

January 26, 1998, Danny de Vries

Summary of Historical Ecology

If the assumption that culture has triumphed over nature is indeed a mistaken, historical ecology would be the first to point this out. According to Crumley (1994), anthropological evolution textbooks couch the first part of the story is usually in evolutionary and environmental terms, while the second part denies the environment a meaningful role. Here, values, beliefs and issues, history, and culture start to constitute the key elements of human history instead. As a result, few efforts seem to have been made to incorporate information about how humans have altered the environment and how environmental change revised human activity. To exemplify this, Crumley points to the disciplinary separation between Archeologists and Physical anthropologists versus Sociocultural anthropologists, and in a more general to the chism of "the two cultures" (after P.C. Snow) of the humanities and sciences as a whole (Crumley, 1998).

Lack of incorporation of this human-environmental dialectic is thus no accident. Ingerson (1994) in particular investigates the deeper causes of this duality, tracking and testing the Nature-Culture dichotomy. Her review of the theoretical materialism-idealism debate in environmental history, the interdisciplinary case reviews of the *Journal for Forest and Conservation History*, and personal classroom discussions reveal a deeply ingrained tendency to emphasis either the human or environmtal side of the picture. This perceived dicotomy, strongly embedded in our language, can however be overcome by introducing historical data--unique, contingent connnections between cause and effect--into the systemic functioning of a structure.

According to Winterhalder (1994), emphasizing this historical dimension, as he does in his evolutionary ecology, draws attention to an important epistemological assertion: *a complete explanation of ecological structure and function must involve reference to the actual sequence and the timing of the causal events that produce them*. According to him, the behavioral properties of the ecosystem are only indirectly revealed in the manifest form and behavior of the extant system. Leaving out the historicity of the ecosystem, leads the traditional focus to emphasize structural stability. However, Winterhalder asserts, what a system is doing rarely gives an indication of what it would do under changed conditions. To understand the system then, temporal variation becomes key. Normative descriptions and averaging statistics,

characterizing most studies of the environment, thus need to be replaced by interest in temporal dynamics, discontinuity, unpredictability, and historic quality.

Concepts play an important role in an Historical Ecology. Striving to create a new, shared language for multidisciplinary interaction, concepts which encourage interdisciplinarity, especially bridging the gap between humanists and scientists, are looked for. Crumley emphasizes contradictions, scale, culture, region, boundaries, biodiversity, heterarchy and landscape. To this Winterhalder adds: ecosystem, patchiness, persistence (versus predictability), and resilience (versus stability). These concepts all play their role in a methodology centered around long term, dialectic, dynamic change. According to Crumley, most cultural geographers and cultural ecologists lack an explicit historical component in their analysis. The holistic disciplines of archeology, historical archeology (see Garman et al.), ethnohistory, and ethnography play therefore an important role, putting anthropology at the center of the endeavour.

Two examples of an Historical Ecology can be found in the readings. First of all, Crumley describes ecological change in Burgundy, France. In this paper, a link is made between climate change and the decline of the Roman empire, as well as the descent into the Dark Ages, which follows from the lost Celtic cultural knowledge on how to deal with variability. Cronon (1983) gives another example based on the New England early colonial area. Although differing in time depth from Crumley's work and by its sole reliance on historical documents, Cronon's description is well taken, and resembles Crumley's in its emphasis on ecosystem dynamics, change, dialectics, perception and boundaries. However, Cronon's approach differs in that it is not multiscale, relying on one geographical level, and seems to be less apt to bridge the physical sciences in its description.

Finally, an important philosophical problem arrives with historicizing ecology. As Worster argued (in Ingerson), to abandon the constancy of an undisturbed nature is psychologically uncomfortable, because that belief provides a standard against which to judge our actions. How can we overcome this problem? Is the scientific community ready for such dramatic shift in perspective? Ingerson proposes a new ethical science as a tool for building a more egalitarian relationship between culture and nature: *"a essentially horizontal and temporal based standard for accountability, based on communication between equals rather than a description of a passive object (nature) by an active subject (culture including science..."* The biggest problem perhaps is explaining nature as to change our way of understanding nature from within the current subject/object discourse. As such historical ecology would be

locked within a discourse, and forced to probe for weaknesses and contradictions from within. And doing this, it needs all the help it can get.

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