in our baths, now with wave action from the whirlpool attachment. The idyllic gesture of woodland brook is caught in the specialty waterfall tap, pool, and the exotic fern. The bathroom has become landscape - just like that of a forest, and indeed, now with the bottled fragrances, it even conjures the same olfactory experience.

Certainly there are other urban spaces that resemble the woodland pool: we find it reconstructed in the plazas before office towers, and with fountains in suburban shopping malls. These locations have their successes: pennies and coins can be seen even in the shallowest of pools, guaranteeing wishes. Yet even though their falling waters succeed in blocking out some of the noise, we are still confronted with people: these are, after all, public spaces (there is perhaps an unintended collision of design metaphors here).[14]

The bathroom however, is unequivocally our most private location, guarded over by some of our most powerful cultural taboos.[15] It is a place we retreat to. The situation that I have described arises from historical accident rather than by design. The functional combination of what previously had been two rooms with the advent of cost-conscious tract housing brought about the juxtaposition of the taboos surrounding excretory beha-viour and their privacy-maintaining orientation, with the recuperative elements that have always been associated with cleansing and bathing. The result was that what has often been a social activity (the French kings and other nobles held salon while in the bath, the Romans had public bath houses) became surrounded with the veil of pri-vacy, and the opportunity of retreat without the stigma of dirt became possible: in short, it became a socially acceptable isolation, in which the individual was free from interruption.[16] Here, even more than in the mountains (now full of hikers), solitude is possible. This solitude is very important.

Nature as presently constituted is something that, for the most part, we approach as individuals. Great significance has been attached to the idea of the solitary figure in the face of Nature, finding truth, beauty, God, or whatever. Ever since Descartes, the French mathematician and philosopher who wrote the **Discourse on Method** in 1637, it has been individuals who are aware first of themselves, then of the world, and finally of other people within that world.[17] Thus Jean-Jacques Rousseau, the Enlightenment philosopher, entitled his personal reflections **Reveries of the Solitary Walker**, while Thoreau spent his year alone in the woods, written up in **Walden**.[18] But Rousseau and Thoreau wrote in the eighteenth and nineteenth centuries before the advent of the mo-dern city. Nature then included the pastoral, and finding a Nature in which to reflect, alone, was not a difficult task. More than a century later we have forced a conceptual retreat of nature: no longer is the pastoral entirely sufficient, especially in North America, where the transcendental legacy of John Muir leads us into the Sierras. Besides, much of the pastoral scene bears the distinct imprint of agribusiness. For the city dwellers of the world, crowded together and insulated from what little remains of the wild, solitariness - the condition for constituting the self - is an increasingly difficult state to attain. However, as the boundaries of nature are subject to revision, a space has been found in the underbelly of cultural taboo. Today we retreat to the bathroom. The old excretory euphemism of 'nature calls' has new literal currency.

The Political Dialectic

Having sketched out the role of the better bathroom in modern culture as a retreat for introspection, it now remains to explore in more detail some of its symbolic elements. By this exploration I hope to unveil some of the political and spiritual

functions of the better bathroom that hide out of sight, lurking around the bend of the wastepipe.

The grandiose better bathroom is, of course, a signifier of wealth. Already bathroom appointments have become selling features in large houses and executive apartments. For a while bathroom fixtures imitated the utilitarian cabinetry found in the kitchen, but now the pedestal sink is reinstated, as pedestal approximates altar. From being the most forgotten room in the house, it is now the most expensive, demanding materials not found in other rooms. The bathroom has become the principal signifier of wealth in the modern dwelling.

There is of course a practical explanation of why more money is being spent on bathrooms. The work day is long, and bathroom provides a respite from human contact. I am not immune: after a hard day I will relax in my tub, even though I may have had a shower that morning: the water goes down the plughole almost as clear as it came out the tap. Occasionally I read there, but the steam does funny things to the pages, so often I simply sit there, old bones and worn muscles soothed. There is after all, comfort here. It might even be enhanced by windows looking out across the landscape.

But sometimes we go too far: picture windows in the bathroom are quite probably not a good idea. Why this is so requires some explanation, for I do not think it is immediately apparent.

The designer of a better bathroom has an incredible array of images and symbols to manipulate, the more powerful for their lack of exercise. At the elemental level, there is the play of light with water. Also the gurgle, glug of the tub, the splash of falling water. There are textural elements, the possibilities and associations of wood, of marble, of glass and mirror, of plaster and enamel, of ceramic tile and porcelain. There are the fixtures themselves, steeped in social expression. There are the accessories and ornaments, designer taps, the gold-plated toilet seat, the art, the plants, the colour coordinated towels. There are the architectural and historical references, composite elements: the bath alcove, the shadows of fixtures, the mysterious black holes (those pop-up sink plugs hide the reality of Hades), the creeping water stains, flaking paint, and the simulated effects of mildews, moulds, fungi, etc. From all these, moods are created. Moods that carry with them the associations we have built up around each element, and around each composite element; associations that are the depositaries of value within the culture. Bathrooms are thus often the most symbolically interesting rooms.[19] Beyond physical form, the better bathroom designer designates the patterns of interaction between occupant and fixtures: thus it happens that the picture window is next to the bath, and not the toilet.

The better bathroom, designer-wrought, marbled, mirrored and picture-windowed is a scene to be looked at rather than lived-in. It is in itself beautiful, conforming to the Kantian aesthetic, rather than acquiring its beauty through the process of being lived in. This is beauty made objective, and therefore marketable. Indeed, the mirror and marble, precisely because of their impervious durability, defy living-in.[20] The beautiful out-there beyond the ego (both the bathroom itself and the scene through the picture window) is objectified, is untouched, unchanged by human presence. No organic relationship between the occupant and room is ever entered into. There is no sense of exploration, and little of creation. The only relation left between room and occupant is one of aggrandizement, an identification with the values that inhere in the mineral purity of glass and marble: the status function of the better bathroom becomes apparent. Above the altar constituted by the pedestal sink, we find the object of worship. Before the mirror, naked, the aesthetic constitution of self takes place. Narcissism rears its head in the materiality of the better bathroom. Are these glorified bathrooms mere temples to the body or does the steam get up the nostrils and into the mind?

The Spiritual Dialectic

In the basin, in the bathtub, our ritual cleansing take place, washing off the day's psychic baggage. It is at this level the proverbial gold-plated toilet seat is found, for those with truly caustic shit. It is this spiritual purification, rather than any hygienic imperative (which was met at the stage of the tin tub, pitcher and basin, and hand-pump), that has created the better bathroom. In North America cleanliness is next to godliness, and our sins disappear down the plughole on their way to Hades. The holy liquid that courses from the gold-plated taps creates a pool in the better bathtub, into which we submerge, to arise baptised. Water has always had this symbolic function of purification, but it is often context depen-dent. The context of the bathroom is given greater legitimacy by appeal to existing cultural idylls. Thus the woodland glade, a symbol of naturalistic innocence, enters the house. And having entered the bathroom it carries with it the symbolic function of reflective contemplation, so that the bathroom becomes the locus of reflective contemplation in the home. Beyond the politico-aesthetic constitution before the mirror, spiritual constitution takes place in the bathtub.

Which brings us back to the picture window. The bathroom window is not of itself any different than any other window in a house. But once the viewer is able to gaze, reclining and half-submerged in steamy water, across the landscape framed in the window, both landscape and window are transformed. Because of its function of spiritual regeneration, the vantage of the bathtub is privileged. Because the situation of the bather demands inner gazing, the view through the window is bracketed. The bather does not enter the flat landscape afforded by the pane. The landscape is thus devalued as compared with any other landscape viewed through any other window. The bathroom itself meanwhile, as the crucible of purification, is valued more, until the valuation of the semblance of nature represented within the bathroom exceeds that viewed through the window. The spiritual aspect of nature, through a perverse symbolic manipulation and architectural happenstance, is reconstituted with the home. As Madonna juxtaposes the intimacy of boudoir apparel with the transcendental theological symbol of the cross by manipulating the symbols out of context, so the modern designer better bathroom perverts the unity of individual and nature.

Conclusions

I have described two movements that take place in the better bathroom. A politico-aesthetic relation that feeds materialistic individualism takes place before the mirror. The ego-self is enriched, and the connection with organic nature and communitarian culture loosened by the life-defying associations brought by marble. And a spiritual relation, whose complex dialectics proceed from the bathtub, that serves to appropriate natural idyll as purely cultural form. As I suggested earlier, these cases are overstated to make the point. The incremental difference these new relations make to the boundaries between the conceptual fields occupied by 'nature', 'culture' and 'self' is extremely small. However the bathroom is only one locus in which such changes can take place. Similar analyses of how our practice affects our metaphysics can be made for almost every other location, for almost every cultural object. The additive impact of all of these changes is likely to be much more significant, and can affect the general outlook of society toward wilderness.

The better bathroom is at present the social aspiration, and is a reality only for the few whose houses are featured in **Better Homes and Gardens**. The particular spiritual and political dialectics described have not been able to exert an influence yet, despite their role as cultural leaders. Material aspirations are frequently adopted without an examination of the environmental consequences, which may operate at the level of metaphysics. If this is the sort of relation our aspirations incline us towards with our immediate and personal environment, what does this say about the possibility of a better relation with the wild environment out there beyond the picture window when, perchance, we wander out beyond the bathroom? What is required is an examination not just of the material impacts of our object choices, but also of the metaphysical consequences. Today's corporate Pontius Pilate, enviro-nmental despoiler, goes home to a whirlpool bath instead of washing hands for salvation. Responsibility for the day's deeds goes down the plughole, and the scene beyond the thermally insulated picture window slowly degrades, like the picture of Dorian Gray.

Notes

1. Idyll: a poetic form evoking a rustic episode; idol:an image, excessively admired and worshipped. The woodland waterfall is somehow made discontinuous with the rest of the wood, is rendered a human place above all else, and thus occupies the dual status of idyll/idol. These words are related through the Greek stem 'eidos', meaning form, idea, essence, ideal.

2. Usage of 'our' and 'we' in this paper is intended to convey the collective aspect of culture. Certainly there is diversity represented in any culture, but what helps define a culture is that certain precepts are commonly accessible. Personal agreement is therefore not criteria for evaluation of a cultural statement, but rather recognition is sufficient.

3. Before 1800 mountains were almost invariably referred to as barren wastelands, and forests were thought of as deserts. During the 19th century the Romantics undertook an aesthetic and spiritual re-evaluation of mountains, and in the 20th century general society reappraised wilderness areas in the context of a scarce and diminishing aesthetic resource. For further details on history of Anglo-American attitudes toward mountains and forests, see Marjorie Nicolson, (1959) **Mountain Gloom and Mountain Glory: the aesthetics of the infinite**. Cornell Univ. Press, Ithaca; Kieth Thomas, (1983) **Man and the Natural World: Changing Attitudes in England 1500-1800**. Penguin, Harmondsworth. 425pp.; Clarence Glacken, (1967) **Traces on the Rhodian Shore: nature and culture in Western thought from ancient times to the end of the eighteenth century**. Univ. California Press, Berkeley. 763pp.; and Roderick Nash, (1973) **Wilderness and the American Mind, 2nd Ed**. Yale Univ. Press, New Haven.

There is a vast literature documenting cultural specificity of other idealized landscapes.

4. Dark holes and drains still seem to hold great fascination for small children. Adults in North American culture tend to ignore the symbolic content of water, or have lost awareness of it. In all classical cultures that I am aware of, the symbolic attributes of rivers and the spiritual properties of flowing water were of major significance. The rivers of classical mythology typically carry with them the residues of human folly and sin. Charon the boatman ferried the dead across the river Styx to Hades. The Lethe was a river of Hades which caused oblivion and forgetfulness when drunk. Early Christians waited on the banks of the Jordan for transport to heaven. The Ganges, holy river for Hindus, contains a spirit river, the Saraswati that purifies the spirit. For more on this subject see Ivan Illich (1985) **H2O and the Waters of Forgetfulness: Reflections on the Historicity of 'Stuff'**. Heydey Books, Berkeley. 92pp., esp. p.30.

5. Ivan Illich, **H2O and the Waters of Forgetfulness**. See esp. pp.75-76.

6. Hans Peter Duerr (trans. F. Goodman) (1985) **Dreamtime: Concerning the Boundary Between Wilderness and Civilization**. Basil Blackwell, Oxford. 462pp. This remarkable piece of scholarship, focusing mainly on the medieval European concepts, describes how various iterations of this wilderness/-civilization distinction are central to the identity of social formations.

7. It is awkward, although not impossible, to talk of animal selves; when we do so we are realigning the boundaries of the concepts. This is a case in point: the linguistic practice of talking of animal selves redefines the concepts without our having to consider the root concepts directly.

8. Mary Douglas (1966) **Purity and Danger: an analysis of the concepts of pollution and taboo**. Routledge and Kegan Paul Ltd., London. 188pp. See p.124, p.163.

9. For a full exposition of the importance of preserving categories, see Mary Douglas, **Purity and Danger**, esp. pp.114-128.

10. This relation is important: only those cultural changes that gain legitimacy as proper objects of desire are able to affect the general ordering. Some luxury objects, such as mirrors on the bedroom ceiling, are viewed as aberrant, and do not affect the general ordering.

11. While plants are also found in other rooms, the deliberate placing of organic matter in the bathroom marks a move away from the Victorian obsession with bathroom sterility.

12. Gaston Bachelard (trans. Maria Jolas), (1964) **The Poetics of Space**. Beacon Press, Boston. xxxv + 241pp. (first published in French, 1958 as **La Poetique de L'espace**, Presses Univ. des France). In popular culture these relations emerge in the haunted house and the horror movie, where the audience supplies the associations that make the attic and the cellar frightening. The creature that emerges simultaneously from the drain and the subconscious (see for example Michael Jackson's **Thriller** video) is another case more relevant to the present exploration.

13. Illich overstates the case in **H2O and the Waters of Forgetfulness** to make his point, arguing that water has become a mere cleaning fluid, and has lost its spiritual power. I also overstate the case in the opposite direction. In both cases overstatement is necessary because of the subtlety of the phenomena being described.

14. Ivan Illich's **H2O and the Waters of Forgetfulness** addresses this aspect of the symbolic use of water.

15. The taboos that allow for privacy in the bathroom are treated descriptively by ALexander Kira (1976) **The Bathroom, 2nd Ed.**. Viking Press, New York. 272pp.; and theoretically by Mary Douglas, **Purity and Danger**.

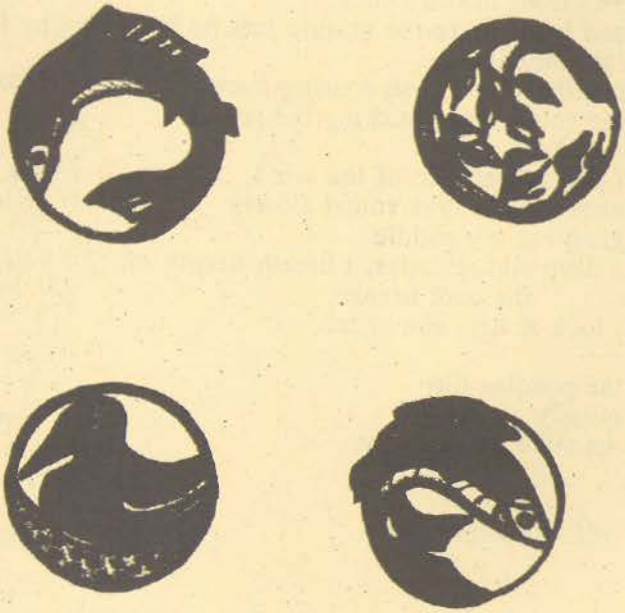
16. For a description of the social aspect of bathing see Lawrence Wright (1960) **Clean and Decent: the fascinating history of the bathroom and the WC**. Univ. Toronto Press, Toronto, 282pp. Unfortunately Wright's study terminates with the Victorian period.

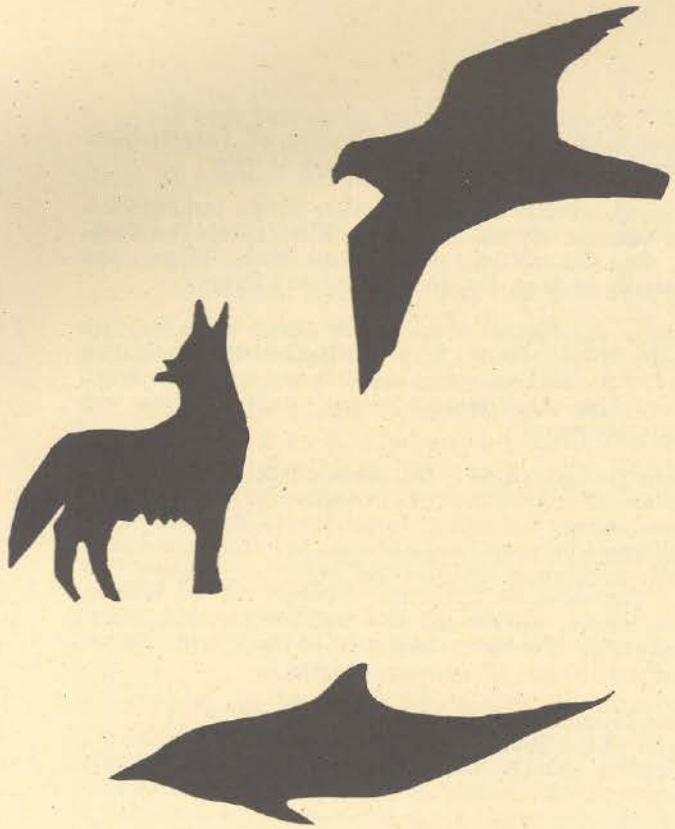
17. Rene Descartes (1637) **Discourse on Method**. Descartes is held responsible for the modern dualism of mind and body, of human culture and nature. In his "cogito ergo sum", only the self could be immediately known, and all else had to be doubted, particularly the spiritual aspect of anything non-human. For more on Descartes' influence on the relations between nature, culture and self see, for example, Morris Berman (1981) **The Re-enchantment of the World**. Cornell Univ. Press, Ithaca. 357pp., esp. chapter 1.

18. Jean-Jacques Rousseau (trans. P. France) (1979) **Reveries of the Solitary Walker**. Penguin, Harmondsworth. 155pp. (first publ. 1792). Rousseau observed that "These hours of solitude and meditation are the only ones in the day when I am completely myself and my own master, with nothing to distract or hinder me, the only ones when I can truly say that I am what nature meant me to be". p.35; Henry David Thoreau, (1960) **Walden and Civil Disobedience**. Signet, New York. 256pp. (first publ. 1854).

19. Except for those which go wholly overboard on marble and mirror, and thereby demonstrate poor grasp of the symbols of the modern temple, in prematurely alienating the subject. My own favourite bathroom designs recollect the Matisse chapel, the Bhuddist Temple, and the Roman Temple.

20. Marble is the material of choice for mausoleums. During the Romantic period, marble was a symbol of mineral purity, because it did not degrade as organic forms did. This is termed the death-seeking tendency in Romanticism.





Ways of Being

for John A. Livingston

Oh, let me see the world with a falcon's eyes:
Height and speed, the sound of failing;
the flash of killing, the smell of flight;
let me be the world with those eyes:
let me know the power,
let me feel the way.

Oh, let me see the world with a wolf's nose:
Stealth and mapping, the colour of pursuit;
the scent of belonging, the song of night;
let me be the world with that nose:
let me know the power,
let me feel the way.

Oh, let me see the world with a dolphin's ears:
Depth and texture, the odour of water;
the music of space, the image of free;
let me be the world with those ears:
let me know the power,
let me feel the way.

Louise Fabiani

Infatuation

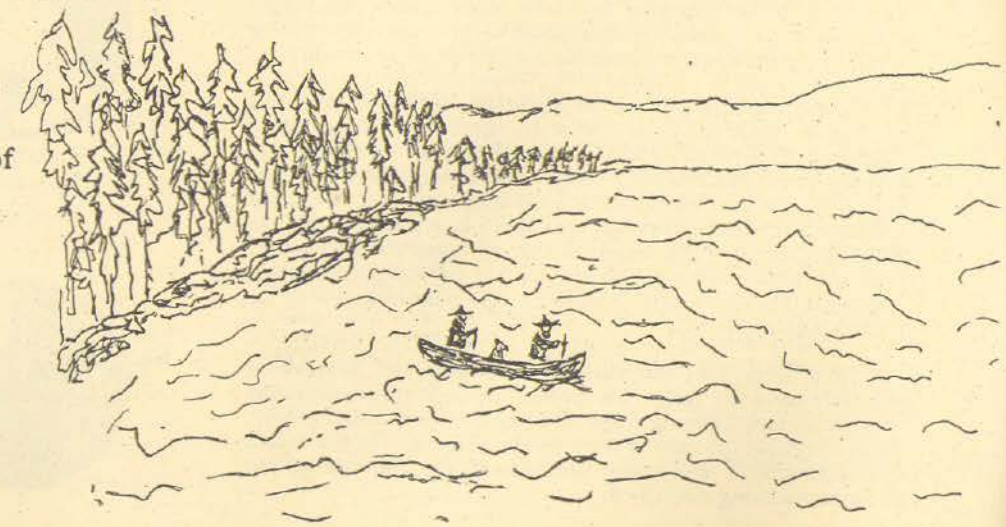
i watched her dip her hand
into the deep dark blue lake,
sipping, while staring into the cold depths
watching her rippling reflection.

Blue sky, a harsh northern sun
beating strongly, struggling to hand warmth
to this permanently cold stronghold,
The trees bravely stand,
and here, there the granite juts its long knobby fingers
into the lakes,
making rivers rush roaring over windswept rocks,
the cool breeze hushing the sound.

i pull myself out of the wind,
once more i look round slowly
grasping my paddle
a deep sigh escapes, i breath deeply of
the cool breeze,
i look at her, she at me,

the paddles dip
quietly
we slide on our way.

rolf struthers



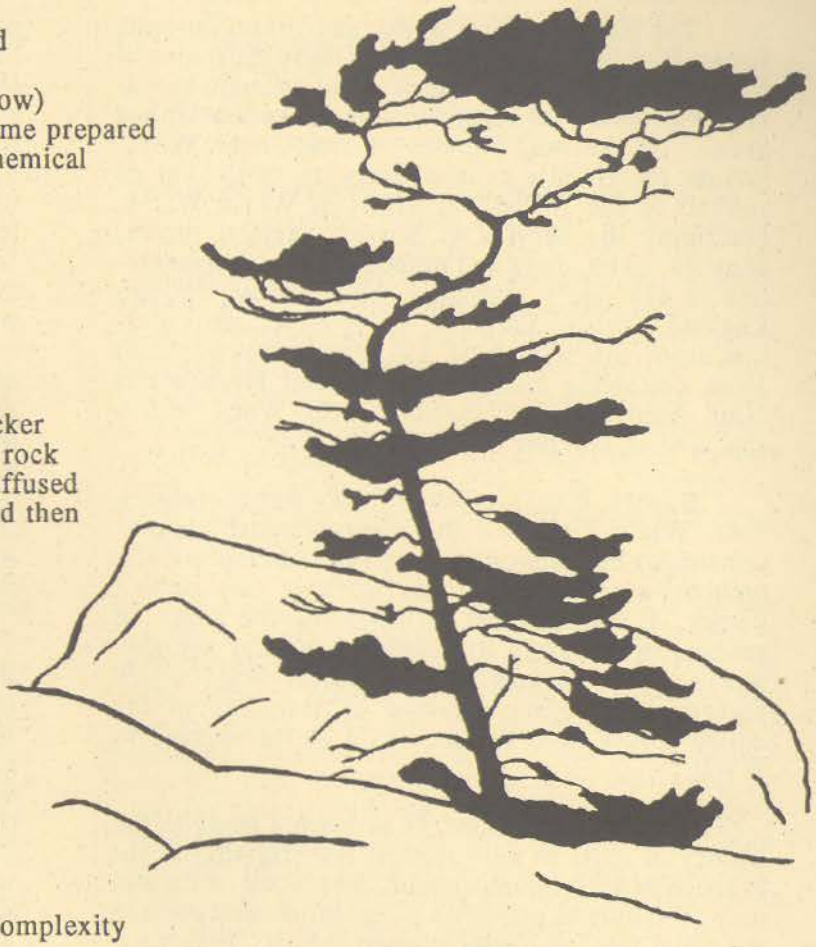
Lichens

for
Christopher Dewdney

I. A glacier-
etched round of granite: exposed
Canadian Shield; on this are spread
the truest pioneers:
(sea-green, lime-green, black, mustard-yellow)
lichens. No soil, no welcome prepared
for those who lack roots to seek; a chemical
fondness hugs them to the rock, flattened
in a prudent sort of intimacy,
yet proud, timeless - the fossil remains
of water drops
tumbled from rainbows.

II. To be first-
how venerated, then ignored are they
who invade dead atom clusters with the flicker
of DNA, its quest: to pass the beacon. A rock
will become soil, will become **alive** - as suffused
with protoplasm as with dust and water, and then
it can all be recognized
as a miracle.

III. Early, alone, yet
not **alone**, the stark stains of life
are mutual dependencies,
of the dark-loving and the dark-fearing:
SYMBIOSIS -
a team that redefines the unit.
The individual organism is a question
of names and origins.
It is the oldest story and the one
most recently understood: cooperation
is the crux of complexity, and complexity
the stamp of the divine.



IV. Tucked away from wind and sun,
another secret: protection will yield
a bold reach for the third dimension.
A bleached-bone lichen filaments into a forest
several centimetres high, a panic of reticulation,
a dried-out mass of brain tissue.
In this dendritic huddle of interlock,
a dream forms.
The lichens are willing an entire ecosystem
into premature self awareness.

Louise Fabiani

The Modern Battlefront of Natural History and the Emergence of Animal Heroes

*by Gary Genosko**

The popular nature writer and conservationist Ernest Harold Baynes (1868-1925) was instrumental in bringing the issue of the place of animals in war to the attention of nature historians in the United States. In **Animal Heroes of the Great War,**[1] Baynes presented a general overview of the use of animals in the Allied war effort of World War I, describing the service of horses, camels, mules, donkeys, oxen, dogs and pigeons. As a representative of **Harper's** magazine, he travelled through England, France, Belgium, Italy, Egypt and Palestine from the winter of 1919 to the summer of 1920, collecting material for **Animal Heroes** and "Our Animal Allies in the World War," which appeared in **Harper's** in 1921.[2]

Baynes, then, was no ordinary war correspondent. While his place in 'environmental history' remains to be elaborated, I will not attempt a comprehensive treatment of his work in this paper.[3] Rather, I will use his writings on the place of animals in the army to develop a critical perspective on the accounts of the 'heroic acts' which pigeons and dogs performed as members of the Allied forces in WWI and, to a lesser degree, in WWII.[4]

This paper, therefore, is as much a study in the history of ideas as a theoretical investigation of the practice of anthropomorphism. The work of Baynes may be shown to provide a poignant counterpoint to the claim that, as Leesa Fawcett puts it, "anthropomorphism stands as an example of the realization that we are an integral and continuous part of the living world."[5] The animal heroes theme reveals some of the extreme consequences, the dark underside if you will, of this 'realization.'

Burroughs-Roosevelt-Baynes

In the early years of this century, especially those of Theodore Roosevelt's first term as president of the United States (1901-05), the naturalist John Burroughs launched several attacks in the pages of **The Atlantic Monthly**[6] against a kind of nature writing which he called "Sham Natural History." Burroughs maintained that the popularizer of nature adventure stories, Rev. William J. Long and the naturalist and illustrator Ernest Thompson Seton, had published animal stories which were to a large extent fictional rather than true observations of the animal kingdom as based on "natural facts." Burroughs believed that by using the term 'true' to describe and to defend their stories, Long and Seton were misleading their readers: "True as romance, true in their artistic efforts, true in their power to entertain the young reader, they certainly are; but true as natural history they as certainly are not."[7] In essence, Long and Seton were 'charged' with corrupting the minds of the young and it was through this legal metaphor that the influential Burroughs, with the support of Roosevelt, gave rhetorical notice to those who did not recognize anthropomorphism as an 'offense'.

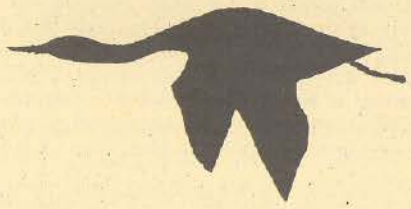
When Roosevelt wrote the "Preface" to Baynes' **Wild Bird Guests** (1915) six years after his second term as president (1905-09), the Baynes-Roosevelt ligature was established in the name of the preservation of bird life: a patriotic, economically sound and acceptable brand of aesthetic interest, in that order.[8] In the "Preface" Roosevelt acknowledged a debt to the "missionary work" of Baynes in establishing some 300 bird sanctuaries in the country. Upon Roosevelt's death in 1919, Baynes published a short eulogy in verse, "Death and Roosevelt,"[9] therein paying homage to the so-called 'Great Conservationist'.

When Baynes' book, **Animal Heroes of the Great War**, appeared posthumously in 1925, Owen Wister, the author of the introduction, did not fail to again place Baynes in the Burroughs-Roosevelt camp. Wister states that Baynes "rose to the first rank in his chosen field; the peer of Burroughs and of Muir--indeed of any among those who observe and interpret the wilderness with imagination and accuracy."[10] He was quick to add that Baynes "was

* *Gary Genosko is an alumnus of F.E.S., currently working on his doctorate in Social and Political Thought at York University.* *An earlier version of this paper was written under the direction of John Livingston while Gary was at the Faculty and it is part of an ongoing investigation in the cultural studies of animals in which he is engaged.*

always literal when he spoke or wrote of animals." In fact, for Wister, Baynes had an indefinable quality which enabled him "to write of animals without mawkishness," avoiding the habit of excessive humanization and anthropomorphism.

In the exalted company of Burroughs, the American nature writer John Muir (who was a model of legitimacy in the eyes of Burroughs), and Roosevelt, who had given Baynes a letter of introduction which facilitated his research in Europe and Africa, Baynes had achieved the status of a 'true' nature writer and a patriotic conservationist.[11]



Animal War Heroes

Although Wister was careful to align Baynes with the Burroughs-Roosevelt offensive, the theme of the animal hero which Baynes used owed as much to the focus of Seton as to the patriotic and anti-anthropomorphic mandates of Roosevelt and Burroughs. In **Animal Heroes** (1905), Seton defined a hero as "an individual of unusual gifts and achievements whether it be man or animal ... and it is the histories of such that appeal to the imagination and to the hearts of those who hear them."[12] The adventure story with an animal as its central character is an enduring part of popular culture. Indeed, thirty-three years after Seton, Harper Cory published his version of **Animal Heroes**. Cory's tales of non-human heroes and heroines were based on "wild animals which displayed courage and patience when confronted with circumstances inimical to their freedom or existence."[13]

By adjusting the scope of the definition of the hero, an individual animal could be seen to distinguish itself from others through heroic acts. The notion of an "animal hero" became an interpretive framework with which to render the exploits of outstanding individuals in the context of an adventure story. In the work of Baynes, however, there was no need to create a sense of adventure since the war itself provided the 'plot'. Moreover, he did not have to fabricate animal heroes on the battlefield since he found that many pigeons and dogs had in fact been rewarded for their brave service. Thus, the war records easily lent themselves to the animal heroes theme.

Baynes observed that:

> The French used in all about thirty thousand [pigeons] and the birds that performed distinguished service, or showed unusual gallantry in the line of duty, were rewarded the Croix de Guerre or the Croix Militaire. Diplomas, with the citations were issued and kept at the headquarters of the French Pigeon Service, and because pigeons cannot wear medals on their breasts, special bands with the colors of the decorations were made for their legs...[14]

The British Pigeon Service, established in 1914, and the American Pigeon Service, which did not see action until 1917, did not adopt the vanguardism of the French recompense as such. Although it was not until the Second World War that Britain engaged in such a practice (the People's Dispensary for Sick Animals donated the Dickin Medal for heroic animals) and, in the United States, the taxidermists of the Smithsonian Institution and the Hall of Honor of the American Pigeon Service held a monopoly over the creation of stuffed and mounted pigeon heroes, the famous British birds were not neglected.

The animal enthusiast Jilly Cooper notes that in World War I "pigeons who were wounded in active service were promptly pensioned off"[15] as pets. Baynes relates that a group of soldiers who were rescued from the North Sea as a result of a message delivered by their final bird (which dropped dead from exhaustion upon delivering the call for help), "took the little body, had it carefully mounted, and today there is to be seen in the headquarters of that aero squadron a neat glass case, containing a beautiful pigeon, and beneath it the inscription, 'A Very Gallant Gentleman'."[16]

The mode of characterization which Baynes used in relating the histories of the animals which were eligible for the status of war hero (almost exclusively racing homer pigeons and dogs) was that of the self-sacrificing individual, especially the tragic hero. This way of delivering the service of pigeons and dogs is based on the idea, firmly established and encouraged in the military context, of self-sacrifice in the name of a higher or greater cause. Baynes differs from Seton in his use of the hero theme since in the military context it is strictly the case that pigeons and dogs are rewarded for serving humans rather than for acts which pertain to their conspecifics or to self-preservation.

In his discussion of pigeon heroes, Baynes noted that "the loss of a leg or an eye was quite a commonplace occurrence, and such an injury in itself was not enough to prevent the bird from finishing the task it had been set to do."[17] But it was as a result of coming from 'proud stock' that the American blue check cock Lord Adelaide, a famous tanker bird (a bird released from a tank as a means of communication) "went on, weak and covered with blood," to deliver his message.[18] The heroic bird is given a will to serve and to triumph over adversity and has as its goal the successful completion of a 'mission' or, in the case of Lord Adelaide, a tradition to uphold. The will to serve indicates that it is not merely as a result of instinct or training that a bird completes its task. The status of hero is irreducible to the importance of the message which an animal delivered. For instance, Cooper insists that "people tend to dismiss the pigeon's achievement and to say that they all just followed a natural instinct to get home as fast as possible. But there are courageous pigeons who battle on, and others who dally by the way."[19]

Although there has been a shift from wild to domesticated animals in the animal heroes theme, in both cases an individual (rather than a group or a pair) distinguishes itself. The domesticated animal serves the human agent who has made certain that its natural capacities work toward the cause of the war effort. Animals, therefore, cannot serve in the war effort unless they become absolutely dependent upon their trainers or handlers. For instance, Lieutenant-Colonel E.H. Richardson, Commandant of the British War Dog School at Shoeburyness in Essex, found that many breeds of dogs were unsuitable for the messenger service because, with respect to hounds:

> ... their absorption in their natural work--the temptation to follow the scent of some wild creature that had crossed their path, --was usually so great, that even if it were possible for training to overcome it, the time required was better spent on breeds which had--shall we say --a broader outlook on life.[20]

In fact, the rigour of the dog school was such that "out-and-out slackers, or 'conscientious objectors', were given short shrift and sent to the lethal chamber at Battersea. England expects every dog to do his [sic] duty!"[21]

A general point needs to be considered: the so-called 'natural work' of dogs, insofar as such 'work' concerns other dogs or non-human beings, is prohibited by the trainer unless it can be made operational for the benefit of the troops. In **Animal Reveille**, Richard Dempewolff provides us with a burlesque description of the deployment of a liaison dog named Plaisir:

> ... there was one risque little war dog specialist who played a field all her own. She was a seductive French 'fifth columnist' dog named Plaisir. It was early in the game when Plaisir went into operations, but she did a noble job. Nazi hordes were pounding at the Maginot Line, and their canine corps was much in evidence. Messenger hounds scuttled back and forth across the front continuously. The Frenchmen sniped at them whenever they could, but it was like trying to hit a white jackrabbit zigzagging over the snow. Then a soldier with a fine sense of humour and a keen imagination happened to think of Plaisir, a small liaison dog of dubious ancestry who had reached her 'time' and was out of service temporarily.
>
> That afternoon Plaisir was unleashed and sent out across the front to practice her wiles. Early in the evening the men saw her coming back, trotting saucily along, her bushy tail curled naughtily over her rump. Behind her, trailing a long queue, were a round dozen well-trained German messenger dogs, devotedly following the little Mata Hari into captivity.[22]

There is perhaps no clearer example of sexism in anthropomorphism. Dempewolff achieves a burlesque effect by sexually exploiting the heat of the female dog. His description is then supplemented with a stereotype of French women. This ethnocentric and sexist passage is perfectly compatible with military operationality. In this example, Plaisir's "natural work" was made operational in order to lure the "well-trained German dogs" away from their duties. It is in this sense that the prohibitions concerning "natural work" may be lifted and used to tactical advantage. Yet, Plaisir is also de-professionalised--she will become no hero, no "well-trained" war dog. Her "work" is "pleasure," and this reduction is only an extension of her "dubious ancestry." But still, a hallmark of anthropomorphic description is that sex is pleasure for animals.

Domestication entails the absolute dependence of an animal (in anthropomorphic terms, the willing dependence) on its trainer and the reduction or, in some cases, redirection of sensory subtleties. The successfully engineered war animal can distinguish itself if it exhibits the behavioral patterns that it has been taught. A messenger dog is deemed to be heroic if it suffers and overcomes battle wounds or similar obstacles. If a dog is able to overcome injuries incurred on the battlefield in active service and, in completing its mission, exhaust itself, ultimately expiring at its destination, then it is afforded the status of a tragic hero. For example, Baynes and Cooper describe how Commandant Raynal's "last pigeon, badly mangled, dropped dead as he delivered his message" to Verdun and as a

result was awarded the Legion d'Honneur.[23] Both authors recount the exploits of the messenger dog Von Kluck who died at the feet of the officer awaiting his message.[24] Baynes tells us that the British bred pigeon No. 2709 was given up for lost since a night had passed from the time that it had been dispatched from the front to divisional headquarters some nine miles away, but:

> She was not dead--it was not time to die yet. Somewhere she had lain out in the wet all night, and in the grey of the morning, she staggered into the loft, and died before the officer on duty could read the message she had brought.[25]

The downfall of a tragic animal hero is not the result of a tragic flaw in its personality, as we find in the definition of a tragic human hero. As we have seen, a domesticated animal may be said to be flawed in the military context if its behaviour cannot be made operational for a specific task. The force of the story of the tragic animal hero does not emerge through the use of the term 'tragic', but is established on the basis of two invariable features: i) the messenger completes its mission and; ii) expires at its destination after having overcome an obstacle (shrapnel, predators, weather conditions, etc.). The "rewards" of domestication may be a medal, a posthumous toast, pet or veteran status, a noble death, or a pat on the head.

Toward a Critical Anthropomorphism

War animals are referred to as 'soldiers,' 'veterans,' 'heroes' and 'allies.' The level of anthropomorphism in the military use of animals is extremely high. Primarily, however, it is the process of domestication which brings animals into the human social unit as creatures designed to suit our emotional needs and living conditions which warrants the practice of anthropomorphism.

It takes almost no effort to attribute human qualities to the animals we have domesticated and socialized. It is not surprising that we do so since anthropomorphism is an essential feature of the way we comport ourselves with domesticates. John Livingston remarks in a personal note that "when I am teased for behaving anthropomorphically, my rejoinder is that as a person that is the only way I *can* behave."[26] Anthropomorphic description is appropriate as an insight into the practices which mediate our relations with domesticates and, more generally, as the self-reflective recognition that anthropomorphization is a prevalent if not constitutive feature of human knowledge.[27] In this sense, the absence of anthropomorphism may be seen as an aberration which is indicative of an insensitivity to the status of domesticated animals and our influence over them. An anthropomorphism which is critical must acknowledge its own prejudices.

In the work of Baynes, we do not find a critical, reflective anthropomorphism. Instead, it is a straightforward orientation. I do not mean that it is only anthropocentric, as if this term explained itself. The value judgments which an unreflective anthropomorphism carries give rise to the belief that the failure of some animals to satisfy unrealistic human expectations results from their uncooperative attitudes toward certain human goals, in this case military goals. As we have seen, this belief was a reason to send dogs to the "lethal chamber." It is supremely anthropomorphic to claim that the failure of some dogs to "broaden their horizons" for King and Country is a renegade tendency, a breakdown of loyalty, yet this claim has nothing to contribute to a sensitivity to domesticates.

What is so deceptive about the use of the animal war heroes theme is that it seems to provide evidence of a caring approach to animals, despite the excesses it allowed. It represented a moral triumph of sorts over the conditions of war and a way to legitimize the expenditure of animal charges. It would be inhumane not to award animals if they displayed military virtues. But a large number of animal heroes were tragic heroes, and thus "received" awards posthumously; it is difficult to imagine what a pigeon might make of a diploma bearing its "name."

Anthropomorphism is fraught with racism, sexism, nationalism, militarism, etc.
Anthropomorphism is also selective. The animals capable of performing the human tasks that were necessary for the survival of soldiers but impossible for them to perform proved to be the best candidates. Pigeons and dogs were given a special status over camels and oxen, for instance, and awarded with tokens of their military use-value. While all war animals are chattel of military proprietors, those that function as soldiers and develop affection for their handlers receive the highest "honours" of anthropomorphism; those that merely toil, appear to respond negatively to humans, exhibit little affection and have a limited use-value, receive little.

The animal heroes theme should not be dismissed as a historical curiosity, an affectation of a mid-twentieth century war culture. It has genuine heuristic value since it expresses the ambiguity of anthropomorphism as a means of ennobling animals. This ambiguity--glorification and justification for the injury and death of animals--reveals to us that anthropomorphism has a dark side. It is the task of a critical anthropomorphism to uncover the extent and the depth of the contradictory goals which

guide our relations with domesticates, and to analyze our power to categorize, terrorize and reward animals when they mirror certain aspects of ourselves, including our follies.

Notes

1. Ernest Harold Baynes, **Animal Heroes of the Great War** (New York: Macmillan, 1925).

2. Ernest Harold Baynes, "Our Animal Allies In The World War," **Harper's** 848/22 (Jan., 1921):168-78.

3. While the animal heroes theme did not originate with Baynes, the animal war heroes theme he employed remains influential in popular writing on war animals. In **Animals in War** (1983), Jilly Cooper borrows heavily from Baynes and uses his interpretations of the war records from WWI as models for elaborating the war records of the distinguished animals of WWII.

4. The war record of an animal usually consisted of a short factual report kept by the service in which the animal served. In some cases the record of the decoration of an animal may appear on its certificate of identification. Such records provide only the 'bare facts' and do not tell a story or narrate an episode in the life of an animal. Stories are reconstructed from eyewitness accounts, personal records, memoirs and army lore.

5. Leesa Fawcett, "Anthropomorphism: In The Web of Culture," **Undercurrents** 1/1 (1989):20.

6. John Burroughs, "Real And Sham Natural History," **The Atlantic Monthly** 91 (1903):298-309; idem, "The Literary Treatment of Nature," **The Atlantic Monthly** 94 (1904):38-43; for a general overview of the debates of this period see Ralph H. Lutts, "The Nature Fakers: Conflicting Perspectives of Nature," in **Ecological Consciousness, Essays from the Earthday X Colloquium**, University of Denver, April 21-4. Edited by R.C. Schultz and J.D. Hughes (Washington: University Press of America, 1981), pp. 183-208.

7. Burroughs, "Real and Sham," p. 300.

8. Ernest Harold Baynes, **Wild Bird Guests** (New York: E.P. Dutton, 1915), pp. v-vi.

9. Ernest Harold Baynes, "Death and Roosevelt," **The Independent** 97/3659 (Jan. 25, 1919): 109.

10. Wister in Baynes, **Animal Heroes**, p. xxiv.

11. It is ironic that a few years before his death in 1925, Baynes became embroiled in the vivisection debate, fighting against what Wister called the sham of anti-vivisection; Ernest Harold Baynes, "Vivisection and Modern Miracles," **The Outlook** (July 11, 1923):366-69.

12. Ernest Thompson Seton, **Animal Heroes** (New York: Charles Scribner's Sons, 1905), p.9.

13. Harper Cory, **Animal Heroes** (London: Duckworth, 1938), p.7.

14. Baynes, **Animal Heroes** , p. 221; for short histories of pigeons in war see Wendell Mithchel Levi, **The Pigeon** (Columbia, S.C.: R.L.Byers Co., 1941) and Robert E. Lubow, **The War Animals** (Garden City: Doubleday & Co., 1977).

15. Cooper, **Animals in War** , (London: William Heinemann Ltd., 1983), p. 79.

16. Baynes, **Animal Heroes**, p. 231.

17. Ibid., p. 216.

18. Ibid., p. 218.

19. Cooper, **Animals in War**, p. 80.

20. Baynes, **Animal Heroes**, p. 163.

21. Ibid., p. 164.

22. Richard Dempewolff, **Animal Reveille** (Garden City: Doubleday & Co., 1946), p. 125.

23. Baynes, **Animal Heroes**, p. 223; Cooper, op. cit., p. 75.

24. Ibid., pp. 185-86; Ibid., p. 60.

25. Ibid., p. 221; see also, Marion B. Cothren, **Pigeon Heroes** (New York: Coward-McCann Inc., 1944), p. 22.

26. John Livingston, "Rightness or Rights? Dominance, Domestication and the Paradox of Animal Rights," **Border-/lines** 5 (1986): 27, n. 11.

27. John O' Neill, **Five Bodies** (Ithaca: Cornell University Press, 1985), p. 47.

Domination and Preservation:

Reflections on Wildlife Cinematography

*by Margot La Rocque**

Contemporary wildlife documentaries, geared for the television market, exhibit a recurrent pattern: their narratives tend to emphasize the predatory pursuit of wild animals. In large part this problem is a consequence of the masculinist and scientistic legacies which wildlife filmmakers have taken over from the natural sciences, in order to seek legitimacy for this genre.[1] Other (even contradictory) forces also come into play in the production of wildlife documentaries, namely those arising from commercial demands. The differences between wildlife programming and entertainment specials are at times only ones of modality. Thus, while the contemporary writings of deep ecology and ecofeminism very clearly reflect alternate ideals of human interconnectedness with the nonhuman environment, wildlife documentaries seem compelled to answer to two rather "environmentally unsympathetic" task-masters: objective science and entertainment.

In general, environmentalists have failed to launch a critique of wildlife documentaries, choosing instead to overlook the embeddedness of most programs in the very assumptions to which radical environmentalism must necessarily be opposed. Of the few dissenting views about wildlife documentaries on record, not surprisingly one of the earliest I have found comes from Adolf Portmann--the European biologist noted for his radical revisioning of biological thought.[2] Amidst the ecstatic accounts of the achievements of filmmakers such as Cousteau in the late 1950s,[3] the following passage from a 1959 essay by Portmann stands out as a rare admonition of the perils of a disembodied eye:

> The present flood of illustrated publications threatens to increase to an enormous extent the number of the visually ignorant and the visually apathetic.
>
> It may sound strange to emphasize this danger at a time when an unparalleled flood of nature documentation is overwhelming us--books, magazines, films, television--photographs everywhere, everywhere possibilities of seeing as never before. Can this actually be a menace? Yes, precisely because this deluge of pictures rarely encourages a genuine relationship with nature, and because any true education of the spirit lies in a totally different direction.[4]

Portmann's message is plain: photographic reproduction will fatally weaken our appreciation of an original nature.

In this paper, I present a few tentative reflections on wildlife documentaries which seek to expand the above critique of this genre that Portmann initiated. In particular, I begin with a discussion of the figure of the wildlife filmmaker as a "personality" or exemplary witness. Indeed, few of these figures (who often appear on screen as well) are scientists, despite their appeals to scientific ideology. Their appeal lies, on the other hand, in their enthusiastic amateurism, their fierce independence, their mastery of technique, and the heroism of their sweeping vision. I argue that as mythic constructions, the careers of such filmmakers resolve antagonisms between domination and preservation (much in the same way that series such as **Mutual of Omaha's Wild Kingdom** are an attempt to reconcile the conquest of the frontier with the effort of saving it).

To begin to understand how such a persona is constructed--a persona which in turn shapes many of our everyday relationships with wild nature--I will consider some of the various ways in which the single white male *occupies* nature in wildlife documentaries, and advertises himself as such. But rather than generalize, I begin with a brief look at one such document of self-promotion: **Lights Action Africa!** (1980).[5] This film, co-produced by Alan Root and Aubrey Buxton, is about the celebrated careers of Root himself (and his wife Joan) -- makers of such well-known wildlife documentaries as **The Enchanted Isles** (1967) and **The Year of the Wildebeest** (1976).

The One Who Looks at Wild Animals

Lights Action Africa! may well be the epitome of idealizing film biographies about the ones who look at wild animals. This 60-minute film follows the Roots through a variety of domestic and professional situations. Scenes of the Roots at work on various films, and relaxing and doing chores around camp, are intercut with extraordinary footage shot for their wildlife documentaries. The

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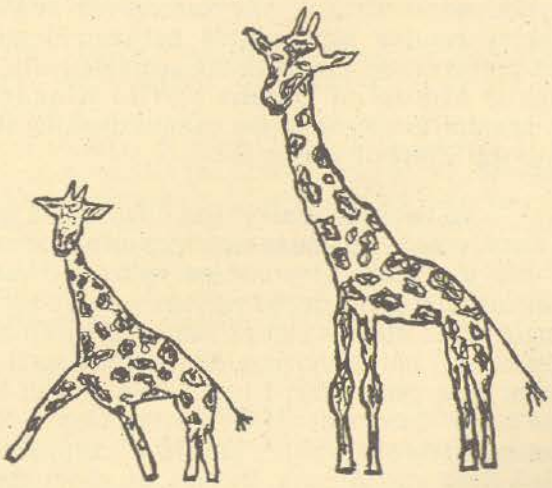
resulting images of wildlife are marked, above all, by indications of their normal invisibility to the layperson's naked eye.

The Root legend occupies a unique place in the history of wildlife filmmaking. Indeed, it is a legend identified almost solely with Alan. Alan's public image is in fact a composite of images: of teacher, adventurer, husband, carpenter, superb pilot, risk-taker, naturalist, and conservationist. In the first few minutes of **Lights Action Africa!**, the viewer is treated to a dazzling array of exploits, as the Roots rise above the terrain in a hot-air balloon, take a coffee break in the middle of a remote river, jack up a four-wheel drive vehicle, buzz over treetops in a small plane, climb a rope ladder, share a drink with some "natives," and film underwater -- to list just a few. The ensuing film primarily documents how the Roots manoeuver their way around the physical barriers that stand between the wild creatures of the continent of Africa and their camera lens. The Roots are clearly privy to knowledge and experiences not accessible to most.



Almost immediately, however, the commentary informs us that in this idyllic, exciting world, the Roots share the fate of *all* human creatures: to "try to keep fit," to "try to keep clean," and to "try to keep 'regular.'"[6] Taken literally, this is of course true. But the juxtaposition of commentary and images here wields an irony. Rather than show scenes which might seem synonymous with domesticity, the viewer is treated to glimpses of a life probably very different from their own: Alan jogging past a group of elephants, and bathing in a river with an audience of wild creatures; Joan tossing a roll of toilet paper from a make-shift outhouse towards a lion. These vignettes all serve to emphasize not in fact the similarity of their lives to our own, but the marked contrast. The Roots are, most definitely, *a breed apart.*

However, there is at least one sense in which this semblance that is drawn to the rest of our lives is correct. This husband-wife "team" is hitched to the familiar theme of the sexual division of labour, with Alan the professional, and Joan his help-mate. In the film's initial shot, Alan peers through a long lens in a torrential rainstorm. He continues filming while his tea cup and saucer, perched precariously on a log, fills up with drops of rain. A female figure (Joan) comes into frame, picks up the cup and saucer, exits frame, and a moment later returns the tea cup to the log--this time with the saucer placed on top. Alan, meanwhile, has not removed his eye from the lens. Joan's small civilizing gesture in this wilderness will likely go unnoticed in the shadow of Alan's much more significant task.

This sexual division of labour informs almost every scene of the Roots at work and at home in the camp, and is underscored by the shots which introduce Alan and Joan individually: Alan is lathered with shaving cream; Joan bakes bread. These images place Alan and Joan on opposite sides of the sexual divide, although the commentary seems at first unwilling to acknowledge this:

> In the short time that they spend at their Lake Naivasha home, Joan does what she can, with a little help from her [animal] friends. But she's happiest when living in a tent, and is not really into domesticity and the comforts of home.[7]

Yet again, images soon belie words. There are several shots of Joan gardening, sewing, and cooking, always with "orphaned" animals at her side. Then in the first major sequence in the field, after several aborted attempts at filming hippos underwater from floating "coffins" and cages, male and female are finally explicitly distinguished as an arduous task approaches:

> Now they knew that there was only one way to get their pictures: **they** would have to take the plunge.
>
> Alan is a stimulus at it. He relishes this sort of situation--where danger and fear are finely balanced. A project is not interesting unless the odds are against him.
>
> Joan's philosophy is simpler: if Alan is going to do these things, it's less worrying and much more fun to do them with him. So, it was the two of them who swam toward the unknown in Mzima.[8]

Throughout **Lights Action Africa!**, Joan is variously set up as target for a snake's poison; as parent to the smallest hornedbill chick (whom she "'tops up' . . . so it doesn't get left behind"); and as the one who can get closest to the nonhuman (by

mimicking the rasping feeling of a fish that cleans algae from the hippo's hide, Joan is "able to scratch a two-ton hippo's bottom"). These scenes construct woman as closer to "nature" than man. Teamwork is perhaps a misnomer here, for in spite of the assistance Joan offers, the persona Alan projects seems to hinge on his singularity and self-sufficiency. The figure of Joan serves primarily to mark the gap between Alan's masculine privilege and authority, and the closely interconnected domains of "the feminine" and "nature."

In the closing moments of the film, the commentator asks rhetorically: "So, what is it the Roots have that makes them the 'A team'?"

> Well, for a start, they're obviously just that--a team. They have a pioneering sort of courage... and patience. Tenacity... and patience. Special skills. Lots of energy... and patience. But above all, they have a deep understanding and love for the creatures they film. And for Africa.[9]

But here is the crux of the problem. The film ends with a confused appeal to the simultaneous threat to wilderness and the inevitability of extinction. Accordingly, in one breath the narrator concentrates on the Roots' aspiration to save what is fast disappearing, and with the next, the pastness of a great Africa is a given:

> They will need all these qualities in the future, for their kind of Africa is fast disappearing. Their films, and others like them, have done much to show the world what a tragic loss that would be.
>
> Alan and Joan will go on filming, and will continue to share their wonderment and understanding. And who better to record, for all time, what used to be... in Africa?[10]

So much for saving animals then. The urge to *save* wildlife has been translated into the urge to *record* it: the preservation of a life by its representation.[11] The Roots may well be an "A team," as the commentary exhorts, but following the logic of the marketplace (where images of wildlife are a commodity like any other), the exchange value of their work reflects the increasing rarity of the phenomena that they photograph.

Survival of the Fittest

I recall that at the screening of **Lights Action Africa!** at a gathering of wildlife film professionals I attended in Bath, England in 1981[12], the auditorium was abuzz with excitement at Alan Root's presence . Confessed Eamon de Buitlear (a colleague of Root's) on coming face-to-face with this legendary figure:

> I was quite confident at coming to talk and show my bit of film. Now panic has set in! I'd never seen Alan Root before, and here he is himself--and on film! This fantastic film-maker, tearing around the jungle, fully equipped with small plane, a generator, a whole boxful of every lens ever made for the Arriflex, a battery of lights, not to mention a wife thrown in as snake baiter and hippo fodder![13]

What is striking about this statement (aside from the fact that it vastly depreciates the accomplishments of de Buitlear who, labouring on a tiny, intensively cultivated island, has himself produced some of the most resplendent wildlife film sequences I can recall ever seeing[14]) is the extent to which it focuses on the sundry trappings of the trade. Indeed, this paraphernalia is of no possible use to a filmmaker whose task it is to document not the flora and fauna of the vast continent of Africa, but of Ireland. Clearly both the human and nonhuman accouterments--wife, vehicles, camera apparatus--augment the power of Root in de Buitlear's eyes, for in this profession expertise is virtually synonymous with the command of technique. But it would be a mistake to put such comments down simply to de Buitlear's envy or false modesty; the embracing issue is surely the advancement, both on- and off-screen, of masculine prowess and technologically intensive activity as the very essence of conservation practice.

Such an accord between domination and preservation is abundantly documented in literary and filmic chronicles of the careers of wildlife filmmakers, and in numerous publicity images featuring filmmakers with their gear. The ideological force of such accounts and displays of wildlife filmmakers with their gear may be seen to lie in their apparent reconciliation of the human drive to **master** Nature with a technologically guided process of **saving** it. This suggests that, despite whatever desires are peaked by the lure of danger and the promise of omnipotence, this seemingly primordial contest is now offered in service of a greater and contemporary ideal: wildlife preservation. The wildlife filmmaker appropriates nature, but allegedly solely for ameliorative purposes.

The immense burden of this critical assignment is iconically represented in numerous publicity -shots in which the filmmaker stands as a metonymic representation of "one who looks at wild animals." Typically, he deftly shoulders his weighty apparatus while surveying an expansive or formidable terrain, or, in another favored pose, pauses for a moment from his intense investigations through the camera lens to look toward yet another lens, thereby evoking the phantom witness who will eventually share in an imagined exchange

with a true champion of the wild. The expression is always stoic; pleasures accrued in the pursuit of one's quarry are necessarily consumed by the gravity of this urgent task: to make an exact representation of a species so as to insure against its disappearance. This endeavour would seem to have both spiritual and scientific import.

Yet it seems to me each filmmaker is ultimately posed to suggest a triumph of human ingenuity over nonhuman nature. The lure of wildlife photography and cinematography--its appeal to modern, humane sensibilities--is that it allows a connoisseur's relation to nature while simultaneously claiming not to exploit it. If the photographic fray is a disturbance--a penetration of the animal's habitat not unlike that of hunting--it is nevertheless ostensibly bloodless: a way of having our cake and eating it too, of possessing the animal and permitting its life to be spared.

Wildlife photographers and filmmakers seem innocent; by contrast, hunters, and most particularly trophy hunters, do not. Accordingly, while the hunting of animals has provoked much outrage throughout this century, wild animals may be held captive, given sulphuric ether, refrigerated, chased by motorized vehicles, treed by dogs, etc., all by photographers and cinematographers without a qualm; nesting locations may be revealed without a thought. Yet, hunting and photography share much of the same terminology. We are reminded of this whenever we speak of "loading" and "aiming" a camera, or "shooting" or "taking a snap-shot."

Obviously, it is not by chance that the photographic act has often been compared with shooting, and the camera with the gun.[15] In her collection of essays on still photography, Susan Sontag suggests that people have switched from bullets to film as the fear of nature has been replaced with nostalgia:

> The hunters have Hasselblads instead of Winchesters; instead of looking through a telescopic sight to aim a rifle, they look through a viewfinder to frame a picture. In end-of-the-century London, Samuel Butler complained that "there is a photographer in every bush, going about like a roaring lion seeking whom he may devour." The photographer is now charging real beasts, beleaguered and too rare to kill. Guns have metamorphosed into cameras in this earnest comedy, the ecology safari, because nature has ceased to be what it always had been--what people needed protection from. Now nature--tamed, endangered, mortal--needs to be protected from people. When we are afraid, we shoot. But when we are nostalgic, we take pictures.[16]

The desire to hunt trophies may be said to be the result of nostalgia and respect for the species. The larger, the more magnificent the species (and the rarer, I might add), the truer the match is said to be with the human. It may also be the result of wanting to enter into communion with the environment, to return to a time when man was a hunter, a provider; to return to our "animal roots." This pleasure must be pursued in further and further away places, as more and more exotic animals are sought.

And what prompts one to photograph wildlife? What is this urge? The desire to photograph a wild animal may also be said to grow out of respect and affection for the species. Animals are beautiful and colourful; they are fitting subjects for the lens, out of the ordinary, naturally photogenic. The act may be prompted by the desire to be out of doors, to make a contribution to science, or as Richard Kearton put it, "to pit one's skill and ingenuity against the shyness and cunning of a wild beast."[17] In both instances the animal is taken from its world and made over into an image; it is opened up for future scrutiny, in another place, by another group of people, or perhaps by all of humankind when the species or phenomenon has ceased to exist.

Significantly, the history of wildlife cinematography and its progenitor, wildlife photography, is entwined with that of hunting. We can find evidence of this in the titles of many of the early natural history photography texts--**Photography for the Sportsman Naturalist** (1904), **How to Hunt with the Camera** (1926), **Stalking Birds with Color Camera** (1951), etc.[18]--and in the careers of many of the great museum collectors and wildlife filmmakers. To appreciate just how intimate the relationship between hunting with a rifle and hunting with a camera is, we do well to read the numerous personal accounts that have been recorded by men who have performed both.

"In past few years I have tried hunting and collecting," noted Herbert K. Job in his 1905 account of his adventures as a "camera hunter,"

> but this new hunting [with the camera] entirely outclasses them. It requires more skill than shooting, and hence is a finer sport. The results are of more interest and value, and, withal, the lives of the wild creatures are spared for our further pleasure. This hunting is in season the year round, every living thing is proper "game," and the sport may be enjoyed by men and women alike. One may use both gun and camera, if desired. In my own case, at first both were used, but, finding camera-hunting the more interesting and exciting, I gradually lost the inclination to shoot.[19]

Carl Akeley declared in 1923, "Camera hunting takes twice the man that gun hunting takes"--on the grounds that it required greater skill, daring, and

endurance.[20]

Today, the sheer volume of published tales of near-fatal encounters between wildlife filmmakers and their "quarry" in the field provides ample evidence of the legacy of this predatory tradition in contemporary film practice. An article celebrating the 21st anniversary of Anglia's wildlife series **Survival** catalogs the exploits of several filmmakers associated with this series:

> Alan Root had a hole torn in a leg by a hippopotamus and was also bitten by a leopard. John Buxton was nearly trampled by buffalo in northern Canada. Des and Jen Bartlett came close to drowning in the Amazon when their rubber boat was damaged and they were washed half a mile down river. Dieter Plage, a mercurial West German, was attacked by a crocodile which bit through his camera mounting, and has twice had close encounters with charging elephants.[21]

Wildlife filmmaker Wolfgang Bayer has conceded: "I am basically masochistic. . . . It's the challenge I enjoy--it's toughness, overcoming circumstances."[22]

In the conventional split between "consumptive" and "non-consumptive" uses of wildlife, wildlife photography of course falls in the latter category (the animal's life is spared, afterall). But we must surely ask, what do we mean by non-consumptive use? Is this not a contradiction in terms? Are we to assume that only the results are important? That the largely predatory pursuit of the animal is always understandable, justifiable--even desirable--if the animal is not killed, if indeed we have a bloodless fray?

New Wilderness?

A close look at the long-standing success stories of wildlife television would indicate that wildlife photography and filmmaking has to be constantly renewed with new frontiers--whether of species, behaviour, or technique--so as to engage the interest of the television audience in the *non*human. From the microscopic daguerreotypes of the mid-nineteenth century, through the "flashlight" night images of the 1920s and the underwater scenes of the 1950s, photography and its evolutionary progeny, cinematography, have certainly lived up to (and surpassed) the promise made by American painter Samuel Morse upon seeing the first daguerreotypes in Paris in 1839: that the medium would offer the naturalist "a new kingdom to explore."[23]

Though many nature writers have not ceased to celebrate their relationship with the natural world first of all within the everyday and close to home, or to pin the great questions of humankind in nature on something as simple as the dilemma of a domestic cat and a junco, wildlife photographers and, in particular, filmmakers, have known no such freedom from commercial demands. Driven to travel further and further away from home in order to pursue an ever receding horizon of "amazing creatures," or, alternately, to get closer and closer to those species and natural processes near at hand, filmmakers in particular find themselves under pressure from two conflicting sets of expectations: those arising from the desire of the audience to participate in the vicarious conquest of new realms of the nonhuman world (whether this be scenes never recorded on film before or scenes normally beyond the naked eye) and those created by the need of these discourses for an idea or condition of wildness whose mythic proportions have not been diminished by this proliferation of images.

Consider the sensation once created by motion picture recordings of even the most commonplace scenes in nature, as reported in the **London Times** of August 17, 1907:

> Entirely new possibilities in photography in nature study--one may say in field lore--were revealed by Mr. Kearton yesterday before a small gathering at the hall of the Institute of Journalists. It has been known for sometime that [Richard Kearton] and his brother, whose photographs of birds are known all over the world, had been experimenting with the bioscope . . . The results are astounding . . . The photographers have chiefly been busy with young broods . . . You could follow every movement of the bird: watch the bullfinches bring out the pouched food in surprising quantity: the larks run along their little pathway and carefully select each bird in turn. The waving of the grass, the ruffling of the feathers were quite distinct. The audience could not forbear a cheer when the sedge warbler, finding his mate on the nest, passed on the food, which she in turn passed on to the young . . .[24]

The more our collection of such photographic evidence grows, the more difficult it becomes to elicit such a response. We compensate for this by searching even further abroad, substituting information or sensation for experience. The single human being today--be it wildlife painter, photographer or filmmaker--now stands most often not in relation to a local woodlot or other cherished spot, but to an entire continent, or even planet. Yet the dialectic of man and continent--rarely woman and continent--even man and planet, does not dwarf the individual, as one might expect, but rather aggrandizes him. Listen to some of these titles of television series: **The Undersea World of Jacques Cousteau; Mutual of Omaha's Wild Kingdom; Lorne Greene's New Wilderness.** These are regions not of the world's body--her

rivers, landscapes, ecosystems, or even nation-states--but rather territories of human mastery and subjugation: evidence of our sweeping vision.

A final note: If I have been pessimistic here, it is because the genre of the wildlife documentary as we know it now has absorbed elements of escapism and scientism common to other practices, and is fraught with contradictions. For example, it may well be that even the flattened "whole earth" image, often featured in the title sequences of wildlife television documentaries confirms Portmann's dire prediction cited at the beginning of this piece. In an essay first published in the **Whole Earth Review**, Yaakov Jerome Garb writes that behind this image which may commonly express the "beauty, finiteness, fragility, and interconnected unity of the Earth," he finds instead "a banner of alienation and escape from the Earth." He calls it "a rearward view of a distant and abandoned Earth."[25] Indeed, in a recent television interview, wildlife filmmaker Wolfgang Bayer confessed his "ultimate dream" was to pursue his profession in outer space: "When there's going to be life up there, I would like to be the first one to document it. That would be nice."[26]

Notes

1. See Margot La Rocque, "Speaking Animals: Notes on the Human Voiceover in Wildlife Documentaries" in **Undercurrents**, Vol. 2, 1990, pp. 3-8. One crucial consequence of this legacy is the fact that in most programs the representation of the natural world appears unmediated by individual consciousness.

2. Portmann is often cited by Neil Evernden in **The Natural Alien: Humankind and Environment** (Toronto: University of Toronto Press, 1985). For a fuller discussion of the work and thought of Adolf Portmann, see Marjorie Grene's **The Understanding of Nature**, Vol. XXIII of **Boston Studies in the Philosophy of Science** (Dordrecht, Holland: D. Reidel Publishing Company, 1974). Grene explains that Portmann's work hinges on the distinction between what he calls *authentic* and *inauthentic phenomena*. Authentic phenomena are those patterns in space and time which appear to our senses, and inauthentic phenomena are those phenomena which would ordinarily be imperceptible to us, but which are increasingly mistaken for reality itself.

3. See, for example, Bosley Crowther's review "Cousteau's *The Silent World*," **The New York Times**, September 25, 1956, reprinted in **The Documentary Tradition** ed. by Lewis Jacobs (2nd. ed.; New York: W.W. Norton & Company, 1979), pp. 316-17.

4. Adolf Portmann, "The Seeing Eye [1959]," in **The Subversive Science: Essays Toward an Ecology of Man**, ed. by Paul Shepard and Daniel McKinley (Boston: Houghton Mifflin Company, 1969), p. 121. Reprinted from **Landscape**, IX (Autumn, 1959), pp. 14-21.

5. **Lights Action Africa!** 16mm, 60 mins., 1980, Survival Anglia.

6. **Lights Action Africa!** All excerpts from this commentary have been transcribed by this author.

7. Ibid.

8. Ibid.

9. Ibid.

10. Ibid.

11.. This is not, one surmises, accidental, for behind such statements lie some of the most complex theoretical questions about the nature of photographic and filmic representation.

12. 2nd International Wildlife Film-Makers' Symposium, Bath University, England, September 23-27, 1981

13. Although I was in attendance, I have taken this quote from a short piece entitled "Quotes from Bath ...," **The BKSTS Journal**, 64:1 (January 1982), p. 7.

14. I am thinking in particular of his series on the indigenous wildlife of Ireland. An excerpt from **The Living Forest** produced by R.T.E. was screened at the symposium at Bath.

15. See Susan Sontag's **On Photography** (New York: Farrar, Straus and Giroux, 1977), pp.14-15, for a discussion of some of these metaphors, which Sontag claims are variants of the "inescapable metaphor" of the camera as phallus.

16. Sontag, p. 15.

17. R. Kearton, **Wild Life at Home: How to Study and Photograph It** (London: Cassell and Company Limited, 1898), p. viii.

18. See L.W. Brownell, **Photography for the Sportsman Naturalist** (New York: The Macmillan Company, 1904); William Nesbit, **How to Hunt with the Camera: A Complete Guide to all Forms of Outdoor Photography**, (New York: E.P. Dutton & Company, 1926); Arthur A. Allen, **Stalking Birds with Color Camera** (Washington, D.C.: National Geographic Society, 1951.

19. Herbert K. Job, **Wild Wings; adventures of a camera-hunter among the larger wild birds of North America on sea and land** (Boston: Houghton, Mifflin and Company, c. 1905), pp. viii-ix; Carl E. Akeley, **In Brightest Africa** (New York: Doubleday, Page & Co., 1923), p. 155. Cited by Donna Haraway in **Primate Visions: Gender, Race, and Nature in the World of Modern Science** (New York: Routledge, 1989), p. 43.

21. "21 years of Survival" in **The BKSTS Journal**, 63:9 (September 1981), p. 568.

22. Wolfgang Bayer, interviewed for **The BKSTS Journal**, 63:9 (September 1981), p. 581.

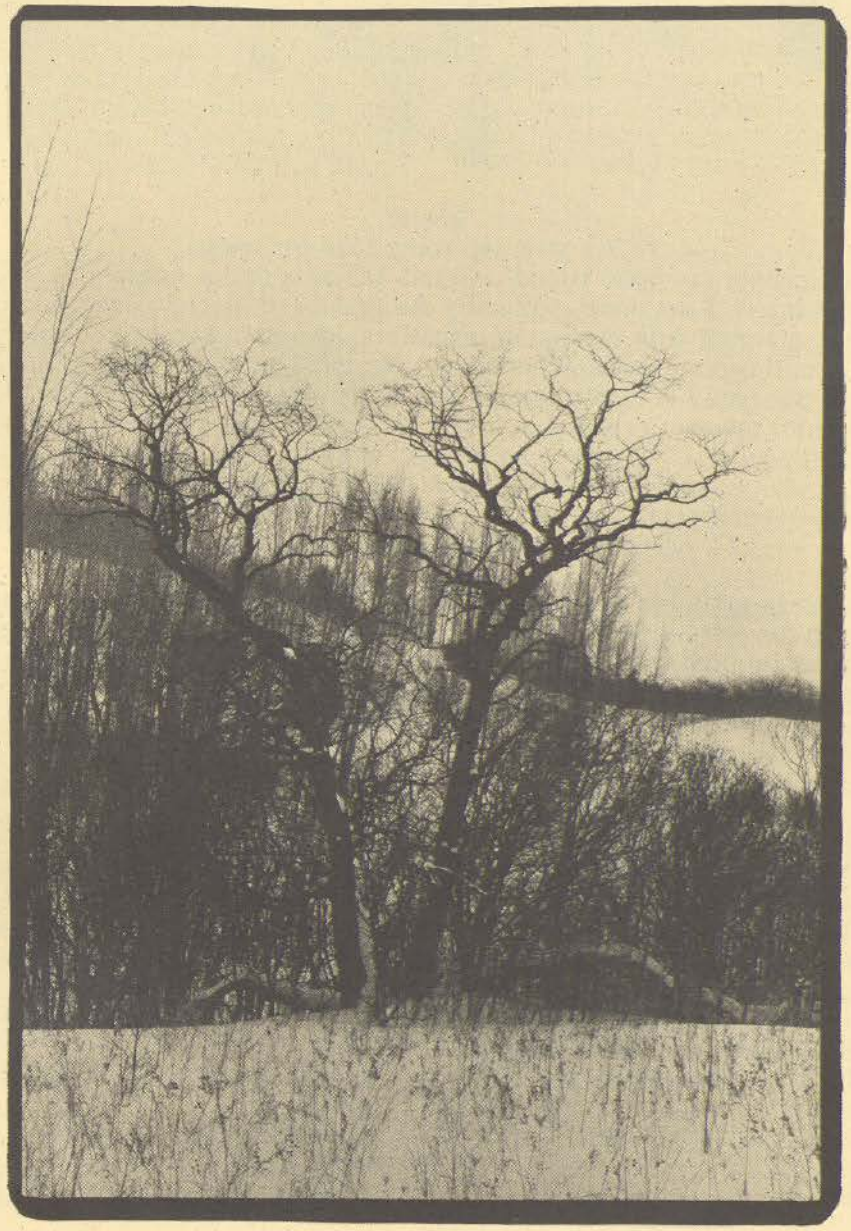
23. Morse described the daguerreotype in a letter from Paris to the editor of the **New York Observer**, published on April 20, 1839. He wrote: "The impressions of interior views are Rembrandt perfected. One of Mr. D.'s plates is an impression of a spider. The spider was not bigger than the head of a large pin, but the image, magnified by the solar microscope to the size of the palm of the hand, having been impressed on the plate, and examined through a lens, was further magnified, and showed a minuteness of organization hitherto not seen to exist. You perceive how this discovery is, therefore, about to open a new field of research in the depths of microscopic Nature. We are soon to see if the minute has discoverable limits. The naturalist is to have a new kingdom to explore, as much beyond the microscope as the microscope is beyond the naked

eye." Cited by Richard Rudisill in **Mirror Image: The Influence of the Daguerreotype on American Society** (Albuquerque: University of New Mexico Press, 1971), p. 45 from letter reprinted in Samuel Irenaeus Prime's **The Life of Samueal F.B. Morse** (New York: D. Appleton and Company, 1875), p. 401.

24. **London Times**, August 17, 1907. Cited by Peter Steinhart in "Why do we watch Animal films?" (an address given at the 3rd International Wildlife Film Festival, University of Montana, Missoula, March 1980). This address has been published in **The BKSTS Journal**, Vol. 63, No. 9 (September 1981), pp. 578-79 and p. 584. Steinhart acknowledges Robert Dickson of U.C.L.A. for supplying this quote.

25. Yaakov Jerome Garb, "The Use and Misuse of the Whole Earth Image," **Whole Earth Review**, March 1985, pp. 18-25. For another discussion of this theme, see Garb's more recent essay "Perspective or Escape? Ecofeminist Musings on Contemporary Earth Imagery" in **Reweaving the World: The Emergence of Ecofeminism**, edited by Irene Diamond and Gloria Feman Orenstein (San Francisco: Sierra Club Books, 1990), pp. 264-78.

26. Wolfgang Bayer, closing comment in television interview **Wolfgang Bayer: Wildlife Cinematographer**, produced by KRMA-TV, Denver, 1986.



P L A C E

*by Ann Howatt Krahn**

Place?
To ask wets tap-roots keen for water.
Its people say "The Island", Grand Tracadie on its Atlantic Shore.
And naming it, I *am* there, pulled by the gravity of glacial quartz and native sandstone, merging with my watery ancestors, swimming among our salty selves. Horizons are illusions, vast and boundless; the mind empties. And in the dunes, the stillness is not really still; for when I *see*, every small thing is in some movement, some oscillation; the energy radiates, warm on the cloudiest of days. Nor is the silence really silent, especially in the long grass of the Fox Hills...where still eyes, once engaged, are enigmas, deep in all directions.
The night sky positively hums; and then lies breathless. And when it arches to the dragon's thunder, the stars shake.

Its marsh in spring is damp and greenly wild, singing in the hawk's shadow-wheeling in the warmth of summer--weighted with the scent of spruce and bayleaf. And in the moon-high tides of autumn storms, the dune grass, wet and blond, drums like wings against the hills. While the winds chant for winter, and the ancient songs of water under ice.

This island lives within me. Its tides are mine.
I know this Inside Place as My Island-
a space edgeless, fathomless, drawn in mystery. It is compelling, intense, yet infinitely still, knowing, somehow, before I do. There are wonders there, which I can't imagine. This place absorbs each joy and sorrow, and accepts those of my ancestors. This boundless, inside place is My Island; it travels with me; it celebrates all wonders and re-cognizes all pain. It listens to the unacceptable; and when there is healing, it is sanctuary.
My Island woke to midnight chanting in Alexandria; it rose on the incense of Japan; it tasted the growing things of Bali. My Island goes everywhere, yet it stays home. Yes, I sense that it has been everywhere before me--that it knows its world, and this place is vast and deep.
Water bright and shadow black, blood beating in the ocean
Is this Island.

**Ann Howatt Krahn is conducting graduate research in environmental thought from the perspectives of psychology and material culture.*

The Dog and the Wolf:

Some Thoughts On Biological Shackles and the Trap of Humanism

*by Craig Naherniak**

> Discouraged after an unsuccessful day of hunting, a hungry Wolf came on a well-fed Mastiff. He could see that the Dog was having a better time of it than he was and he inquired what the Dog had to do to stay so well fed. "Very little," said the Dog. "Just drive away beggars, guard the house, show fondness to the master, be submissive to the rest of the family and you are well fed and warmly lodged."
>
> The Wolf thought this over carefully. He risked his own life almost daily, had to stay out in the worst of weather, and was never assured of his meals. He thought he would try another way of living.
>
> As they were going along together the Wolf saw a place around the Dog's neck where the hair had worn thin. He asked what this was and the Dog said it was nothing, "just the place where my collar and chain rub." The Wolf stopped short. "Chain?" he asked. "You mean you are not free to go where you choose?" "No," said the Dog, "but what does that mean?" "Much," answered the Wolf as he trotted off. "Much."[1]

There are many different themes running through this Aesop fable which are applicable to trends in Western culture. One way to interpret this piece is to think of the Wolf as representing "wildness" and the Dog as representing "domestication."[2] The collar and chain that rub around the neck of the Dog are like our own tie to the Western technological mind-set. It appears that the Dog is living a comfortable, safe, easy life, just as we feel that the benefits of our technological world have brought us a similar security. The Wolf, in choosing not to accept the collar and chain of the Dog, maintains the freedom to follow his own will and purpose. He retains his wildness. The Dog has had this wildness, this independent purpose, bred out of him by the Master. His purpose is not his own, but that of the Master. We, in Western culture, tend to see ourselves as like the Master, possessing control over what purpose the rest of nature will serve for us. We fail to recognize that, nature, like the Wolf, has purpose independent from us. We also fail to recognize that the very mechanisms and techniques which we use to exert control, have placed us in the position, not of Master, but of the Dog. The trap of humanism, therefore, is that in attempting to domesticate nature, we domesticate ourselves.[3]

Wildness is everything opposite to what we consider civilization: it is the untamed, the undomesticated and that which is not controlled. In this sense, wildness is understood as the absence of human control. A wild animal is a creature with its own intrinsic volition, beyond any humanly defined purpose. While wild animals have come to symbolize such human qualities as freedom, innocence and courage, it is important to recognize that wildness is also part of our biological heritage. Humans, too, have sprung from the spontaneous integration of genetic information that forms new unique beings, and which characterizes wildness. The constant change, through reproduction, in a constantly changing environment is what provides both the diversity and the stability of all life forms on the planet. In other words, despite our culture's tendency to see humans as different and separate from wild nature, we are continuous with it.

From our position of perceived separation from nature, we extol the virtues of freedom and independence associated with wildness. Yet at a cultural level, to ensure our survival we seem to have been working on ways to minimize risk and extend control over society, and ourselves. Writer and naturalist John A. Livingston has described the development of this mechanism of control as a cultural "domestication" process.

It is Livingston's contention that long before we began to physically domesticate plants and animals, humans had already become psychologically domesticated through technological dependence and the cultivation of sophisticated techniques of social control, in the form of rituals, customs, regulations, and codes of varying description.[4] To sustain control over our lives and our growing

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populations, we gave up the biological mechanisms of social regulation which still characterize the rest of nature. We suppressed our wildness and replaced it with techniques of social management. By doing so, Livingston argues, we were "forced to suspend (and eventually forgot altogether) the mutualistic, non-competitive, peaceful social order from which [humans] had come."[5] The techniques humans developed for maintaining social control became the very fabric out of which civilization was woven.

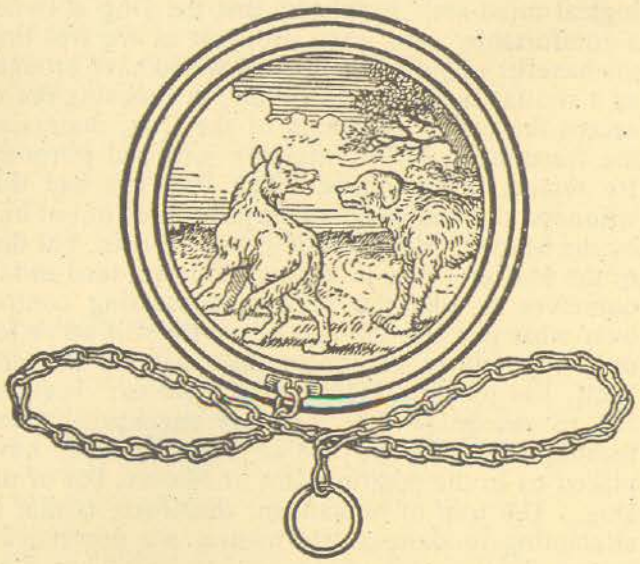
Simplified as this account may be, in retrospect we can easily see the increase in human dependence on technology, accompanied by the deepening of the perceived separation between humans and the rest of the natural world. This has not occurred to the same degree in all human cultures, but is presently epitomized by industrial societies. According to Abbe Mowshowitz, a computer science professor from the University of British Columbia, our human dependence on technology has led to technology becoming the mediator of all experience. He says: "It is not simply the use of machines and gadgets that defines this dependence. Our reliance on them is merely the outward manifestation of a pervasive attitude toward experience."[6] All experience, he believes, has become a commodity. He says, "the ability to grasp what is real is attenuated by the interposition of interpretive media, by excessive filtering, blocking, and laundering of experience. To the extent that we inhibit the capacity to interact with the world on a direct basis, we risk a one-sided and faulty view of reality and ultimately become maladaptive."[7] Technology becomes not just something we use for survival, but becomes technique--a mind-set for looking at and interpreting the world (like a pair of coloured glasses).

Mowshowitz uses examples from science fiction to demonstrate both the consequences of human technological dependence, and the "inherent contradiction in the conquering spirit of science and technology."[8] His conclusion is that in extending our dominion over the natural world we have alienated ourselves from the sources of our own vitality. "Through obsessive exercise of the will to power in the elaboration of technique," he says, "will itself became enfeebled and subject to control by autonomous forces linked to mechanical progress....A social order built of this imperative ultimately domesticates the heroic impulse which fashions it."[9] In other words, by creating an elaborate technological infrastructure aimed at making humans more free (to enjoy life), we have paradoxically ended up becoming enslaved by this technological mind-set. The result is less freedom of will and more centralization of control. But, does the control we humans like to think we have really exist? Christopher Hodder-Williams, author of **Fistful of Digits**, thinks not:

> Eventually the mechanical interlock of technology must conquer all individual will. You might conceivably postpone it, but it could only be postponement, because for as long as man could not stand by himself and rely on himself in preference to the easy way out, then inevitably he would wind up handing over the mastery of his own wits...[sic][10]

Though Hodder-Williams does not directly say so, he hints that the domestication of humans through dependence on technology and social order eventually causes the loss of individual will, which is the one thing the so-called control and stability of technological society were supposed to grant us.

For the sake of comfort and security the Dog gave up its own will to that of its master. So too, we give up our will to that of the cultural technological machine we have created. By giving up its will and independence, the Dog relinquishes pursuit of its own teleology. (In the case of the Dog, its teleology has been relinquished biologically, through breeding.) Its teleology, or purpose, is now that of the Master. In a way, the Dog becomes a technology whose purpose is to guard the house and show fondness to its Master.



If we can associate the loss of will to the surrendering of purpose, then the next question is, what is purpose? And, where does purpose reside? I will avoid discussing the possibility of purpose on a cosmic level. That there exists some omnipotent entity predetermining evolutionary direction can not be supported beyond faith. John Livingston suggests that there is no "purpose" of this kind in

nature--at least no purpose that humans are capable of knowing. He suggests that "random genetic and environmental events brought us to a stage at which our minds, and thus our cultures took over,"[11] and that prior to this all change was accidental and random.

Another way to think of purpose is at the level of the individual, where it can be thought of as residing in all beings--at least in the sense that each organism has its own teleology, whether it is conscious of it or not. Paul Taylor, in **Respect for Nature**, reaffirms the idea that each individual organism has its own purpose (which can be as simple as sustaining life):

> We conceive of the organism as a teleological centre of life, striving to preserve itself and realize its good in its own unique way. To say it is a teleological centre of life is to say that its internal functioning as well as its external activities are all goal orientated, having the constant tendency to maintain the organism's existence through time and to enable it successfully to perform those biological operations whereby it reproduces its kind and continually adapts to changing environmental events and conditions.[12]

Every living thing has being in and of itself. In this sense, it has purpose. Its purpose is inherent in its being, otherwise it would not be here, in nature--the conglomeration of everything being. There is no need for humans to know and understand purpose for it to exist. However, not knowing is irritating to the Western rationalist who, by cultural tradition, feels compelled to equate all purpose in terms of human use value. The purpose-to-humans-only view is what prevails in present society.

Hans Jonas, in **The Imperative of Responsibility**, discusses the same topic of individual purpose by showing the effects of having purpose reside solely in humans.[13] His discussion of the way humans try to control the elements of nature to fashion technologies or tools for their own use helps illustrate the humanistic ideology that permeates our conception of purpose. The end or purpose of a tool (or machine) belongs, Jonas argues, to the *concept* of the tool, and this concept, as with all artifacts, *preceded* the tool's existence and is the cause of its origination. The tool, a hammer in Jonas' example, does not have a purpose in and of itself. The concept of what a hammer might be underlies the object itself. The hammer did not exist before the concept of the hammer existed. The concept of time measurement, for example, was the inspiration for the clock, and the clock is totally defined by this end. It is its only reason for being. The end of the clock is not, however, located in the clock, but in it's maker, and this is also true of any machine. Neither the hammer nor the clock have any purpose in and of themselves; their purpose is only in their use within a particular cultural context. And so it is true for all lifeless implements of human manufacture. These implements can be anything from simple tools to abstract institutions. Both the tool and the institution are artifacts created to serve the maker's purpose.

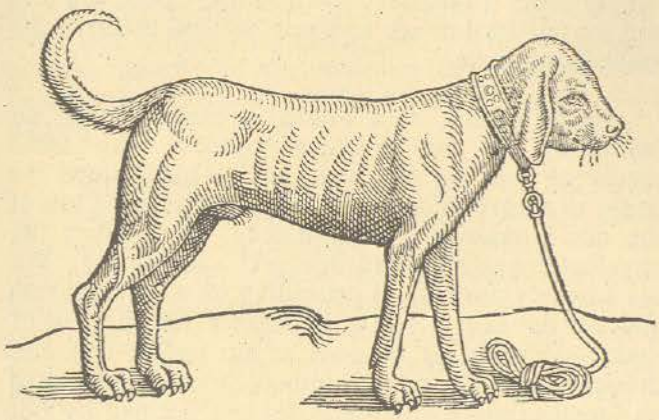
Even nature, as a whole, is made over as an institution in the Western mind. The same reasoning we use to create social institutions we apply to nature in deciding what the intended use of the non-human is. With nature, we analyze the physical appearance and interpret a use for us. We see nature's purpose as providing us with resources and we develop a set of processes for the use of them. Stripped of its own being, nature becomes thought of as "our environment." It is considered an "institution," which has its use defined by our purposeful desires. The ramifications of this egocentric view are growing now that genetic engineering has brought our technological society to the threshold of controlling all life processes.

Over the centuries, the one level the human domestication process could not touch was that of the genes. Reproduction, the way living things transmit genetic information from one generation to the next, has always been the only way new life forms could emerge. The random genetic fluctuations in the offspring further ensures that change --the one constant of all life--continues.[14] This evolutionary process is extremely slow however, and evolution does not always create the kind of life forms humans find useful; therefore, we have learned to control nature with selective breeding. While yielding predictable results, selective breeding has limitations. There still remains room for random natural mutation. Also, selective breeding is limited by the natural limit of the range of variation within a particular species beyond which severely mutated offspring cannot survive. Further, we always had to wait until the offspring were born, or sprouted, before we would know if the trait bred for was indeed passed on.

Now, the human practice of genetic engineering has the potential to remove the randomness of genetic changes. In place of randomness, genetic engineering promises exact predictability and control of the genetic structure of life forms, by manipulating their DNA. Geneticist David Suzuki explains that:

> Until now, the power to determine the fate of individual genes in living things has, with rare exceptions, resided in nature. Evolution tends to rid populations of organisms possessing detrimental genetic traits at a ponderously slow

> pace. But today we are rapidly assembling the technological tools not only to render quick judgments concerning the "genetic worth" of DNA sequences but also to impose those judgments by modifying the information stored in genetic molecules.[15]



By altering the DNA of an individual life form, whether by selective breeding or genetic engineering, the individual's teleology can be altered at the organism's genetic structural level and replaced with human purpose. The science of genetic engineering simply takes the guess work out of domestication.

The idea that domestication makes nature into technologies to be used for human purpose becomes realized literally through genetic engineering. An organism's very essence, its DNA, cannot only be altered, but engineered to our exacting specifications. Through the process of cloning, for example, we are now able to take a cell from a microorganism, couple it with another piece of DNA, insert this cell into a host animal so that it will propagate, and "harvest" the cloned enzymes that are produced. In this way, organisms acquire novel genetic properties that would not be attainable through conventional breeding or natural mutation. Other possibilities include using the stomachs of animals to manufacture chemicals or drugs in quantities previously unheard of. In an article entitled "Transgenic Animals Make Drugs in their Milk," Andrew Pollack describes this undertaking:

> Scientists are reporting their first successes in genetically transforming animals so that they can produce drugs and other useful substances in their milk. Although in the early stages of development, it could one day turn farm animals into living factories, producing pharmaceuticals, industrial enzymes and food additives.[16]

This process effectively turns the cow into a living machine whose sole purpose is to produce drugs for humans.

The biotechnology company, Integrated Genetics Inc., is bioengineering mice so that their milk contains a drug useful in treating human heart problems. Likewise, researchers in Edinburgh are inserting into sheep the genes needed for the production of two human proteins that could be used as drugs for the treatment of human diseases. The advantages of having animals produce these substances is that costs are substantially reduced. As one biologist remarks, "What is your input: grass and hay." Also, if more of the substance is needed, then it is simply a matter of breeding more animals,[17] of essentially building more machines.

As the science of genetic engineering becomes perfected, more and more complex substances can be produced in animals for human use. This type of "molecular farming" is just one of the ways applied genetic engineering is being realized. Another aspect of genetic engineering is the creation of entirely new creatures that are genetic recombinations of creatures that would normally be unable to reproduce naturally. One example is the "geep," a combination of a goat and a sheep.[18] These new life forms can even be patented like any other new "technologies."

One of the next applications of genetic engineering will likely be the removal of "negative" traits in humans. Currently, genetic engineers are mapping the human DNA in order to discover which particular gene regulates which specific trait.[19] What is at stake may, however, be more than just the ethical considerations surrounding the decision of what is a "negative" or "positive" trait. If and when we begin to apply technological practices to the formation of the human we will have crossed a line that has never been traversed before. If we understand engineering to mean the designing and constructing of complex material artifacts for human use, including the redesigning of existing designs for adaptation or improvement, then applying engineering techniques to the human genetic code means turning humans into the same category of artifact (that we reduce the non-human world to). Thus, everything in the world becomes an artifact, an object. This, Jonas argues, makes the human subject, not a means, but "a thing merely to be acted upon."[20] Human evolutionary change then becomes determined not by the chance integration of genetic traits (governed by adaptive mechanisms rooted in relationship with nature), but rather by the direct physical intervention of humans whose understanding of what traits are desirable or undesirable is rooted in a narrow, culturally fabricated understanding of the place of humans in nature. In other words, future humans become artifacts whose purpose resides in past generations.

We in Western society maintain a view that

humans are the subjects and "nature" is the object of our technological mastery. In this view, humans are the mediators, the appliers, the purposeful linkers of technology onto nature in order for the non-human to serve our *ends*. Humans are ethically out of bounds for technological manipulation because they are considered to have purpose of their own. Western society has always considered there to be a clear division between humans and technology, or artifacts. Now that the science of genetic engineering has made it theoretically possible for technological application to be applied to humans, this may change.

Right now we have a sense of belonging to a humanity in which we see all purpose residing. But, after several generations of engineered humans --that is, humans with pre-determined characteristics--where will the goal or realm of purpose lie? It seems that purpose will be defined forever by the previous generation and there will be no opportunity for adaptation from these pre-ordained characteristics, since the unique potential of each person will have been limited. The random genetic fluctuations that Livingston maintains are the one constant of all life will have been removed. Humans will have become domesticated, not just culturally, but very possibly, physically as well. Our "collar and chain" will be engineered right in. The possibility of engineering social control in humans will become reality.

If, as Livingston maintains, human history is one of furthering the domestication process in order to preserve social control, then genetic engineering is the final solution to the unpredictability and irrationality of all nature. In the process, humans will have become a product of the same technological applications that we enact on nature. There will no longer be any "wildness" within or without (nor will there be any "Wolf" to remind us of what has been lost). At least this is the direction we are headed if we take the domestication process to its logical conclusion. The biggest proof that our assumptions about human control are flawed is that they are self-defeating. Instead of technology being used to free humans, it will have imprisoned humans within a biological heritage designed by previous generations, and hence the domestication process will have been completed.

Notes

1. An Aesop fable as quoted in Barry Lopez, **Of Wolves and Men** (New York: Scribner's and Sons, 1978), p. 254.

2. I do not mean to suggest that "wild" and "domestic" are totally separate realms, but reading on you will find that I suggest that, while we, in Western culture, began by separating them in our minds, we now separate them biologically, or physically, as well.

3. This paper is limited to discussing the self-defeating flaw in the logic of domestication and does not address the numerous other implications that domestication raises in respect to the relationship between humans and the rest of nature.

4. John A. Livingston, " Ethics as Prosthetics," **Environmental Ethics: Philosophical and Policy Perspectives** (Burnaby, B.C.: SFU Publications, 1986), p. 71.

5. Ibid., p. 70.

6. Abbe Mowshowitz, **The Conquest of Will: Information Processing in Human Affairs** (Don Mills, Ont.: Addison-Wesley, 1976), p. 311.

7. Ibid., pp. 311-312.

8. Ibid., p. 313.

9. Ibid.

10. Ibid., quoted in Mowshowitz, p. 313. The interpolation [sic] used here refers to the sexist language in the quotation.

11. John A. Livingston, **One Cosmic Instant: Man's Fleeting Supremacy** (New York: Dell Publishing, 1973), p. 210.

12. Paul W. Taylor, **Respect for Nature: A Theory of Environmental Ethics** (Princeton, New Jersey: Princeton University Press, 1986), p. 122.

13. Hans Jonas, **The Imperative of Responsibility: In Search of an Ethics for the Technological Age** (Chicago: Chicago University Press, 1984)

14. Livingston, **One Cosmic Instant**, p.70.

15. David Suzuki and Peter Knudtson, **Genethics: The Ethics of Engineering Life** (Toronto: Stoddart Publishing Co., 1988), pp.46-47.

16. Andrew Pollack, "Transgenic Animals Make Drugs in Their Milk," **The Globe and Mail**, Sept. 3, 1987, p. B22.

17. Ibid.

18. Steven Strauss, "Science or Sin: Laboratories Are Now Creating Whole New Life Forms," **The Toronto Globe and Mail**, April 30, 1988, p.D1.

19. See for example "Wanted: Fast Ways to Map Human DNA," **The Toronto Globe and Mail**, November 7, 1987, p. D4, Pat McNenly, "Scientists Seek Ways to Repair Genes," **The Toronto Star**, August 22, 1988, p. A8, and Michael J. Kelly, "Computers: The Best Friend a Human Genome Ever Had," Unpublished paper presented at the 16th Genetics Congress, August 24, 1988. The first two articles describe the need to sequence the human genetic code primarily so we can begin to isolate genes that cause heriditary diseases, and the third article discusses the role computers can play to help geneticists attain "the goal of understanding the nature of man."

20. Hans Jonas, **Philosophical Essays: From Ancient Creed to Technological Man** (Englewood Cliffs, New Jersey: Prentice Hall, 1974), p. 107.

Toward an Original Forestry

*by rolf struthers**

A Moment (A Release).

On a day in early spring, I was sitting on a small hummock eating lunch, enjoying the warmth of the spring sun and relieving my legs after a good, long walk in the Woods when it happened. It takes a while, it never happens right away but sometimes, after hours of walking, thinking, and feeling my way along the paths of the Woods, it can happen. The wall drops and conversation begins. I breathe in fresh spring air and I feel my blood go rushing through me in a flood of exhilaration. "LIVE, BREATHE, AWAKEN" the Woods say, "Let us begin again." The ground, the smell of fresh rotting leaves, the sound of the trickling water, the hum of the first bumblebee in the nearby leaves, the unhurried wariness of the wolf spider hunting in the leaf mold, the up-shooting lush green of the trilliums and other wood spring flowers--all these things create a rhythm. I feel the rhythm coursing through me; I feel like I too am being renewed. I leap up and caper around briefly, then stop.

And the moment is gone.

But it is not completely gone. Many times now I have re-called that moment, and I am there. I and the Woods are speaking, the Woods saying LIFE and I exclaiming yes! here, life dig, root, push, lift, spread! The rhythm of spring echoes in my ears and fills my nose with its vibrant odour.

This literary passage takes us along a way toward an *origin*al forestry. When we say "original," we mean a forestry that re*turns* to its *origins* and then *turns* out into its own pathway. In this essay I try to speak with language that reminds us of the textuality of the text, breaking up words or bringing words together to remind us of their contextual origins and their origins-in-the-world, that is, the origins of language in nature and our shared experience.

This venture begins on woodpaths in the Backus Woods, an old-growth Carolinian forest in Southern Ontario. It has recently been the centre of an environmental controversy, which resulted in the Woods becoming an "Area of Natural and Scientific Interest."[1]

The Backus Woods' existence is intertwined with the forces of Western history, that is, with the questions of modern forestry management and the questions of modern Western conservation and thus Western environmental thought.

The Woods is now dependent upon the sway of modern Western technology and representational thinking. The sway of modern Western technology is an expression, translated from the thought of Martin Heidegger, which describes an underlying force within modern Western forestry and indeed all facets of modern Western life.[2] This paper intends to openly think[3] on the way in which representational thinking and the drive of modern technology entraps modern Western forestry and forest conservation into devastating and disruptive relationships with forests. To think openly on the matter of an original forestry asks us to step back from our assumptions concerning modern forestry and modern forest conservation and think openly on the matter at hand--forestry. In venturing into this confrontation I have relied on the helpful work of Martin Heidegger, particularily the texts: **What is Called Thinking?**[4] and **The Question Concerning Technology**.[5]

Let us get underway by meditating on this passage from Martin Heidegger.

> The forester who, in the wood, measures the felled timber and to all appearances walks the same forest path in the same way as did his grandfather is today commanded by profit-making in the lumber industry, whether he knows it or not. He is made subordinate to the orderability of cellulose, which for its part is challenged forth by the need for paper, which is then delivered to newspapers and illustrated magazines.[6]

Habitually we think the forester is bidden by the forest industry to "improve" natural deciduous woodlands with forest management techniques. The lumber industry is bidden by the profit-motive to make an ever greater profit from the sale of forest timber; thus it puts ever-increasing pressure on forest lands to produce timber more quickly. It is commanded by the drive for ever-increasing profits.

* rolf struthers completed his Masters in Environmental Studies in 1989. On the way he wrote "Toward an Original (Alternative) Forestry" an exploration of the metaphysical and representational roots of modern forestry. He would like to thank Neil Evernden, John Livingston and Sam Mallin for their help with the original draft. He would like to thank the members of the Editorial Board for their help with this draft. He would also like to thank Andrea. Currently, whenever the opportunity presents itself, he can be found wandering in Carolinian forests.

Lumber companies and pulp and paper companies, small or large, are no longer secure as long as they are profitable in comparison to the average profits made in the forest industry. Profit-making is measured internationally by the ability of investors to make profits in any particular industry. Thus, if gold mining is more profitable than lumber, then investors will invest in gold mining. Those that invest in the forest industry expect the same rate of return as if they had invested in gold mining and so drive the forest industry to increase its profitability in order to secure and increase the investments of its investors. This profit-making itself should not be understood, however, to be controlled by investors. Investors are themselves driven by profit-making to invest in the most profitable industry. If they do not invest in the most profitable industries, then they will be overtaken by those who do invest in the most profitable industries. Investors can only store their profits in the most profit-making industries to remain themselves profit-makers. Thus, investors are made subordinate by the drive of profit-making in the forest industry as in every industrial investment possibility which is itself subordinate to global industrial investment possibilities.

In the same way, profit-making in the lumber industry makes the forester "subordinate to the orderability of cellulose." That is, the forester finds that the most productive and efficient means of producing wood fibre, whether for lumber or pulp and paper, are silvicultural techniques that are themselves the embodiment of our modern ecological and representational understanding of the forest. Let us turn to the forester's ecological and representational way of thinking of the forest.[7]

As we walk south along the centre path in the Woods we encounter stands of red pine and mixed stands of red and white pine. These plantation stands embody the challenging drive of profit-making in the forest. Red pine and white pine are valuable tree species useful to humans. They are planted in rows, thinned and pruned. In this way the forester orders the forest and commands the forest, *challenging forth* the lumber or pulp chips he needs to supply the forest industry's sawmills and pulp and paper mills. Often the forester cannot wait for the trees to grow naturally, so fertilizers[8] are applied to challenge the trees to even greater growth and to compensate for soils that have been exhausted by previous silvicultural or agricultural stress. As well the forester cannot allow undesirable tree and shrub species to slow the growth of those trees he has under his command, so he applies herbicides[9] to destroy these "competitors." The forester also cannot allow the death of his profit-making trees through disease so he applies fungicides[10] to destroy viruses and fungal tree diseases. He cannot afford the loss of crop trees through insect infestations and depredations so he applies insecticides.[11] In this way, the forester commands the forest to supply trees for the forest industry. The red and white pines before us are the embodiment of "the orderability of cellulose" to which the forester is made subordinate, whether he knows it or not. In this way forests are being set by the forester into what Heidegger calls a "standing reserve."

Thus, even as a forest preserve, Backus Woods is part of the carved up mosaic for modern forestry of lands that are in one way or another standing reserve. Though most of these lands are not on reserve for the forest industry, every piece of land is categorized in terms of its possible usefulness or use-less-ness to the forest industry: its current reserve status or its ability to be put on reserve (its capability in terms of soils, drainage and physical features to support valuable forest species).

This challenging forth is not limited to the forester. In the same way, the scientist, environmental educator and naturalist fall into the trap of approaching the forest as "objects of research," (i.e. representations: names, diagrams, collections, vegetational inventories, etc.) or as "a living tree museum."[12] These are the records of the standing reserve. In order to ascertain the presence of an object, the researcher does not need to actually find the object in the forest but only make an observation of it in the inventory (the list of the standing reserve). We no longer need to actually visit the Woods to ascertain what is in it, we can consult an inventory. Thus we believe, in some sense that the inventory--the abstract collection of objects in the forest--is more desirable and useful than a visit to the Woods with all the variable and incidental inaccuracies that may arise from such a visit. The scientist is commanded by his science to yield up objective knowledge of the forest, while the forest is challenged by scientists seeking the forest's objective knowledge. The conservationist is commanded by the representational science of conservation to yield up scientific proof that the forest is a rare and representative Carolinian forest, while the forest is challenged to yield up rare and representative fauna and flora (plants and animals). The proof of the importance of scientific conservation is revealed in the Backus controversy where scientific conservationists arguing on the basis of the need for scientific research in old-growth forests and the rare collections of species and species communities played an important role in conservationists' arguments for the preservation of the Woods.

This is the danger, the Danger, that accompanies us on our walk, in our venture, but

which we are only now able to articulate in a way that we can begin to attend to. The Danger is the grasping, driving, challenging forth of the forest to yield up its gifts: lumber, pulp, firewood, shade, nuts, fruits, syrup, resins and sap, medicaments, scientific knowledge, rare species, conservation challenges and sacred groves. The Danger to the essence of the Woods is that we will only think of the Woods as a list, an inventory, or a tree museum.

The Danger stems from what we have called representational thinking. This thinking is driven by what we might call the drive of the modern technology of the West; we must not however, mistake this technology for something technological, for it itself is not a tool or machine or technique. The interwoven links between the Danger, representational thinking and Western technology are revealed not just by the Woods itself but also by the old Backhouse waterwheels and the new Backus Heritage Conservation Area "Nature Trail" pathway.

The Backhouse waterwheel sits at the end of the flume that brings water from the dammed pond into which the Dedrich Creek flows. It is presently a wooden, overshot wheel similar to the one John Backhouse originally used. The mill, before it was bought by the Long Point Region Conservation Authority (LPRCA), had a turbine at the bottom of a ten foot well.[13] The mill also had, at that time, a natural gas engine which could be hooked up to the main drive shaft of the mill, and the water wheel disengaged, if the water level was too low. The dam places the water of the Creek "on call" and ready for use. The natural gas engine is similarly on call as is the mill itself: its belts and buckets, grinders, baggers, rollers, sifters and the grains stored in bins, ready to be ground and sold as animal feed, flour for baking, oats for cooking, etc.

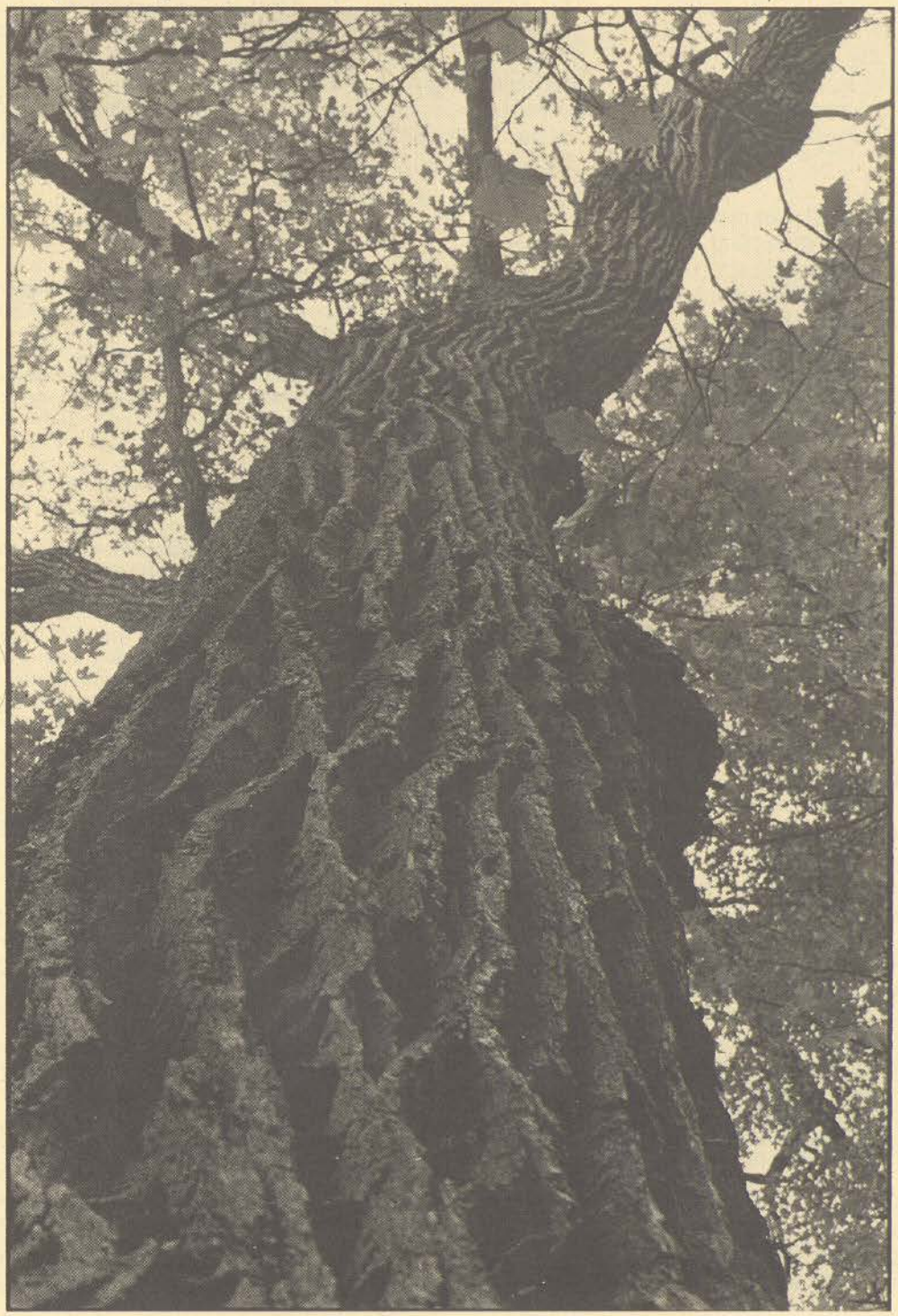
Thus the dammed water of the Creek and all the materials and machinery of the mill are placed on reserve, in other words, on call for the making of grain products. However in order for the Creek to be dammed up there first must be *the thinking that thinks* of the water as an object that can be stored up in readiness for the use of a grist mill. This thinking would also see the forest as "ready-to-hand;"[14] objects ready to be sawn into timber for export to Great Britain and the eastern United States and to build the sawmill, gristmill, local housing, harbour facilities, canal systems and fortifications. This thinking would also see the forest as a supply of nuts, sap, etc. The technology involved in thinking of the water mill is a way of thinking that does not as yet show itself fully. According to our modern way of thinking the mill is now inefficient. The mill dam is insufficient; it cannot always guarantee "peak" production--in fact, it cannot guarantee any production at all. When the water is low in the Creek, sufficient power to drive the mill is unavailable. We could say the dam does not gather the water together in a way that successfully challenges the Creek to be orderly and supply the Backhouse mill continuously.

It is because the Backus grist mill, waterwheel and dam cannot produce at all times, that the mill has passed out of use and become a curiosity piece. It is a thing that still stands for tourists to poke through, though its thingliness[15] is ended. The mill is now a piece of Ontario's heritage: "a resource of antiquity." Thus it has been successfully put into the standing reserve of this age as a part of the Backus Heritage Conservation Area. The mill has therefore become part of the standing reserve but not as the thing that it was but as a thing which has had a new determination of its thingliness attached to it as Ontario's heritage.

The Backus mill, homestead and former woodlands (now the Backus Conservation Area and The Backus Woods, respectively), are joined into the larger history of Upper Canada. As well, the mill and homestead were constructed because of the historical movement that has placed the Woods into the context of Western history.[16]

Backus Woods lies in the path of Western history as is shown by recent improvements to the "Nature Trail" in the Backus Heritage Conservation Area. This nature trail was widened and flattened last summer. It appears the LPRCA used a bulldozer. A bulldozer is a good symbol of the progress of the technology of the West. This particular bulldozer gouged out a broad, flat pathway from the mill pond up to the third concession. What was a small footpath that made its way along the banks of the Dedrich Creek up to the third concession and over along the Dedrich floodplain path, is now a large muddy walkway wide enough for trucks. The bulldozer tore up and smashed the roots of trees along the high side of the path leaving a scar of broken roots and exposing the sub-soil which is now eroding into the pathway. It pushed the soil it had torn up from the high side, down onto the lower creekside covering up the trunks of trees. Two magnificent white ashes, their trunks now a foot deep in subsoil, stretch their arms out over the Creek. A sign beside them identifies them as white ash--*Fraxinus americana*. Will the ashes survive? Trees react very poorly to such changes. It is likely that the bulldozer broke or damaged many of the twin ashes' roots. Thus weakened, the ashes may experience root rot and other root diseases. However, it is because their trunks have been buried that the twin ashes

probably will not survive. Many trees are very resilient to change and some trees are unaffected by fluctuating soil levels (for example floodplain tree species). However most tree species will die if their trunks are covered with soil forty centimetres or more from the base of the trunk. Other trees have died and may die from the work of the bulldozer. This summer, while walking along this path by the Creek, I noticed that three trees (which had previously fallen into the Creek because their principal roots were cut by the bulldozer blade) have now been sawn up and their trunks removed. The pathway is now broad and even, making it easily accessible. But the cost of this easy access is the life of trees, ironically, in a conservation area.



Should we be surprised to see that, in a conservation area, the improvements to a nature trail actually harm those beings they are trying to conserve? It is the over-arching and over-whelming drive of the modern age to use a bulldozer to "improve" the nature trail. The path the bulldozer makes is the kind of path we most often find ourselves walking on in this age--a path that is gouged out, paved over and marked off with signs everywhere: turn right, turn left, bathrooms this way, three kilometres to go, no motorbikes allowed, etc. The most obvious of these, such as the now bulldozed, widened and flattened path, display our representational distance from trees and therefore break their roots and cover up their trunks without care and without understanding. The bulldozed path shows up the way we think in this age in the way it flattens out and controls everything in its path before it may happen. We seek to prevent the kind of interference a natural path might cause. And we seek to prevent it from reminding us that it is a natural path through the Wood that bends our way and that bends to our walking way. We can see good examples of these two ways at work in animal paths that make their way through the Woods. The bulldozer path seeks to control the way the path moves through the forest: it maintains the path by moving dirt into areas where the Creek threatens to pull the path down and it controls obstructions by cutting trees and branches out of the way and removing uncertain inclines and downward