



Beyond the Natural Resource and Environmental Sociology Divide: Insights from a Transdisciplinary Perspective

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In response to the Field et al. (2001) and Buttel (2001) argument that there are distinct patterns that distinguish natural resource and environmental sociology, I argue that this is typical of a thriving multiparadigmatic social science and is occurring across other ecological social sciences. In this article I briefly review current debates among anthropologists and human geographers to illustrate the transdisciplinary relevance of the natural resource and environmental sociology division and to suggest approaches that integrate this divide and also provide bridges to other ecological social sciences. The “bridging” areas I discuss include political ecology, community conservation, and sustainable livelihoods. Natural resource/environmental sociologists have much to learn from engaging the works of each other and from other social and natural scientists.

Keywords community conservation, environmental sociology, natural resource sociology, political ecology, sustainable livelihoods

Field et al. (2001) and Buttel (2001) proposed that natural resource and environmental sociology constitute two distinct subdisciplines characterized by substantial differences in subject matters, theories, literatures, institutional locations, scale of analysis, and policy relevance. I do not disagree with them that there are distinct patterns in the styles of scholarship and intervention. Indeed, I have personally confronted such differences in attempting to teach and direct student research projects across diverse programs in sociology, recreation and leisure studies, and international agriculture and resource management. I also agree with them that it is useful to understand these differences. But while recognizing there are differences in how sociologists understand and intervene (or not) in social and environmental/resource interactions, in this article I wish to emphasize that this is typical of a thriving multiparadigmatic social science and is occurring across many ecological social sciences.

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Let me suggest some reasons for treating our differences as reflecting multiple approaches or paradigms and not merely as two separate subdisciplines. First, interpreting our differences as subdisciplinary may unnecessarily overshadow shared foundational beliefs in seeing the natural world and social relations as mutually constitutive and reciprocal. Our debates and divisions relate to how we define and study these interrelations. For example, Humphrey et al. (2002) continue to suggest that how one approaches social–ecological interactions is in large part influenced by one’s position on classical traditions, including order–conflict approaches and attention to one or more key social forces of culture, power, and class. These include how culture, power, and class are defined, linked, and further related to materialist and discursive strategies. Indeed, the constructivism/idealism and objectivism/materialism debate seems particularly divisive today, particularly between modernist- and postmodernist-influenced constructivism. These are important epistemological and theoretical questions that cannot be deduced from the natural resource/environmental sociology dichotomy. Furthermore, the differences in constructivist approaches are more complex than the Field et al. suggestion that a social constructionist orientation may be an arena of convergence between the two subfields.

As the foregoing implies, there is a tendency (which some may see as a historically Western practice) to simplify complexity to binary, opposing categories, often with essentialist underpinnings. But as Buttel (2001) warned, such thinking can lead to unproductive claims of one approach as “good” while the other is “bad,” disregarding the more important observation that environmental and natural resource sociology as depicted both have shortcomings and that these limitations are “mirror images” of the other. Furthermore, the titular distinction between a highly utilitarian (“natural resource”) or nonutilitarian (“environmental”) approach to valuing nature may be helpful at a general level. But most of us would never align our approach to nature as fitting always with one or the other, rather, it would depend on the basis of a particular situation. Again, binary oppositions cannot capture the complexity of multiple and shifting positions involved in human–nature interactions, and they ignore how each side implies the other.

Third, proposing that there are two separate subdisciplines may permit reification of our differences, rather than seeing them as historically based and hence changeable. Rosa and Machlis (2001) showed that failure to embrace and integrate multiple concerns and approaches largely reflects “trained incapacities” rather than some enduring, natural logic. Indeed, the environmental/natural resource sociology distinction seems to be more applicable to American rather than European sociologists (Buttel 2001; Woodgate and Redclift 1998). In this regard, the papers by Field et al. and Buttel are extremely important for providing an historical perspective on these different paths and for encouraging us to consider strategies for cross-fertilization. Recognizing our paradigmatic assumptions in how we treat socioecological subjects is a necessary first step toward overcoming paradigm isolation and moving toward paradigm integration (Sunderlin 1995).

Sociologists are not the only ones struggling to reconcile multiple approaches and cleavages within their discipline. A brief look at recent works by anthropologists and human geographers reveals similar discussions and intellectual debates over units of analysis, images of society, theoretical frameworks, research methods, and objectives. In many instances, these literatures also reveal an openness to bringing in scholarship and perspectives from other disciplines. In this article, I briefly highlight

the works of contemporary cultural anthropologists and human geographers to suggest the transdisciplinary relevance of the debates and divisions among sociologists and some examples of integrative and innovative work—in political ecology, community conservation, and sustainable livelihoods. My argument is that in examining our approaches we should not be satisfied with a look at sociology alone, but should extend our scrutiny to other disciplines as well. Interdisciplinary perspectives are critical given the recognition that social and environmental change are multicausal and demand attention from multiple disciplines (O'Riordan 1993), and at least in Europe, there is some indication that a new “ecosociology” is being forged that is “pluridisciplinary, interdisciplinary and even transdisciplinary ... and ... open to the contributions of other disciplines which are interested in the same questions, but approach them from different, and sometimes complementary, angles” (Vaillancourt 1995, 27).

To illustrate a transdisciplinary perspective, I discuss political ecology. While neither a coherent framework nor without critics, political ecology is exciting precisely because it is a hybrid and struggles to “bridge” different disciplines, ontologies, and the theory–practice nexus. By attempting to link the traditional concerns of natural resource sociology (rural community, agricultural development, social well-being, local knowledge) with environmental sociology (social movements, history, the state and political–economic organization, environmental discourse, global capitalism), political ecology provides a venue for a multi-disciplinary network of scholars and other concerned groups to address social–ecological interactions. In exploring political ecology, as well as community conservation and sustainable livelihoods, I also wish to highlight the critique that despite more specific attention to ecological process, the social sciences across the board have not been particularly adept at replacing a static, equilibrium-based model of nature with one that emphasizes instead the complexity and uncertainty in social–ecological systems that severely limit prediction, management, and control (Berkes and Folkes 1998; Peterson 2000; Scoones 1999). Hence, a call for greater transdisciplinary interaction also includes closer interaction with ecologists and other biological scientists (Gramling and Freudenburg 1996). The importance of active cooperation with biophysical scientists seems particularly noteworthy today. This is not only because of paradigmatic shifts in ecology that we need to stay abreast of, but because many in the biological sciences continue to garner the lion's share of grants and projects, including those squarely concerned with social organization as in community conservation (Belsky 1999). I turn now to my first concern, the transdisciplinary relevance of the environmental/natural resource sociology divide.

Transdisciplinary Perspectives

Scholars across the social sciences are struggling with how to better weave together the cultural and biological realms, while at the same time making their findings accessible and relevant to non-social scientists, resource policymakers, citizens, and managers on the ground. As in sociology, scholars concerned with environment and natural resources in the fields of anthropology and geography are divided as to which theories, level of analysis, conception of reality, and research methods can best enable them to understand and guide socioecological interventions. In a recent review in *Current Anthropology*, Brosius (1999) acknowledged a sharp discontinuity in the ways anthropologists have engaged with environmental issues including

environmentalism. He too offered a dualistic schema. Brosius contrasted the “old” *ecological anthropology* of the 1960s and early 1970s with the “new” *environmental anthropology* of the present, and claimed that with few exceptions, there is little overlap between the two. As the names suggest, the former drew insights primarily from the field of human and cultural ecology, characterized by a persistent interest in localized adaptations to specific ecosystems and by an abiding scientism. To the extent that cultural or ideational factors entered into these analyses, they were viewed with respect to their locally adaptive significance. This approach has many similarities to human ecology–inspired natural resource sociology. The present “environmental anthropology,” according to Brosius, involves greater attention to social and environmental movements, institutions, transnationalism, and globalization—concerns that parallel a political economy–inspired environmental sociology.

In sizing up their fundamental differences, Brosius (1999, 278) concluded that “contemporary environmental anthropology is more alert to issues of power and inequality, to the contingency of cultural and historical formations, to the significance of regimes of knowledge production, and to the importance of the acceleration of translocal process.” Both “anthropologies” approach nature and the environment as socially constructed, but do so differently. I think these points are extremely relevant to the debate between natural resource and environmental sociology, but not specified in either Field et al. (2001) or Buttel (2001). In the ecological anthropological tradition, different views of nature and the environment are interpreted as the expression of different values and cultures, while social constructions of nature in the environmental anthropological approach are more foreground in recent poststructural reconceptions of power (i.e., the politics of knowledge production, representation, discourse, contested claims, resistance, identity, space, place, and political agency). An example of the division between the two approaches is the matter of multivocality. The ecological anthropological view approaches different social constructions of nature as the result of different peoples voicing their own perceptions. The environmental anthropological view, in contrast, connects these voices to differentially situated discourses and actors with multiple, shifting, and even contradictory positions.

Anthropologists concerned about environmental subjects are, like sociologists, debating their differences, including Brosius’s proposed binary schema. For example, Escobar (1999a) noted that Brosius’s division makes sense from an epistemological perspective between the largely realist–positivist and interpretist approaches of the 1960s and 1970s, and the profoundly constructivist approaches of the present, with the broad distinction between poststructuralist approaches and those that are not. But Escobar concluded that Brosius’s map needs to be drawn with more nuance and contours, as there are rich forms of constructivism that do not fit either of these categories, and that both approaches are still limited by insufficient dialogue between scientists and indigenous people/local knowledges. These observations have much relevance to the discussion about environmental and natural resource sociologists.

Guha (1999) suggested Brosius’s schema fails to acknowledge the contributions of older traditions and scholars, overly crediting the “new” environmental anthropology as more theoretically astute and politically savvy, but not necessarily involving the meticulous fieldwork that was the hallmark of the old ecological anthropology. In a similar vein, Orlove (1999) raised the concern that Brosius’s “new” anthropology privileges analysis over other forms of concrete intervention. These same critiques have been made of environmental sociology. Another similarity involves anthropologist Hornborg’s (1999) observation that European

anthropology does not suffer from the same clear-cut dichotomy identified by Brosius in the United States, an observation also made by Buttel (2001) and Woodgate and Redclift (1998) in sociology. Indeed, non-American anthropologists (e.g., Scoones 1999; Leach et al., 1999; Li 1996; 1999; Agrawal 1992) have provided some of the most integrative and exciting work on socioecological change and development.

Geographers concerned with the study of the human–environmental nexus are also struggling with preexisting and long-standing schisms within their discipline (Sneddon 2000). Within human geography, gaps are particularly significant between quantitative space–society foci and more qualitative nature–society approaches, though a resolution may be taking place (Hanson 1999). As among sociologists, human geographers at the forefront of incorporating new ecological theory and knowledge into research on environmental change have been less able to incorporate challenges of social theory. At the other end, “radical” or social theoretically informed geographers have struggled to be more attuned to ecological process.

A particularly deep cleavage persists between realist views of nature served by positivist methodologies and those taking a constructivist approach, with the latter further distinguished by the extent to which it is informed by poststructuralist theories and critiques of positivist science (Barnett 1998; Blaikie 1999; Peet and Watts 1996). However, there is a slate of recent work in human–environment geography—identified in terms of “environmental geography” (Zimmerer 1994) or “hybrid research” (Batterbury et al. 1997)—that attempts to combine ecological theory and scientific understandings of environmental change with methodologies that examine how communities experience and interpret environmental degradation. According to Sneddon (2000, 537), “the results are historicized, ecologically informed explanations of socioecological transformations that provide a basis for, among other things, critiques of national development strategies and socioeconomically sensitive conservation approaches.” Geographers are apparently making some headway in reconciling schisms. They have played a particularly significant role in creating and revising political ecology, an integrative framework that is the topic of the next section.

Political Ecology as a Bridging Framework

There are many histories and discussions of political ecology, most of which have been written by either anthropologists (e.g., Berkes 1999; Escobar 1996; 1999b, Greenberg and Park 1994) or geographers (e.g., Blaikie 1999; Bryant 1998; Bryant and Bailey 1997; Peet and Watts 1996). Some sociologists who have identified their work as informed by political ecology include DuPuis and Vandergeest (1996), Neumann (1992), Peluso (1992), Vandergeest et al. (1999), and myself (Belsky 1999).

Of relevance to the discussion here is that early political ecologists, quite consciously, sought to connect human/cultural ecology with political economy approaches. Indeed, an important text introducing “regional political ecology” was coauthored by geographers with a political economy and human ecology orientation, respectively (Blaikie and Brookfield 1987). While recognizing the limited value of a solely place- or non-place-based analysis, they sought to connect the two through a nested, multiple-scales approach, using a “bottom-up” research methodology. Linkages were sought across time and spatial scales. Similarly, they recognized the limitations of either a strongly actor-oriented/behaviorist or a structuralist approach. Instead, their goal was to direct analytical attention to the usual concerns

of political economy (i.e., state dynamics, colonial history, class formation, market transactions, and processes of capitalist incorporation and marginalization), but simultaneously to maintain a social actor-focused orientation embedded within local or regional ecologies (Blaikie and Brookfield 1987). They presented region as an intermediary and preferred level of analysis precisely because it builds up from case studies of particular peoples and ecological process to consider national and global dynamics, and it facilitates comparisons and theorizing across different cases. Regional analysis in political ecology fosters “middle range” theories that can link natural resource and environmental sociology.

Bryant and Bailey’s (1997) discussion of political ecology furthered the usefulness of analytical concepts such as marginality, vulnerability, risk, resistance, protest, and popular distrust of experts, as well as the roles that states, grass-roots actors, business, corporations, multilateral institutions, and environmental non-governmental organizations (NGOs) play at the different scales at which they engage the environment and each other. Peet and Watts (1996) highlighted political ecology’s engagement with poststructuralism. Importantly, they noted that one of the major contributions that poststructuralism and discourse have made to the field of political ecology is engendering more nuanced, richly textured empirical work, including examinations of different states of nature as they change through time and contested representations under conditions of unequal power. This poststructural approach emphasizes alternative accounts of reality, rather than the author’s own environmental and social data, and the agency and resistance of actors rather than structural inequality. The latter concerns provide opportunities to link resistance with new “counterinstitutions” and to work for emancipatory change consistent with the “liberation” dimension of political ecology in practice. In this variant, political ecology does not discount science, but positions it along side other truth claims. Peet and Watts do not see these as contradictory stances, but rather as consistent with a “critical materialist orientation.” This position combines the insights afforded by scientific, quantitative-empirical, and materialist approaches with insights from poststructuralist constructivism. No small task.

Feminist influences on political ecology have also been particularly influential in attempts to link macrotheoretical political frameworks with microempirical, socio-cultural practice (i.e., from global capitalism to household dynamics). Feminist political ecology constructs a bridge between feminist perspectives and the micro-macro orientations of natural resource and environmental sociology, respectively. A number of feminist perspectives on environmental and resource phenomena suggest integrative approaches, including “micro-political economy” and “feminist environmentalism” (Joeke et al. 1995). “Feminist political ecology” has been particularly useful in helping to situate material and discursive struggles over resource distribution, power, knowledge, and ideology in the context of gendered knowledges, gendered patterns of resource control, access and utilization, and gendered forms of grass-roots activism (Rocheleau et al. 1996).

Political ecology is helping to build important bridges across human ecology and political economy, place- and non-place-based analyses, social construction and realism/materialism, Western science and local knowledge, and theory and practice, among others. Political ecologists acknowledge both nature and society as significantly, but by no means entirely, socially constructed (Blaikie 1999; Escobar 1999b; Greenberg and Park 1994; Peet and Watts 1996). Watts (1996) at the University of California–Berkeley uses political ecology as a framework for a graduate seminar on “Social Theory and the Environment” that he calls a

transdisciplinary reading seminar emphasizing thick case studies and rigorous ecology and environmental studies. Being able to link social constructivism with empirical “ecology” and with critical theory has been very useful to my work and students. The students I interact with from recreation and leisure programs and other natural resource management fields (e.g., wildlife, forestry) are usually very comfortable with a micro, social-psychological approach. They have little difficulty using a constructivist orientation to examine how people value different landscapes, tourism experiences, or place attachments. But these students typically have a difficult time connecting place- and non-place-based analyses, particularly those demanding critical, political analyses. It is hard for them to see connections between individual meanings and broader political projects and processes. Many of these students have found that political ecology provides a useful framework for understanding how language and values are connected to “interests,” and how one can continue to discuss values and multiple meanings alongside material interests and physical nature—indeed, why one must make interconnections across these factors. Political ecology has also helped students absorb the lessons of discursive analysis, yet allowed space for talking about “real states” of nature and the scientific debates that surround them.

Because of its attention to individual meaning in the context of political processes and unequal interests, political ecology has been particularly attentive to the danger of an uncritical pluralism that constructs all “actors” and their meanings and stakes as equal—from ancestral claims, cultural survival, and local livelihood to aesthetic and landscape concerns (Lohman 1998). It has maintained natural resource sociology’s concern with local or traditional knowledge, but opens up the possibility of not only providing rich, detailed understanding of folk classifications and ecological processes from residents’ viewpoints and experiential knowledge, but also highlighting the significance of political struggles between a hegemonic Western science and alternative knowledge systems (e.g., Berkes 1999). Political ecology has provided a framework that helps me to teach a broad spectrum of approaches with students across different disciplines, and to honor and combine the best of natural resource and environmental sociology.

Despite its heuristic appeal as a synthetic framework, it is important to note that political ecology as currently theorized and practiced has yet to realize its integrative potential. Many scholars acknowledge that political ecology lacks coherence (Peet and Watts 1996; Brosius 1999), especially in that it has become “all things to all people” and, even worse, a modality for uninformed “academic hitchhiking” (Blaikie 1999). Furthermore, as with environmental sociology, political ecology has been criticized as long on critique, and short on establishing goals (even plural and/or provisional ones), and especially the technical and political means of achieving them. Consistent with environmental sociology, early works in political ecology portrayed the “environment” monolithically and, though no longer examined through theories emphasizing adaptation and homeostasis, viewed change and disruption as largely attributed to market intrusion, commercialization, and the dislocation of customary forms of resource management. While avoiding the pitfalls of adaptation-based and systems approaches, much of political ecology still accepts that balanced, harmonious, and traditional ecosystems existed until they were disrupted by the forces of modernity. Scoones (1999) argued that political ecological studies in practice have yet to incorporate a dynamic, nonequilibrium-based ecology, a critique he directed to all of the ecological social sciences (Scoones 1999).

Perhaps the greatest contribution of political ecology stems from its hybridity and its capacity to break down boundaries among multiple paradigms and disciplines. As geographer Blaikie (1999, 131) noted,

Clearly, the term [*political ecology*] is an elision of a number of established disciplines from the natural and social sciences which bring with them their dominant epistemologies and methodologies. By internalising diverse notions from its eclectic origins, political ecology is able to throw light on new contradictions and paradoxes that are brought together from different networks of scholars, activists, and other actors. Insofar as intellectual growth tends to be stronger at the antagonistic and problematic margins of established disciplines and the institutions that reproduce them, the claim to be doing political ecology still has a certain *cachet*.

Community Conservation and Sustainable Livelihoods

Other areas that are making significant progress in bridging the concerns of natural resource and environmental sociology, and that also utilize transdisciplinary perspectives, include community conservation and sustainable livelihoods. Community conservation (also known as community natural resource management) is a transnational effort to build legitimacy and worldwide support for communities as an appropriate social institution for comanaging natural resources. Community conservation programs link rural community development (i.e., concerns of natural resource sociology) with critiques of state-led protected area management, global environmental problems, and environmental justice (i.e., concerns of environmental sociology) (Western and Wright 1994; Kellert et al. 2000).

Community conservation is further linked to the notion of sustainable livelihoods (also known as sustainable utilization). The sustainable livelihood concept builds on earlier farming systems and rural community development work influenced by resource sociology perspectives to include a more politically economic (or environmental sociology-informed) approach through increased attention to global environmental problems and institutions and poverty-producing conditions that influence causes of environmental degradation. But unlike earlier efforts, it strives to incorporate a more dynamic ecological understanding. Chambers and Conway (1992, 7–8) defined a sustainable livelihood as one “which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide ... opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long run.” A major concern of the sustainable livelihood approach is translating the abstract concepts of livelihood and sustainable utilization into practical actions. As with critiques of a strictly environmental sociology approach, the sustainable livelihood concept calls for analysis in specific geographical, temporal, and socioecological contexts. Yet it must also incorporate environmental sociological concerns for linking detailed place-based analyses to broader, non-place-based, sociopolitical and ecological dynamics over time and across space.

In theory, community conservation and sustainable livelihoods bring together many of the multistranded concerns of natural resource and environmental sociology. On one hand, they share an emphasis on the rural community, place- and resource-specific conditions and use patterns, traditional knowledge and institutional mechanisms, social well-being, social assessment, social capital and public

participation, and applied policy intervention. At the same time, they are informed by social movement theory, stress theoretical linkages among environmental values, attitudes, and behaviors, consider state–society relations, including global development agendas, and draw on environment justice frameworks. Above all, they build on the common foundational belief of both environmental and resource sociologists that biological conservation and social development are mutually constitutive processes.

But despite evidence for viewing community conservation and sustainable livelihoods as successfully integrating the concerns of natural resource and environmental sociology, several recent papers suggest differences that can be traced to the resource/environmental divide. These tensions suggest enduring differences in how observers assess the difficulties in implementing community conservation and sustainable livelihoods. To some, the problem lies in an inaccurate image of forest or peasant communities in community conservation and sustainable livelihood as too homogeneous, timeless, and essentialized and operating from insufficient analyses of power relationships and structural inequities (Agrawal and Gibson 1999; Belsky 1999; Brosius et al. 1998; Leach et al. 1999; Li 1996; Peet and Watts 1996). These are critiques consistent with an environmental sociology perspective and leveled at natural resource sociology's human ecological tradition. To others the problem has more to do with the historic concerns of resource sociology: local cultural traditions and knowledge, conflict resolution mechanisms, and detailed understanding of ecological processes (Kellert et al. 2000). Additionally, there are differences in terms of epistemology and research methods (Brosius et al. 1998). There is consensus, however, that empirical research is needed that builds from analyses of what people actually do in their struggles to carve out a livelihood, informed by constraints and opportunities differentially placed upon them by social institutions at multiple levels.

Conclusion

While appreciating the Field et al. and Buttel argument that there are separate trajectories in what they call natural resource and environmental sociology, I believe it is insufficient to view them as merely distinct subdisciplines. Disciplinary differences, to me, involve substantial and enduring differences in foundational beliefs and research methods. While recognizing there are patterned differences in institutional histories, units and levels of analyses, thematic concerns, and theoretical allegiances across those engaged with socioecological subjects (for lack of a more inclusive term), our differences seem to me to be indicative of a thriving, multiparadigmatic social science. Furthermore, the debates among environmental/ecological anthropologists and human geographers contain issues similar to those in sociology, suggesting to me further that the distinctions between resource and environmental sociologists are paradigmatic rather than disciplinary in origin.

At times the differences between environmental sociology and natural resource sociology appear as a continuum between extreme poles, no doubt where the “mirror-image limitations” are most severe. Yet as the quotation noted earlier from Blaikie (1999) reminds us, these poles represent the “antagonistic and problematic margins of established disciplines” where intellectual growth can be particularly strong. The difficult part is making “selective integration” of complementary ideas, methods, and approaches (Sunderlin n.d.). In this article I suggest that political ecology, community conservation, and sustainable livelihoods provide promising examples of social scientists struggling to address practical problems through a

theoretically informed analysis that nests levels of analysis and embraces multicausal explanations that consider all of the classical social forces and paradigms. A final point: In coming to an understanding of natural resource and environmental sociology, I think we should not be satisfied with examining only our intradisciplinary differences. Rather, we ought to challenge ourselves further to embrace a transdisciplinary perspective and engage related debates in other disciplines as well. Reconciling our differences in any meaningful way may depend on it.

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