Considering critical dualism:
A Response to Fikret Berkes

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It is an honour to be asked to comment on Fikret Berkes' keynote presentation. I have been influenced by Berkes' work every since graduate school when I attended the meeting he organized of the International Association of the Study of the Commons (then Common Property) in 1991. By both training and interest I am a sociological human ecologist and my field of work is aquatic ecosystems; so he and I have very similar interests. My reaction to his work has not been uniformly positive, however, and 'resilience thinking' has been one strong focus of my scepticism. This scepticism has moderated considerably in recent years.

In Human Ecology we are constantly tempted by analogical reasoning. We see a pattern in how ecosystems operate and then start to see similar patterns in how society operates. Resilience initially struck me as exactly that kind of idea. The ability of an ecosystem to maintain functions after a disturbance seems intuitively important to understand and improve. But why should we think that the maintenance of a set of social functions after a disturbance is either a fruitful object of social analysis or a desirable quality? We want to disturb society. We want to disturb the way it treats ecosystems! And we want it to stay disturbed!

The theme that Berkes refers to as seeking to restore unity in 'the separation of mind and nature' is deeply ingrained in the resilience literature. Sometimes this takes positive forms as when Berkes insists that we recognize that social and ecological aspects of marine management are closely associated. The idea of thinking of social-ecological systems is the essence of Human Ecology. A less helpful form is illustrated when Low *et al.* (2003) write '[w]e find it odd that social scientists have traditionally drawn more on physical analogies in developing an approach to scientific explanation than on biology and ecology' (103). Social scientists should not be developing approaches to explanation from analogies in the first place, they should be reasoning from observation.

Over the last several years, it has become very clear that very many of the aquatic ecologists who wish to work with social scientists on common problems are very committed to ideas like resilience, tipping points, and panarchy. These days, facing the problems we face, being multidisciplinary is basic to making one's work worth doing. The ensuing requirement to read much more deeply into the entwined literatures of social-ecological systems, resilience, and complex adaptive systems led me to the discovery that concepts such as social resilience are generally handled, as Berkes does here, in subtle and careful ways that take many of the sociological critiques into account. I am now convinced that the 'resilience' points at social dynamics that are central to Human Ecology.

Understanding social-ecological resilience, however, would be improved by an injection of the dualism that writers in the resilience tradition are so wary of. Society and nature are indeed deeply intertwined. But since the development of general systems theory two generations ago we have understood that the first step to understanding the interactions and mutual adaptations among systems is to clearly define their boundaries. To progress, Human Ecology needs a clear conceptual separation between society and nature, something that their deep interconnection makes problematic. The best resolution to this conundrum I know of is to think of society as made up of communicative systems built from shared meanings. In this perspective institutions are seen as shared meanings that are iteratively recreated as they both guide behaviour and aid in its interpretation. Empirical research on how individuals actually make use of institutions, and hence reproduce them, strongly supports this view (Heritage 1984). This insight also defines a boundary between society and nature as two different kinds of systems that operate by very different logics: the causal links among matter and energy on the one hand and the determinants of different types of mutual understanding on the other. In this rendering of the problem, analogical reasoning can easily points us towards shallow similarities that obscure the profound differences.

Where I think a bit more dualism might be of some benefit in understanding resilience relates to the trend that Berkes promotes when he observes that 'social and ecological critiques of conventional management are becoming, or could become, more aligned'. He emphasizes the need for perspectives such as political ecology that challenge the 'economism, strict human-centric use, and commodification of nature' that characterize resource management. One important possible response to this need is the expanded application to resilience of the tradition of critical social theory. I am thinking here of thinkers like Gadamer, Foucault and Habermas. Such theories focus on the intersection of power, identity and knowledge. They have been developed with diagnostic intent and they make self-conscious and systematic use of specific normative constructs. I believe discussions of resilience would benefit from these approaches because in my experience when such discussions are systematic they tend not to be critical, and when they are critical they fail to be systematic.

Systematic social theory in the resilience literature draws heavily on complex adaptive systems (cas) theory and other fruitful, natural science inspired approaches to understanding adaption and change in natural systems (Holland 1992; Miller and Page 2007). cas takes an agent-based approach to how complex systems grow and change. Important concepts here include scale, self-organization and the emergence of new phenomena at higher levels through the interaction of agents governed by simple rules. This emphasis on emergence and self-organization rescues cas from the kind of reductionism that Berkes criticizes in his keynote. However, agent-based approaches introduce their own form of reductionism. They cannot address the ways in which adaptive and emergent social phenomena are embedded in inter-subjective processes of power, identity, and knowledge. This reliance on agent-based approaches reflects to some degree disciplinary habits of mind in a field that emerged in natural science and then later began to address social phenomena. cas itself amply demonstrates that in

nature there is no necessary association between methodological individualism and reductionism. In understanding social phenomena, however, this linkage is inescapable.

When the resilience literature takes on the more critical edge that Berkes is calling for the theorizing becomes much less systematic. In what I believe to be a very representative example, at the conclusion of a volume on resilience in social-ecological systems (Folke *et al.* 2003) the central discussion of social resilience reads:

> To avoid social traps that erode resilience, there have to be knowledge, practices and social mechanisms that recognize that disturbance, surprise and crisis are part of the development ... These mechanisms include conflict resolution, negotiation, participation, and other mechanisms for collaboration with rules aimed at maintaining the process of learning and adaptation in situations facing uncertainty and external change. (356).

These words seem to me both true and wise, but what we have here is a list of values. Values are important, but my graduate training in social theory also emphasized that listing things is a sign of poor theory. We are perhaps content with such lists because they reflect our experience of life, and because they have been echoed in the conclusions of a thousand case studies, but we are not given any clear, conceptual argument about their underlying link to resilience. To me, this is disquieting. We need a systematic critical theory of social resilience so we can articulate clearly how the institutional characteristics link to social and ecological imperatives while taking into account inter-subjective social phenomena.

For example, the concept of social memory as it appears in Hollings' panarchy scheme could become a more fertile idea if it were subject to a systematic discussion of the linkage between knowledge discourses and power drawing on Foucault. What makes a memory helpful in responding to a disturbance and when might they reflect distortions based on power relations that would simply reproduce previous vulnerabilities? Frankfurt School Critical Theory, in my opinion, can make a particularly important contribution to resilience thinking. These theorists developed systematic linkages between kinds of rationality, science, knowledge, ideology and power. Habermas' Communicative Systems Theory (1987), in particular, offers a causal account of how the intersection of scale and power distort the development of effective knowledge about the environment (Wilson 2009).

Critical and hermeneutic approaches to social theory, however, involve ways of thinking that only really make sense when applied to meaning-based phenomena. Their use means a step away from the goal of a single unified theory of social-ecological systems. The price of avoiding dualism in reasoning about social-ecological systems is, in my opinion, much too high.

References

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