

Maran, Timo 2014. Place and sign. Locality as a foundational concept for ecosemiotics. In: Siewers, Alfred K. (ed.), *Re-Imagining Nature: Environmental Humanities and Ecosemiotics*. Lewisburg: Bucknell University Press, 79-89.

Place and Sign

Locality as a Foundational Concept for Ecosemiotics

Timo Maran

The study of relations between culture and nature requires a discussion between different fields—no so-called pure discipline can completely embrace such a diverse subject.¹ Starting from the 1960s, several disciplines, such as ecocriticism, cultural ecology, environmental aesthetics, environmental philosophy and others have become engaged in this discussion. These disciplines, proceeding from the theoretical foundations of literary criticism and theories of art and philosophy, have attempted to interpret the relations between man and nature. Such a research situation can be schematized as having four intertwining aspects: theoretical framework, research object, cultural, and natural context. The first one of these—theory—can be considered to carry academic identity and historical legacy, whereas the three latter are rather dependent on a particular research object and its local conditions. As the theoretical background of the abovementioned border disciplines originates mostly (although definitely not solely) in the Anglo-American academic tradition, a question arises: how adequate at all are the theory and methods originating from one tradition for the analysis of the local material in another tradition?

This is an issue, for instance, regarding Estonia, a small Finno-Ugric culture in Northern-Europe from where I come. In studying culture–nature relations in Estonia, one soon discovers that many important concepts of ecocriticism, such as “wilderness,” “environmental writing” and indeed, even the “culture”-“nature” opposition itself, are not operational. Our cultural environment, historical legacy and experience of nature are rather different when compared with these in, for example, the United States. Maybe the greatest difference between the so-called small and large cultures, and between the paradigms stemming from these cultures, is aiming at different degrees of generalization. While a large culture, and a large scientific tradition deriving from such a culture, can quite naturally claim to represent universal experience and knowledge, the academic thinking of a small nation is haunted by the doubt whether the acquired

knowledge represents only local matters or whether it is universally relevant. Also, the question of self-identity is much more important for a small culture.

Therefore, the academic tradition originating from such a culture should have its advantage in centering upon the differences, in contrast to a "large" science, searching for the common. For a small culture, scientific concepts that allow describing and validating its difference and peculiarity, both on the object level and on the meta-level, also are especially valuable. The lack of methods for describing and evaluating the axis of locality-globality is simply the most obvious stumbling block in the way of bringing together local culture and global science. This is also an issue that may hinder the development of studies of culture-nature relations: whether our theoretical language is responsive enough to convey local peculiarities. One way of bridging such a gap could be the creation of comprehensive theoretical conceptions, which could point out some direction for describing local cultures, at the same time leaving the exact nature of the later descriptions unspecified.

The interest of a discipline striving for meta-levels—semiotics—in describing the relations between man and the natural environment, man's position in biological systems, and the role of nature in human culture, is rather belated. Although ecological semiotics has been mentioned in different variations and contexts since the beginning of the 1990s,² ecosemiotics as a paradigm has only been observable since the publication in 1996 of Winfried Nöth's article, in which he defined ecosemiotics as a discipline studying semiotic aspects of relations between organisms and their environment.³ Two years later Kalevi Kull narrowed ecosemiotics some more, claiming that it enfolds semiosis, which occurs between man and his ecosystem—"ecosemiotics can be defined as the semiotics of the relations between nature and culture,"⁴ thus distinguishing ecosemiotics from bio-semiotics. The ecosemiotics seminar held at the Imatra International Summer Institute for Semiotic and Structural Studies in 2000 and the special issues of several semiotic journals⁵ also bear testimony to the birth of a new paradigm. More recent developments in ecosemiotics include attempts to establish connection with system ecology,⁶ landscape ecology,⁷ and ecocriticism.⁸

Next, we could inquire what knowledge the ecosemiotic approach can add to the discourse that studies relations between man and nature, and to the discussion where ecocriticism, cultural ecology, environmental aesthetics, scientific ecology, environmental philosophy, and other disciplines meet. The aim of the chapter is to propose one modest possibility—*locality*, seen as a characteristic that invariably accompanies the relations between a subject and its environment—and to give a definition of this notion based on semiotics. Here I construe *locality* as a characteristic of semiotic structures by which they merge with their surroundings in such a way that they cannot be separated from their environment without significantly altering their structure or information contained in this structure. This concept proceeds from the understanding that a semiotic process or semiosis always involves particular or singular phenomena. In the semiotic tradition of Charles S. Peirce and Thomas A. Sebeok, culture, and for the most part also nature, can be considered as sequences

or patterns of semioses that inevitably put emphasis on their local identity. On the other hand, the concept of *locality* emphasizes the qualitative character of environmental relations.

As shown below, the mutual conditionality of a subject and its surrounding environment characterizes both living organisms and sign systems of human origin, and it is discussed by both theoretical biology and theoretical semiotics—the two disciplines from which ecosemiotics mostly draws. Therefore, the approach proposed here is quite naturally characteristic to ecosemiotics, and it could find application in the study of relations between culture and nature in their wider sense. The role that *locality* as placement in a certain natural environment plays in the shaping of cultural identity will be discussed in the final part of the chapter.

LOCALITY AS A CHARACTERISTIC OF LIVING ORGANISMS

The notion that each living being is to a greater or lesser extent adapted to its environment is one of the main postulates of Darwinist evolutionary biology, and it also belongs to the core stock of ecology. The studies of such adaptations and their mechanisms fill much space in modern publications on biology. But still, the relation between an organism and its environment remains greatly an abstraction in modern evolutionary biology. It is mainly defined on the basis of certain indirect and abstract indicators, such as fitness or adaptive value. Environment as a medium of certain characteristics surrounding a real organism can become an object in ethological studies, natural history studies or in other forms of field biology, when behavior of specific individuals is observed.

In adaptive relations between animals and their environment two aspects can be distinguished: physical correspondences, that is, between the animals' body forms, physiology and their environment; and communicative or semiotic correspondences, where animal as an individual perceives and responds to the particular environmental surroundings. These two aspects are inevitably related: for example, a physical adaptation such as the structure of the mammalian eye makes us humans capable of perceiving landscape the way we do. At the same time these two aspects are still clearly different: communicative or semiotic correspondences are qualitative and related to individual interpretation and development. The relation between a living organism and its environment becomes special and unique as soon as we examine the living organism as a subject, allowing it a certain freedom of interpretation and choice. Jakob von Uexküll, one of the main shapers of the biosemiotic view, has well depicted this subjective phenomenological view:

The body of an animal can be compared to and studied like a house: the anatomists have so far studied in great detail how it is built; and the physiologists have studied the mechanical appliances in the house. The ecologists have also plotted out and studied the garden in which the house stands. However, the garden has been depicted as it presents itself to the human eye, resulting in the neglect of the picture it presents to the house's

occupant. . . . Each house has a number of windows that look out over the garden: a light-, a tone-, a scent- and a taste-window, and a large number of touch-windows. The garden, as viewed from the house, changes according to the windows' structure and design: in no way is it a part of a bigger world; it is the only world that belongs to the house—its Umwelt.⁹

If we proceed from the Uexküllian biosemiotic paradigm when examining the relations between a living organism and its environment, then the placement of the living organism in a certain environment becomes essential—and the characteristics of both the environment and the organism merge in the subject's interpretative activity—semiosis. Environment prescribes the living subject some characteristic features, according to which the organism as a subject can assign its own self-specific meanings to the elements of the environment. In case of other environmental elements the whole system of meanings would be different (they would interrelate with other sign-vehicles). The relation between the subject and its environment also defines all secondary phenomena originating from semiosis: experience (accumulating from past semioses), memories (which allow previous experiences to be recognized), and cumulating on the level of species, also the characteristics partially developing in the course of evolution (the latter can be called semiotic selection).¹⁰ Each feedback-based communication model between the subject and its environment can be examined as a mechanism allowing the development of correspondence between the subject and its environment, or adaptation. Perhaps best-known and most cited among them is the Uexküll model of a functional circle, where the subject relates to the object via sensing and acting (see figure 3.1).

The uniqueness of the relation between the living organism and its environment and the semiotic determination of its outcome has been conceived by other authorities in the field of biosemiotics. Jesper Hoffmeyer writes:

If evolution is concerned, what matters is not genetic fitness but *semiotic fitness*. After all, fitness depends on a relation: something can be fit only in the given context. [—] But if genotypes and envirotypes reciprocally constitute the context on which fitness should be measured, it seems we should rather talk about the fit in its relational entirety, that is a semiotic capacity.¹¹

Based on Hoffmeyer's specification, semiotic fitness in its broader sense can be defined as the success of a subject in adapting to its environment, its skill in bringing together information originating from itself and information originating from the environment with the help of semiotic processes. An organism is semiotically fit if it succeeds in interpreting its organismic information in respect to the surrounding environment and vice versa. While adapting to the environment the subject localizes itself in the environment; thus, semiotic fitness indicates success in localization. On the other hand, it shows how much the structure of the subject will be affected if separated from its environment. Because of such dual relationship, localization should not be regarded idealistically as a desirable condition, since being related also

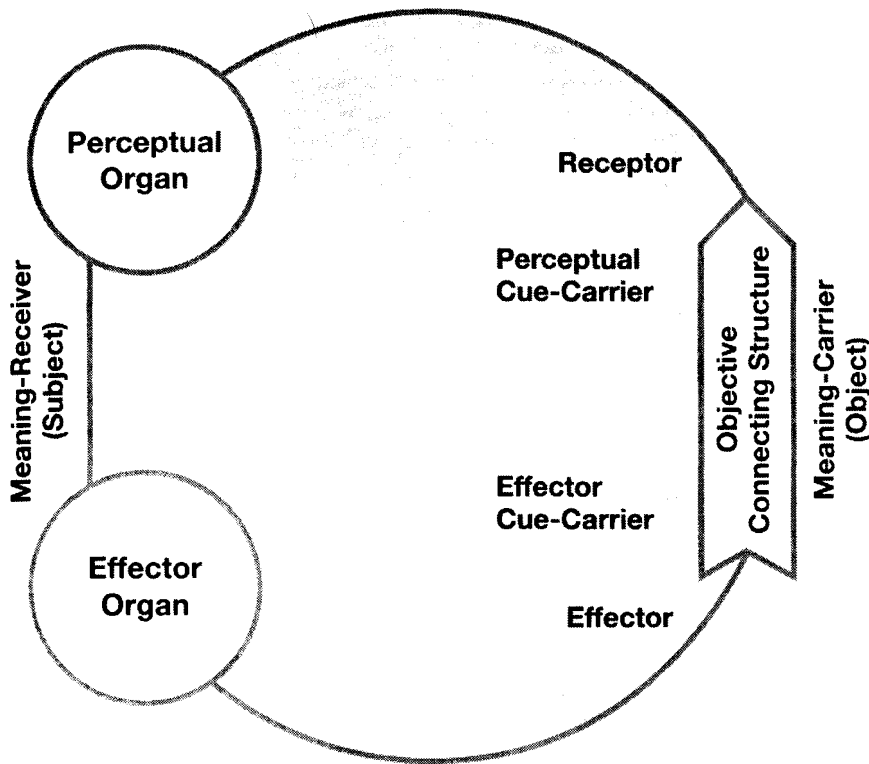


Figure 3.1. Jakob von Uexküll's functional cycle.

means being dependent. In biology, specialization and co-evolutionary adaptations are studied as special life strategies of the organisms. Pronounced specialization to specific environmental conditions tends to go along with rareness as a living strategy, and specialized species are more vulnerable to environmental change.

CONTEXTUALITY OF SIGN PROCESSES

Locality as a characteristic of a semiotic structure has been prominent in discussions in semiotics and culture theory as well, and the notions of *context* and *contextuality* become relevant here. Several semiotic approaches have regarded meaning as conditioned by context, and Winfried Nöth lists British contextual school and distributive linguistics as more important among them.¹² For example, Eugene Nida states in his article of 1952 that "meaning is definable by the environment,"¹³ and a similar view is also noticeable in his later works (e.g., his long discussion on the dependence of the

meaning of the word *run* on its literal and environmental context).¹⁴ I. A. Richards adds the temporal axis, orientated to the past, to the meaning-environment relationship: "A word, like any other sign, gets whatever meaning it has through belonging to a recurrent group of events, which may be called its context. Thus a word's context, *in this sense*, is a certain recurrent pattern of *past* groups of events, and to say its meaning depends upon its context would be to point to the process by which it has acquired its meaning."¹⁵ The notion of context has had also an important role in the works of the members of the Prague Semiotic School. Roman Jakobson, developing further Karl Bühler's organon model of language, relates context to the referential function of language in his model of verbal communication. This line of thinking is developed further by a student of Roman Jakobson, the eminent American semiotician Thomas A. Sebeok in his semiotic studies of animal communication, zoosemiotics.¹⁶

Context as a structure surrounding the text or the sign influences both the formal aspects of the sign as well as the possible meanings a subject might attribute to the sign. Context remains outside the sign, at the same time specifying the limits and characteristics of the sign through semiotic relations. Thus the morphological form and meaning of a neologism depends on the notions already existing in a language, but also on the presence of meaningful and formal gaps in the language. There are well-known examples of context having its effect upon possible interpretations. A word may have a different meaning in different contexts; a behavioral act may be appropriate or inappropriate depending on its context. Also, a work of art or a literary work, as well as criticism of such works, acquires part of its meaning through the wider cultural context. Sebeok has emphasized the role of context in the interpretation of the sign by presenting situations where in the case of conflict between the message and the context, the human recipient builds his/hers interpretation based on the context or ignores the message altogether.¹⁷

The conception of restraints, borrowed from cybernetics and introduced into semiotic paradigm, has an essential part in describing the determining influence of context. According to this idea, context brings along redundancy restraints for the sign. Proceeding from redundancy, it is possible to specify possible meanings of the sign, but the sign itself can also carry information about the context of its usage. To illustrate such a mutually binding influence, it is relevant to cite Gregory Bateson: "If I say to you 'It is raining' this message introduces redundancy into the universe, message-plus-raindrops, so that from the message alone you could have guessed—with better than random success—something of what you would see if you looked out of the window."¹⁸ Any already effective semiotic process also partially determines the further developmental possibilities of the same process—the effect of the context expanding itself along the temporal axis. While reading a novel or watching a film we can notice that things we have already experienced determine the further course of actions. Similarly, each scientific paper or work of art partially determines the further developmental possibilities of the discourse under observation. This characteristic of sign-context relation leads us to think about the causality in semiotic processes as it

has been specified by Charles S. Peirce: how a semiosis directs the possibility of future semioses.¹⁹ Such tendency seems to characterize sign processes rather generally; Niklas Luhmann has said:

If signs are to be combined with signs for the purpose of communication and thought, for instance, then expectations have to be directed and the possibilities of further connections limited. The subsequent sign must not be predetermined, nor should it be too surprising. Each sign must, therefore, not only function as an entity by itself, but also provide redundant information.²⁰

Following the theory of semiotics that examines context as a certain type of general abstraction, there might arise a doubt whether it is relevant at all to talk, in relation to context, about some kind of fitness as a preference of certain contexts to others, since in the wider sense, context always surrounds all semiotic structures, even if the context means the lack of semiotic structures. But such doubt will be refuted when we recall the ability of semiotic structures to organize themselves. The subject that through its semiotic activities establishes redundancy restraints regarding the surrounding context, thus making the surrounding context valuable for itself. Thus, again, we cannot describe the subject-context relation plainly from the objective viewpoint, but the individual, phenomenological and qualitative relations need to be taken into account. Semiotic fitness and the valuability of context or environment, rather, stem from the existence of the subject in a concrete environment and its semiotic activities in it. Time spent in engagement with the environment is a value standard for this environment.

LOCAL IDENTITY AND ENVIRONMENT

Local cultures interact with their environments, and this relation supports their identity. Anthropologist Tim Ingold has described a dual process in his works, in the course of which humans and animals adapt to the environment they live in, at the same time individualizing this environment.²¹ The mechanism of creating such identity works on all levels of human culture: one's native place and its elements support the self-definition of an individual, and language becomes the means of denoting environmental objects and phenomena; the memories and experiences that the individual associates with his/her identity are also specific to the place. The relations with one's environment can also be non-linguistic: Swedish anthropologist and semiotician Alf Hornborg has distinguished between sensory signs, linguistic signs and economical signs in a study of environmental relations of Amazon Indians. The sensory signs that include myriads of "sensations of the eye, ear, nose, tongue, and skin, only a fraction of which have been reflected upon and assigned linguistic categories,"²² allow the deepest communion with the environment. If we return to the cybernetics-centered approach, we can claim that the amount of the so-called redundant information that connects the subject to its environment increases in an

indigenous culture through active engagement. When information accumulates, an individual is capable of predicting environmental processes and is thus able to rely on his/her environment.

Abrupt changes in the environment due to extra-cultural factors or moving into another environment also bring along inevitable changes in identity. The individual and culture as semiotic structures invariably require some kind of *context* to preserve themselves; therefore, when the previous environment disappears, the creation of new structural semiotic relations with a new environment will begin. In other words, if the context is missing, then the culture or individual creates its own context. Such processes can be observed in a case when a human being, having replaced his/her natural environment with an artificial environment, constructs around himself new media in which to store his identity and in this way attempts to compensate for the loss of memory tradition. Hornborg describes this process as the replacement of the sensory and linguistic signs with more anonymous economic signs that denote exchange values.²³ Creation of the new context, however, tends to bring along standardization and simplification because culture can rely here mostly on its existing patterns, as there is no environment that could provide creativity and novelties through its diverse patterns and stochastic processes.

The connections with the surrounding environment are often the only advantage that local culture has in comparison to the globalized culture. The global culture is self-abundant and acquires its identity through abstract, outward-projected ideas and values, such as economical values, abstract symbols and ideals. The attention of the local culture is more directed towards its surrounding environment, its patterns and peculiarities. Such opposition of these two approaches to the world has been described by Joseph W. Meeker, who attributes self-abundancy to the Western philosophical tradition, to tragic genres, and to pioneering species in biological communities, and centeredness on environment and on local cultures to comic genres and to native species.²⁴

The idea of locality and contextuality of semiotic subjects is sharply opposed to a dualism that emphasizes the difference between culture and nature. The statement that, conceptually, nature is the product of culture and that it is impossible to learn anything about nature that is positioned outside culture, can even be considered dangerous to local culture.²⁵ Such statement renders unimportant the natural environment surrounding culture and the culture's relations with its specific local environment. On the other hand, the contextual situated understanding of culture may also conflict with the views in natural sciences and nature protection. The way of thinking that prescribes how in order to preserve natural environment we should also preserve its non-material component (cultural tradition, which supports and adds value to this environment), differs from dualistic nature preservation based on the conception of *wilderness*. In his book *Landscape and Memory*, Simon Schama outlines various relations between different cultures and natural environments, focusing on especially those aspects of local nature that have been included into cultural memory, which have been adopted by culture and that are reflected in culture either in litera-

ture, art or myths.²⁶ Regarding cultural texts about nature, that is, nature writing, nature documentaries, or environmental art, we may often discover that it is not possible to interpret them without including in the interpretation the patterns and processes of the environment itself, or the results of semiotic or communicative activities of nonhuman animals. Semiotically speaking, such cultural texts seem to have a dual character: in addition to meanings present in the text itself, they also include or refer to the information present in the environment. The part of nature that has been included in cultural memory unavoidably belongs to the natural environment as a local entity—by describing nature, culture ties itself to it. As much as culture embraces nature, makes nature a part of itself and gives it meaning, this culture itself starts to resemble nature and specific locations in it. As much as culture has given meaning to nature, it has become like its natural environment.

CONCLUSION

The modern world is foremost characterized by the unification of cultural contexts. Since natural environments unavoidably differ from place to place, this process brings along the reduction of man's semiotic fitness in relating to local nature. The correspondence of subject-related and environment-related information is hindered, or in plain words—people do not know any more how to *be* in nature. At the same time the mass media has been aiming at the weakening of relations between local cultures and local natural environments, since the emergence of cultural homogeneity, which is the prerequisite of globalization, is possible only in this case.

Studying such processes would require suitable theoretical concepts. The relations between a sign and its context have been much discussed in semiotics, and theoretical biology has thoroughly studied the relations between living organisms and their environment. Ecossemiotics that has its roots in both of these disciplines could be actively involved in the studies of the relations between culture and the local natural environment. The semiotic concept of locality proposed here, concepts of context and contextuality with their long history in cultural theories, and Hoffmeyer's notion of semiotic fitness, could be possible and appropriate starting points.

NOTES

1. An earlier and substantially different version of this article was published under a different title, "Ecossemiotic Basis of Locality," in *Koht Ja Paik: Place and Location II*, eds. Virve Sarapik, Kadri Tüür, and Mari Laanemets, Estonian Academy of Arts Proceedings 10 (Tallinn: Estonian Academy of Arts, 2002), 68-80. Research for this work was supported by the European Union through the European Regional Development Fund (Center of Excellence CECT, Estonia), by Estonian Science Foundation Grants No. 7790.

2. Kalevi Kull, "Semiotic ecology: Different Natures in the Semiosphere," *Sign Systems Studies* 26 (1998): 347-48.

3. Winfried Nöth, "Ökosemiotik," *Zeitschrift für Semiotik* 18, no. 1 (1996): 7-18; Winfried Nöth, "Ecosemiotics," *Sign Systems Studies* 26 (1998), 333.
4. Kull, "Semiotic Ecology," 350.
5. Thomas Sebeok, Jesper Hoffmeyer, and Claus Emmeche, eds., *Biosemiotica*, Special Issue, *Semiotica* 127, nos. 1-4 (1999); Claus Emmeche, Kalevi Kull, Frederik Stjernfelt, *Reading Hoffmeyer, Rethinking Biology*, Tartu Semiotics Library Series 3 (Tartu, Estonia: Tartu University Press, 2002); Claus Emmeche, Jesper Hoffmeyer, and Kalevi Kull, eds., *Biosemiotics*, Special Issue. *Sign System Studies* 30, no. 1 (2002); "Zeichenverhalten der Tiere," Special Issue. *Zeitschrift für Semiotik* 8, no. 3 (1986).
6. Soeren Nors Nielsen, "Towards an Ecosystem Semiotics: Some Basic Aspects for a New Research Programme," *Ecological Complexity* 4, no. 3 (2007): 93-101.
7. Almo Farina and Andrea Belgrano, "The Eco-field Hypothesis: Toward a Cognitive Landscape," *Landscape Ecology* 21, no. 1 (2006): 5-17; Almo Farina, "The Landscape as a Semiotic Interface between Organisms and Resources," *Biosemiotics* 1, no. 1 (2008): 75-83.
8. Timo Maran, "Towards an Integrated Methodology of Ecosemiotics: The Concept of Nature-Text," *Sign Systems Studies* 35(1/2) (2007): 269-94; Alfred K. Siewers, *Strange Beauty. Ecocritical Approaches to Early Medieval Landscape* (New York: Palgrave Macmillan, 2009).
9. Jakob von Uexküll, "The Theory of Meaning," *Semiotica* 42(1) (1982): 73.
10. Timo Maran and Karel Kleisner, "Towards an Evolutionary Biosemiotics: Semiotic Selection and Semiotic Co-option," *Biosemiotics* 3, no. 2 (2010): 189-200.
11. Jesper Hoffmeyer, "The Unfolding Semiosphere," in *Evolutionary Systems: Biological and Epistemological Perspectives on Selection and Self-Organization*, ed. Gertrudis Van de Vijver (Dordrecht: Kluwer Academic Publishers, 1998), 290-91.
12. Winfried Nöth, *Handbook of Semiotics* (Bloomington: Indiana University Press, 1990), 100.
13. Eugene A. Nida, "A Problem in the Statement of Meanings," *Lingua* 3 (1952): 121-37 at 126.
14. Eugene A. Nida, *Contexts in Translating* (Amsterdam: John Benjamins Publishing, 2001), 31-32.
15. I. A. Richards, "Functions of and Factors in Language," *Journal of Literary Semantics* 1, no. 1 (1972), 34.
16. Thomas A. Sebeok, "Semiotics and Ethology," in *Perspectives in Zoosemiotics*. Janua Linguarum. Series Minor 122 (The Hague: Mouton, 1972): 123-32.
17. Thomas A. Sebeok, "Communication," *A Sign Is Just a Sign* (Bloomington: Indiana University Press, 1991), 29-30.
18. Gregory Bateson, *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology* (London: Paladin Granada, 1973), 383-84.
19. Charles Sanders Peirce, *The Collected Papers of Charles Sanders Peirce*, vol. 5, eds. Charles Hartshorne, and Paul Weiss; and vol. 8, ed. Arthur W. Burks (Cambridge, MA: Harvard University Press, 1994), 5:253, 8:178.
20. Niklas Luhmann, "Sign as Form," *Cybernetics and Human Knowing*, 6, no. 3 (1999): 27.
21. Tim Ingold, "The Temporality of the Landscape," *World Archaeology* 25, no. 2 (1993): 152-75; and "Building, Dwelling, Living: How Animals and People Make Themselves at Home in the World," in *Shifting Contexts*, ed. M. Strathern (London: Routledge, 1995), 57-80.

22. Alf Hornborg, "Vital signs: An Ecosemiotic Perspective on the Human Ecology of Amazonia," *Sign Systems Studies* 29, no. 1 (2001): 128.

23. *Ibid.*, 128.

24. Joseph W. Meeker, "The Comic Mode," in *The Ecocriticism Reader: Landmarks in Literary Ecology*, ed. Cheryll Glotfelty and Harold Fromm (Athens: University of Georgia Press, 1996), 155-69.

25. Such an awareness of danger applies to all kinds of "modernist" worldviews, which state that humans are able to learn something only about the world that has already been affected by consciousness.

26. Simon Schama, *Landscape and Memory* (New York: Alfred A. Knopf, 1995).