Enter the working forest: Discourse analysis in the Northern Forest

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Abstract

In 1988, four states in the northeastern USA commissioned a study to address land use changes in the Northern Forest, 26 million acres of temperate and boreal forest extending from Maine to eastern New York State. Against a backdrop of economic destabilization and concerns regarding social and ecological implications of a real estate boom, the sustained deliberative dialogue catalyzed by this study has come to rely heavily on the ambiguous concept of “working forest.” To clarify political and environmental dynamics in the region, we analyzed how people respond to and seek to capitalize on the interpretive flexibility of the term working forest. We combine an analysis of socio-political discourses of working forest based on a structured literature review with an assessment of local peoples’ definitions of working forest based on a survey conducted in a pair of contrasting New York State communities. The first study site represents an amenity-oriented community (i.e., a place where the forest supports a service economy including recreation and tourism) and the other study site represents a timber-dependent community. By linking data from community-level analysis to data derived from a general analysis of forest politics, we seek to develop a more robust perspective. By comparing discourses across differently structured communities, we investigate how local forest politics are mediated by local economic development processes. Our study empirically illustrates contested and geographically uneven processes of social construction of environment and rural development in a region confronting pressures of globalization. Results indicate that timber harvesting is a heavily privileged management objective, as a logic of ‘the forest that pays is the forest that stays’ dominates. Environmental politics in the region, and perhaps more generally, increasingly conforms to a form of pragmatism in which economic opportunities structure conservation planning and investment.

Keywords: Discourse analysis; Forest management; Working forest; Northeastern USA; Northern Forest

1. Introduction

Forests and forest politics in industrialized nations continue to change. Globalization of trade in forest products, amenity-oriented rural development pressures and heightened recognition of the ecological services healthy forests can provide pose challenges to traditional structures (e.g., policies, organizations, communities and conventional ways of thinking about forests and their relation to society). In connection with these socioeconomic drivers, the biological character of the forest itself has changed, undermining the potential to support patterns of economic exploitation.

For example, in portions of the northeastern USA, exploitation of the deer population and decades of unregulated logging have altered the age class and species distribution of trees in the forest, compromising the productivity of the forest in both ecological and economic terms (Best and Wayburn, 2001).

While not unique with respect to confronting these multiple scaled and spatially uneven challenges, the northeastern USA presents a useful context for analysis of responses of local people and policy makers. A perception of crisis in the region has spurred an intensive, deliberative policy dialogue. This process invites and requires actors to articulate their positions in reaction to and as part of efforts to initiate institutional change. These public statements offer a means of assessing environmental politics and the context in which forest management is situated in the region.
In 1988, the governors of the four states within the Northern Forest—26 million acres of temperate and boreal forest in Maine, New Hampshire, Vermont, and New York (Fig. 1)—appointed a task force to address changes taking place in the Northern Forest. The US Congress supported this effort and provided funding in 1990 for a study that resulted in the creation of the Northern Forest Lands Council (NFLC), a group chartered to make public policy recommendations aimed at reinforcing “traditional forest-land uses” and “long-term stewardship of the forest resource.” This pair of objectives constitutes a significant challenge for reasons referenced above.

Between 1990 and 1994 the NFLC convened 21 public meetings involving a total of more than 1000 people. In 1994, the NFLC presented its conclusions under the telling title, Finding Common Ground. Strategies for regional economic stability and sustainability included cost-sharing incentives through state and federal programs, tax incentives, land trust programs, and community capacity-building programs (NFLC, 1994). In total, the NFLC proposed 37 recommendations to guide future management in the region.

Notably, the report called for the protection and fostering of “working landscapes” and “working forests.” These terms were referenced 13 times as vehicles for achieving policy and management goals. The term working forests was new, having seldom been used in academic or popular literature, but it diffused quickly among policymakers, forest managers and the interested public. References to working forests in northeast regional newspapers climbed from five in the 1980s to almost 250 in the 1990s (Fig. 2). Working forests, many argued, were critical to the region’s economic and ecological future.

We argue that the concept of working forest reflects and sustains a regional dialogue that materially shapes socioeconomic development and forest management in important ways. The rapid diffusion of the phrase working forest derives from its ambiguity. Its central status in the debate stems from its ability to offer something of value to a range of actors occupying a broad spectrum of positions and interests, not because it references a specific way out of a long and sometimes ugly conflict. While policy makers identify working forest as a middle ground, capable of accommodating the traditionally competing interests of environmental protection, timber extraction and recreation, other actors employ the term quite differently. We identify two additional contrasting and, we argue, competing definitions in active circulation. One privileges the work that forests perform in providing valuable ecological and environmental services. The other privileges the forest as a workplace where timber is produced and an industrial value chain begins.

Our research is focused on the range of meanings attached to the phrase working forest and what we can learn from a consideration of variance in the definitions actors ascribe to it. We are interested in improving understanding of contemporary politics in the Northern Forest in order to support local processes of deliberation, recogni-
tion of interdependence, and innovation. More generally, the analysis offers insights into processes of diversification and transformation of rural regions in industrialized nations. Our results provide an opportunity to reflect on the state of natural resource conservation within the far larger contemporary project of sustainable development. Specifically, we interpret the thorough integration of timber harvesting into conservation planning in the Northern Forest to be an indication of a form of pragmatism with potentially far reaching implications.

In the next section of the paper, we review the historical context in which the concept of working forest has emerged in the Northern Forest. Following exploration of the ambiguous nature of the term, we describe our analytical approach and our research methods. Based on a review of policy and academic literature, what Elands and Wiersum (2001) define as socio-political discourse, we identify a set of three policy-level discourses of working forest. We then compare these policy-level discourses to definitions of working forest articulated by local people in an effort to ground our analysis in a community setting and to assess constraints to realization of upper-level policy objectives. Finally, we compare the range of definitions of working forest across a pair of contrasting communities in the Northern Forest of New York State—one representing timber dependence and the other an amenity-orientation (i.e., a place where the forest supports a service economy including tourism and recreation)—in order to evaluate the effect of socioeconomic function of forests on local forest politics. The final section of the paper situates our findings in the context of interpretive policy analysis and pragmatic approaches to sustainable development.

2. The Northern Forest

Author Bill McKibben, writing for the Northern Forest Alliance (2002), introduced a vision for the future of the Northern Forest by describing the historical ownership changes in the area since the most recent glacial period. After brief treatment of the Iroquois tribes and French trappers, he addressed the present situation. “Now we’re at another moment of enormous change, exemplified by the huge land sales that rip through the region, leaving everyone unsure of what they will be doing, and for whom, a year or a decade hence” (p. 1).

Discussion of enormous change in the Northern Forest is not new. The birth of the conservation movement in the USA was in part a reaction to the over-harvesting of forest resources in the Northeast (Zahniser, 1998). Gifford Pinchot and Bernhard Fernow famously championed forest conservation in order to ensure the sustainability of timber stocks. This utilitarian agenda was complemented by efforts of wealthy sportsmen groups, largely from New York City, who urged the New York State Legislature to establish the 6 million acre Adirondack State Park (established in 1892), the largest park, State or National, in the continental United States. Unlike most US parks, more than 50% of the land in the park is privately owned, and the park is home to 130,000 year round residents.

Despite expansion of the conservation movement, timber restocking in the 20th century along with a decline in industrial production during the Great Depression created a new boom-era for the logging economy from the 1960s to the late 1980s. The threat of over-harvesting was, for many, superseded by fears of real estate development in the Northern Forest, as a land speculation boom began in the early 1970s. New England farmers had been marginalized by larger Midwestern enterprises, and many were eager to sell their land to buyers in the burgeoning real estate market (Irland, 1999). While land sales had been common throughout the history of the Northern Forest, for the first time ever, these purchases were made by developers seeking to build residential subdivisions for part-time residents. Because residential development arrests the ebb and flow of land resources from farm to forest and back again, this mode of development carries special risks (Payne et al., 1975).

Despite concerns regarding land conversion, in-migration and transformation of the region from a zone of production into a space for consumption (Marsden, 1999), the Northern Forest of the 1970s was very much a center of industrial activity. New technological opportunities and added value from decades of stocking lured several multinational timber companies to the region (Irland, 1999). Where previously timber had been a seasonal profession, mills were now operating every day of the year, and intense road building in concert with technological change allowed exploitation of the forest at heightened levels (Dobbs and Ober, 1995). A bust followed the boom of the 1970s and 1980s, as harvesting of large timber holdings resulted in a flooded market and a collapse of timber prices. Major timber companies began divesting from the region, and, once again, fears over a hot real estate market emerged. The issue came to a head in 1987 when timber company Diamond International offered for sale 970,000 acres of forestland in Maine, New Hampshire, Vermont, and New York at the unprecedented price of $200 per acre, roughly double its value in standing timber. Several developers bought the land and announced plans to subdivide 183,000 acres for housing (Dobbs and Ober, 1995). With 70 million people within a day’s drive, concerns were high regarding massive development and acceleration of fragmentation of the landscape.

The Diamond sale propelled this controversy from an episodic, low-level debate onto the policy agenda. Calls to action from residents, activists, state government, and even the US Congress made it possible for Senators Leahy (Vermont, Democrat) and Rudman (New Hampshire, Republican) to secure funding to establish a Northern Forest Lands Study, culminating in the Northern Forest Lands Council (NFLC) in 1988. The charge to this group was “to reinforce the traditional patterns of land ownership and uses of large forest areas in the Northern Forest of Maine, New Hampshire, New York and Vermont, which have...
characterized these lands for decades” (NFLC, 1994, p. 5). As discussed above, in formulating policy and management recommendations, the NFLC relied heavily on the concept of working forest. While the term has served to extend and perhaps focus the debate, its meaning and significance are unclear.

3. Working forest

Working forest is part of a line of ambiguous and contested terms in forest policy and management. In tracing this line, we immediately encounter multiple use. The Multiple-Use Sustained Yield Act of 1960 stated that forests should be “administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes.” However, the legislative debate did not produce an unambiguous definition of the rights and responsibilities of forest managers and other actors. “On the contrary, many used it to legitimate their own views or understandings…That this lack of agreement was more than purely semantic became obvious during the power struggle over, for example, budget dispositions…The normative interpretation was imposed by those who saw the possibility of gaining acceptance of their own ideas on what forestry ought to be like” (Fernand, 1995, p. 72).

Parallel conclusions apply to ecosystem management, the formal successor paradigm to the multiple use doctrine in the US Forest Service (see, e.g., Corner and Moote, 1999). Similarly, the United Nation’s Statement of Forest Principles, emerging from the 1992 Earth Summit in Rio, calls for forests to be “managed to meet the social, economic, ecological, cultural, and spiritual human needs of present and future generations.” The meaning of a commitment to sustainable forest management at the level of practice is, of course, widely debated. Given this lineage, we would expect working forest to be a cloudy designation.

As is well recognized, certain terms are introduced into policy debates to exploit ambiguity. In his analysis of the Wise Use Movement, McCarthy (2002) claims the group selected a name that was purposefully vague, and difficult to oppose. Trombulak (1998) also highlights the intentional cultivation of ambiguity in politics, but he goes further in arguing that such strategies are aimed specifically at winning over centrists. “The battle over language is primarily aimed at the great majority of people…who want healthy natural communities and healthy local economies” (p. 73).

Reliance on the concept of work is particularly interesting from a strategic perspective. Work invokes deeply historical, perhaps biblical, power and legitimacy. Locke’s influential Second Treatise of Civil Government (1690/2004, p. 16) drew on and has contributed to fundamental respect for work, “Let any one consider what the difference is between an acre of land planted…and an acre of the same land lying in common, without any husbandry upon it, and he will find, that the improvement of labour makes the far greater part of the value.” Adam Smith, in The Wealth of Nations (1776/1998, p. 39) applied a similar logic: “Labour…is alone the ultimate and real standard by which the value of all commodities can at all time and places be estimated and compared. It is their real price; money is their nominal price only.” Marx also famously identified labor as the ultimate source of value.

3.1. Contemporary usage

In seeking to identify early use of the term working forest, a Lexis-Nexis search of Northeast regional sources revealed that the term was first applied near Trumansburg, NY in 1989. “The new generation of forest, about 10% of which is owned by the state, is only rarely left to regulate itself. Most state forests are managed for a variety of uses, including lumbering, recreation and game management. They are ‘working forests,’ in DEC language” (Knauss, 1989). Placing the term in quotes and labeling it as bureaucratic jargon of the New York State Department of Environmental Conservation (DEC) identifies the term as esoteric.

Online searches of indices of academic journals identified only six articles with working forest in the title or abstract. Zarin (2004, p. 1) claims that working forest “has multiple meanings, a common problem for words or terms that express complex ideas.” The National Community Forestry Center (2001) characterizes working forest as “richly ambiguous.” Lind (2001) calls the term “imperfect” and notes that it “evades simple definition.” Swan (1994, p. 197) agrees, “The term ‘working forest’ is overworked. I would like to avoid this phrase, but I have not yet figured out a better one.”

Despite confusion and frustration with the term among analysts, usage has steadily increased in regional newspapers across the northeast, as we noted earlier (Fig. 2). The 2005 strategic vision of the US Department of Agriculture Forest Legacy Program, a program funding conservation projects on more than one million acres of private forestland, identifies “conservation of working forests” as its primary goal (US Department of Agriculture, 2006). The concept is also a central reference for planning and policy in the Northern Forest. Though not attractive to academicians, the term has obvious political relevance.

Working forest is directly implicated in conflictual forest politics in the Northeast and in other advanced rural societies. As demonstrated in Fig. 3a, the term references an idyllic scene in an effort to generate popular support. In Fig. 3b, groups protest publicly as part of a coordinated campaign against British Columbia’s “Working Forest Policy,” a policy of leasing logging concessions on public lands to private firms (Integrated Land Management Bureau, 2004). Recognizing the diffusion of the term in both policy and in political spheres, we see a need for analysis. Understanding how people respond to and capitalize on the interpretive flexibility the term provides can clarify social and political dynamics.
4. Discourse analysis as theory and method

Social construction of rural development and the environment as spheres of action is well recognized (Frouws, 1998; Greider and Garkovich, 1994). Analysis of discourse has been shown to be an effective tool for understanding processes of social construction of environment and environmental risks (Dryzek, 1997; Peet and Watts, 1996). Discourse also serves as a means to make sense of contested processes of diversification and transformation of rural regions in advanced societies (Frouws, 1998).

Analysis of discourse allows us to understand the conditions behind a contested issue and gives us access to the essence of that contest as represented by underlying assumptions, the values or stakes recognized by the actors and the priorities they attach to the various considerations that structure the problem. This theoretical stance is closely related to that of (Barnes and Duncan, 1992, p. 8, cited in Peet and Watts, 1996, p. 14) for whom discourses are “frameworks that embrace particular combinations of narratives, concepts, ideologies and signifying practices.” Similarly, for Dryzek (1997, p. 18), environmental discourses can be decoded through attention to (i) basic entities recognized or constructed, (ii) assumptions about natural relationships, (iii) agents and their motives and (iv) key metaphors. In terms of methodology, our approach in this paper can be seen as lying between Dryzek’s (1997), who relies on little, if any, primary data to characterize environmental discourses, and Zimmerer’s (1996), who relies on detailed ethnographic treatment.

In this paper, we seek to compare socio-political discourses, what Elands and Wiersum (2001) and Frouws (1998) define as the content of debate among policy professionals and publicly engaged groups, with positions and interests of local people. We analyze local perspectives through data from a mail survey we conducted in 2004. Our interest lies in assessing congruence in discourse between these levels of social organization in order to identify constraints to the realization of policy strategies. This approach also allows us to assess the relevance of conceptions and pronouncements of elites with respect to the political and material projects of local people.

As Hajer and Wagenaar (2003, p. 7) have persuasively argued, interpretive or post-positivist policy analysis requires “attending to the discursive dimensions of public policy and politics” because the problems we confront resist imposition of centrally determined solutions from afar. Realization of localized, emergent solutions must begin with an understanding of the interests and frames local actors apply. From such an empirical position, the deliberative process of argumentation and debate can move forward, leading, in theory, to recognition of interdependence and innovation. In this sense, our paper presents a partial accounting of local political interests.

Beyond interrogation of working forest discourses, we pursue a narrower analytic objective. Based on our original survey data, we compare definitions of working forest from actors living and working in a pair of contrasting Northern Forest communities in New York State. We selected these communities to represent a timber-dependent community (Stedman et al., 2004) and an environmental amenity-oriented community (Krannich and Petrzelka, 2003). Given the widely discussed shift away from commodity production and toward service and amenity provision in rural regions, what some perhaps naively have referred to as post-productivism (see McCarthy, 2005), we seek to investigate the natural resource management priorities and perspectives of differently situated people and communities. Our comparative approach allows us to investigate how local forest politics are mediated by the ways in which forests are implicated in local economic development processes. By linking data from community-level analysis to data derived from a general analysis of forest politics we seek to develop a more robust perspective regarding politics and policy.

Fig. 3. Two different representations of working forest.
5. Methodology

5.1. Literature review

To identify source material for our analysis of socio-political discourses, we used the Lexis-Nexis News database to search for the term “working forest” in “Northeast regional sources” and “US News.” This search was performed using the full text option for all available dates (January 1979 to August 2006). Additional references to working forest were identified through standard web searches. Peer-reviewed journal articles with the term “Working Forest” in the title or abstract were identified using the Proquest Research Database and MetaPress Database. For the Proquest search, we specified “scholarly journals, including peer-reviewed.” The MetaPress search was conducted using the “all journals” search option.

We categorized references through a combination of a priori and contextual coding procedures (Wiesberg et al., 1996). We developed a set of categories before beginning the coding process based on our expectations of patterns of response, and we refined our typology as the empirical research progressed.

5.2. Survey analysis

Data were collected through a 2004 mail survey conducted in a pair of distinct communities chosen to emphasize different ways in which forest resources are implicated in socioeconomic development. Through analysis of census data and on-site interviews, we selected Boonville, New York to represent a timber-dependent community and Saranac Lake, New York to represent an amenity-based community.

The forest products industry has played a large role in Boonville’s history for over two centuries, but has suffered in recent decades. Several mills have shut down including the 2004 closure of the Ethan Allen furniture plant, a loss of 266 jobs, over 10% of the town’s 2138 residents. This trend has contributed to a 4% rise in Boonville’s unemployment rate from 1990 to 2000 (unemployment in 2000 was at 9.5%). Still, Boonville continues to support a substantial timber industry and is the home of the New York State Woodsmen’s Field Days, an annual festival celebrating the history and vibrancy of state’s timber industry.

Saranac Lake, population 5075, is located in the High Peaks region of the Adirondack Park. Though the timber industry was historically central and still maintains a presence, Saranac Lake now identifies itself as a “family resort destination,” according to the Chamber of Commerce’s website. Currently, Saranac Lake hosts a ten day annual Winter Carnival. The Chamber of Commerce website also claims that “(the) Village of Saranac Lake features all the amenities needed for your next meeting or conference.” In stark contrast to Boonville, Saranac Lake is confronting extraordinary growth and development pressures. The New York Times (October 27, 2006) noted that twice as many building permits were issued in 2006 relative to 1998 (Foderar, 2006). This growth is presumed to be a direct reflection of people’s interest in living in an area with exceptional environmental quality and outdoor amenities. During the period from 1990 to 2000, Saranac Lake’s unemployment rate fell to 4.6%, a drop of 1.6%.

In each of the two study sites, we surveyed nine categories of actors to ensure representation of a broad cross-section of actors that engage the forest in direct and distinctive ways. We surveyed (i) non-industrial private landowners (NIPF) with 10 or more acres of forestland, (ii) professional foresters, (iii) managers and owners of firms in the forest products industry, (iv) commercial tourism and recreation providers, (v) real estate brokers, (vi) environmental group representatives, (vii) local civic group representatives, (viii) public land managers and (ix) chairs of regional development organizations. For categories with small numbers of actors, we surveyed the entire relevant population (i.e., no sampling). For categories with large populations, random samples were drawn where comprehensive sample frames existed. See Table 1 for details. This purposive, stratified approach to sampling allows us to focus on the actors directly implicated in local forest politics. The set of categories we identified as relevant grew out of key informant interviews we conducted on-site in preparation for our survey. This approach to sampling allows us to evaluate the positions of sets of actors specifically implicated by our research question, rather than providing a basis for inference to the entire populations of the study communities.

A total of 299 surveys were mailed out. One hundred and eighty three surveys were returned in usable format, yielding a response rate of 61%. There were no significant differences in the response rates of Boonville and Saranac Lake. We asked a single open-ended question: “Please describe ‘working forest,’ as you understand it.” Of the 183 respondents, 60% were familiar with the term working forest and provided a written definition. Our analysis is based on these 109 responses. Following the coding procedures outlined above, we constructed a typology of definitions through an iterative process that usefully summarizes the data.

Table 1
Composition of sample and survey response rate

<table>
<thead>
<tr>
<th>Categories of actors</th>
<th># of surveys</th>
<th>S.L.</th>
<th>Boonville</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowner (NIPF)a</td>
<td>70</td>
<td>100</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>Public land managerb</td>
<td>9</td>
<td>11</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>Private foresterb</td>
<td>7</td>
<td>7</td>
<td>86%</td>
<td></td>
</tr>
<tr>
<td>Environmental organizATIONS</td>
<td>8</td>
<td>9</td>
<td>88%</td>
<td></td>
</tr>
<tr>
<td>Civic organizations</td>
<td>10</td>
<td>8</td>
<td>72%</td>
<td></td>
</tr>
<tr>
<td>Tourism/recreation sector c</td>
<td>10</td>
<td>11</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Forest products</td>
<td>10</td>
<td>13</td>
<td>57%</td>
<td></td>
</tr>
<tr>
<td>Real estate brokerb</td>
<td>6</td>
<td>3</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>Regional organizationsb</td>
<td>7</td>
<td>7</td>
<td>86%</td>
<td></td>
</tr>
<tr>
<td>Overall response rate</td>
<td></td>
<td>62%</td>
<td>59%</td>
<td>61%</td>
</tr>
</tbody>
</table>

a 100% of NIPF owners closest to communities (Office of Real Properties).
b Full census of the relevant population (no sampling).
c Random sample from comprehensive sample frame.
6. Results: socio-political discourses

We begin with an analysis of socio-political discourses based on a structured literature review, and then we shift our focus to study local actors’ perspectives through analysis of original survey data. We identify three working forest discourses through consideration of public statements of analysts, policy makers and policy activists. The first, a conservative economic and cultural perspective, privileges active, local professional management of the timber resource as the basis of working forest. The second, a pro-environment position rooted in environmental science and ecological economics, emphasizes the value of the ecological services healthy forests produce and the socioeconomic risks that accompany loss of these services. The third discourse, the dominant public policy making and policy analysis logic, conceptualizes working forest as an emergent platform for sustainability premised on integration of industrial logging, non-industrial economic activity (e.g., recreation, value-added artisanal activities), and environmental conservation.

6.1. Forest as workplace

Zarin (2004, p. 2) argues that working forest “emerged as a way of distinguishing production forests from those set aside as wilderness.” Defining working forest by drawing a contrast with wilderness highlights central elements of a conservative utilitarian perspective. First, working forests are productive in the sense that they produce timber, supply mills and fuel the economies of timber-based communities, while wilderness areas are not regarded as materially or socioeconomically productive. Second, the concept of working forest has been constructed in response to a regionally and historically situated environmental movement that threatens to take increasing acreage out of production—i.e., limit or eliminate timber harvesting in an expanding portion of the landscape.

Working forest is often cited by the forest products industry as the way forward for the Northern Forest. For example, the (American Forest and Paper Industry, 2002) produced a pamphlet entitled “Working Forest” in which they identified working forests as the source of “most of the wood and paper you use every day” (p. 1). For industry, perhaps we can say that working forest has value as a potential means to naturalize logging for an increasingly non-rural, environmentally sympathetic public that does not cognitively link its welfare to natural resource extraction. Reference to work, and its honest, cleansing power, may allow timber interests to build solidarity with a variety of increasingly distant segments of society (e.g., urbanized workers in the service sector).

While access to harvestable timber is the immediate objective in this discourse, loftier goals are articulated which resonate with actors outside the timber industry. Working forests are identified as a means to cultural continuity, socioeconomic stability and functional democracy. Mnookin (1999) argues that this framing of working forest seeks to draw on legitimacy rooted in the historical land use patterns of the region, which have always centered on harvesting. She argues the term works to “gather public support for a continuation of that tradition” (p. 48), though the ecological and economic implications of contemporary forestry are quite different from traditional uses. In this sense, this discourse has an explicit reactionary element that resonates with the broader anti-environmental backlash of recent decades (e.g., Switzer, 1997).

When the NFLC, in its infancy, began consideration of regulations with the ostensive aim of ensuring a sustainable future for the region, Carol Lagrasse of the Adirondack Cultural Association spoke out. “This is a classic assault by the rich against the poor, the urban and suburban dwellers against the country folk, trying to turn our communities and homes into a park for their recreation” (as quoted in Petersen, 1998, p. 27). More recently, a 1997 statewide ballot measure in Maine to limit the maximum clear cut size was defeated in part because of the actions of Mary Adams, a property rights activist who coordinated a campaign organized around the slogan “Remember the spotted owl.” This reference seeks to equate government intervention in the eastern USA with the prolonged and divisive wrangling in the Pacific Northwest (there may also be references to Texas’ sovereignty and Daniel Boone’s fate here as well). These images resonate, particularly in the Adirondack Park, where roughly half of the forestland is publicly owned and “forever wild” (i.e., logging is prohibited), and poverty is the highest in New York State.

Defense of liberalism is, of course, not solely the province of grassroots policy activists. Ted Johnson, former president of the Maine Forest Products Council and member of the Governors’ Task Force, gives voice to very similar arguments: “There is only one way to keep working forests working—and that is to prevent environmentalists from using the power of the federal government to control how private landowners manage their forests. The day landowners are no longer free to work their forests profitably, two New England traditions are gone forever: public access to private forestland and the vibrant rural culture forestry has created” (as quoted in Petersen, 1998, p. 40). Jim Beil, former Forest Legacy Coordinator for New York State, argues that once state intervention “severs [a landowner’s] ability to grow and produce forest products on the open market, it has eliminated the working forest ethic for that tract” (as quoted in Petersen, 1998, p. 40). Working forest is defined in this perspective through a reassertion of the legitimacy of the traditionally dominant land use, timber harvest, and the dominant institutional order, the market.

6.2. Forest as workhorse

For some, forests do essential, yet unrecognized work on behalf of people and non-human entities. Lind (2001, p. 1) notes that “all forests ‘work’; by providing multiple benefits
such as clean air, clean water and wildlife habitat.” The National Community Forestry Center (2001) claims more broadly, “The forest itself works, regardless of our intervention or lack thereof, not only for our benefit, but for the benefit of all life on Earth.” Matteo Burani, formerly of the Vermont Natural Resources Council, argues that defining working forest only in terms of harvesting “makes it appear that wilderness does not have economic value, which is untrue” (NCFC, 2001).

Drawing on environmental sciences such as biogeochemistry and conservation biology and the logic of ecological economics (i.e., the socioeconomic sphere in which economic transactions occur and humans interact is a subset of the larger ecological sphere), these actors define working forests through reference to ecosystem services. Ecosystem services are the set of material regulation and supply functions that natural resource complexes provide to humans, for example, water provision and filtration, waste assimilation, plant and animal habitat and climate regime stabilization.

The value of ecosystem services derived from the planet annually has been crudely estimated to be $33 trillion per year (Costanza et al., 1997). This number highlights, on the one hand, the immense value of work performed by ecosystems including forested landscapes. On the other hand, this number points to an explicit contemporary political and technical project that aims to shift from an epoch in which these services were taken for granted by consumers and the state, to an epoch in which users pay and full cost accounting is pursued.1 According to this logic, those who conserve and expand ecosystem services are creating real value and potentially have the right to compensation. Those that degrade the stock of natural capital must pay to do so.

As we characterized the timber-centered discourse as, in part, a reaction to the success of the environmental movement, the expansion of parkland, and an erosion of the legitimacy of logging, the ecosystem-centered discourse can also be analyzed in oppositional terms. Biologist Stephen Trombulak argued in his 1998 essay, Wild Forests ARE Working Forests, “(a)ll forests are ‘working’ whether or not some human being cuts down the trees therein. Forests make a range of contributions to the homeostatic functioning of the biosphere… Forests—especially unmanaged, uncult, and unharvested forests—provide basic ecosystem services without which life on Earth would be very different” (pp. 75–76).

Trombulak (1998) positions himself and his forest values in opposition to what he perceives to be the dominant paradigm: “We should not let go unchallenged the notion that a ‘working forest’ is only one where trees are cut by people to make money. Let’s call this what it really is: the exploited forest” (p. 77). Similarly, opponents of British Columbia’s Working Forest Policy argued that working forest is a ‘wolf in sheep’s clothing,’ where forests were singularly managed for high yields (See Fig. 3b). “The provincial government is prepared to mortgage the future of British Columbia to provide short term economic benefits to timber companies, at the expense of endangered species, wild salmon, sustainable forestry and basic democratic rights” (Wilderness Committee, 2006). The Provincial Government of British Columbia backed down from the proposal in July of 2004.

This pro-environmental discourse combines a positive assertion of the economic value of healthy forest ecosystems and a critique of narrow conceptions of the socioeconomic functions of forests. Both of these arguments are supported through references to science. This ecosystem-centered perspective can be analyzed as a political reaction against perceived power of timber interests. At the same time, this discourse rests on an independent assertion of the ethical and economic rationality of conservation of ecosystem structure and function.

6.3. Forest as multifunctional

The most common treatment of working forest within the socio-political sphere emphasizes opportunities to accommodate multiple interests and actors. This discourse is linked to policies that seek to integrate, and sometimes transcend, tensions between logging and conservation/preservation. Brissette (2004), a research forester in the USFS Forestry Sciences Laboratory in New Hampshire argues that a working forest should be managed with ecological and economic sustainability in mind. “To be a ‘forest’ it must be ecologically sustainable, and to be ‘working,’ it must be economically sustainable.” British Columbia’s “Working Forest Policy” referenced earlier claimed “to enhance long-term forestry management while maintaining opportunities for conservation, other resource uses, and full public access to our forests” (Integrated Land Management Bureau, 2004). In Swan’s analysis (1994), “a multi-use working forest” is defined through integration of economic value of forests for those who work in and around it, and ecological and open-space values of a broader set of actors.

The New York State Department of Environmental Conservation defines its approach to integrated management through explicit reference to working forest. “The State has acquired 1294 acres of working forest land in northeastern Delaware County… The acquisition helps protect the water quality of the Delaware River system, part of New York City’s water supply, and also provides exceptional public recreational opportunities, while continuing to be sustainably managed for forest products” (New York State Department of Environmental Conservation, 2006). Similar logic applies to New York State’s recent acquisition of working forest conservation
easements (Lind, 2001). Faced with the imminent sell-off of 260,000 acres (105,200 ha) of industrial timber land owned by International Paper, the state purchased the forest. Twenty six respondents, or 24% of the total, defined working forest through exclusive reference to timber harvest. None of these respondents identified conservation, recreation, or other considerations as relevant criteria of working forest:}

- “A forest from which timber is harvested.”
- “A forest that is logged.”
- “Taking of trees for lumber sale.”
- “One where trees are harvested for some human use such as lumber, pulp, chips, firewood, poles, Christmas trees, etc.”

These definitions were shorter than those in our other categories (averaging less than 16 words) and were the most pointed (i.e., least nuanced and open to interpretation).
These respondents were the most likely to identify a specific silvicultural technique:

- “To try to remove cull wood to improve the growth of desirable trees.”
- “Land open for timber harvest, cut cull/firewood, cut logs about every 20 years, cut softwood for lumber and post.”
- “Selective harvest of timber to maximize return on investment while at the same time optimizing the growth of the forest.”

7.3. Forest as ecological workhorse: environmental and ecological services only

Nine respondents, 8% of the total, identified ecological services and conservation as the defining features of working forest. These respondents made no mention of timber harvest:

- “A forest which is allowed to exist and function naturally with only minimal human management/involvement.”
- “Forests where people apply a land ethic that calls for intellectual and emotional inputs and attachments...”
- “A working forest for me is one that has plant and tree biodiversity and cleaned trails one can easily use to monitor growth, observe wildlife and protect streams, rivers from degradation...”

This category of definitions was the longest, averaging over 28 words per response. These responses did not reference specific interventions, but rather outlined overarching philosophies for management.

7.4. Forest as multifunctional: multiple use with explicit reference to timber harvest

The majority (61%) of our respondents defined working forest as a place in which multiple benefits could be achieved through management. All of these responses identified timber harvest explicitly as one of the appropriate or desirable outputs. These definitions often incorporated qualifying language, such as “a forest that provides X, while also allowing for Y.” Most often, timber was identified as the primary function, accompanied by an ancillary activity (see also Fligger, 2004):

- “A forest that is managed to provide timber and firewood and yet provide wildlife habitat and recreation opportunity.”
- “A sustaining supply of timber for continual harvest today and for years to come. Also to provide for recreation all year round.”
- “A multi-use area for both timber harvesting and recreational use.”

Thirteen definitions (20%) in this category explicitly noted the linkage between working forest and multiple use forestry.

- “I believe the old term ‘multiple use’ fits nicely....”
- “A forest used along the lines of a ‘conventional multiple use’ forest....”
- “Multi-use: could include: logging, firewood, recreational access, sugaring....”

While some respondents in this category identified specific silvicultural practices (e.g. “allow uneven-age management” or “constant thinning and pruning”), the majority referenced management objectives as the hallmark of working forest.

- “A working forest is managed to maximize the growth of timber with its utilization, while leaving enough to retain the forest—perhaps keeping it healthier.”

7.5. Not codable

Eight definitions, 7% of the total, could not be categorized in any of the three categories above:

- “A forest that yields a product.”
- “A forest that has or is being manipulated or managed (‘worked’) to reach a desired result. It could be for
timber, recreation, wildlife, watershed or firewood/pulp or education.”
• “Managed forest for realizing owners’ objectives.”
• “A forest providing benefits to its owner and/or the public.”

These responses emphasized the management intention of the forest owner, without specifying the nature of the intention. The envisioned land uses tended to be utilitarian, rather than conservation oriented, but the emphasis is squarely on the autonomy of the property owner in determining how the forest is to be used. We note that these definitions were somewhat coy in that their vagueness seemed calculated. These definitions seem to recognize the inherent ambiguity of working forest. In these cases, a working forest is merely a forest that provides something of value. All respondents to our survey recognize forests as valuable. It is, of course, a question of which values are captured by whom that defines forest politics.

8. Analysis

Results indicate that working forest is not a fixed reference. It is a vehicle through which meaning and power are constructed, contested and refashioned. This conclusion could be interpreted to mean that the sixteen year old deliberative process in the Northern Forest has failed to produce a consensus, or it could be interpreted to mean that the deliberation process is alive and well, and the process is the product. Working forest discourse reflects and sustains a dialogue regarding forests, socioeconomic development and associated rights and responsibilities. The object of this dialogue is land management (i.e., whose access claims will be upheld), but as we have demonstrated, tradition, science, liberty, justice, ethics and welfare are directly implicated.

8.1. Correspondence between socio-political discourses and local definitions of working forest

Timber advocacy, environmental advocacy and those seeking to find middle ground emerge as distinct discourses within the working forest debate. This same set of three orientations or world views emerged clearly at the socio-political level and at the local level in the Northern Forest. The conflict is independent of level, as the general contours of the debate remained fixed across levels of social organization. For this reason, accommodation of multiple interests will have to be accomplished at local scales if avoiding displacement (i.e. creation of classes of people whose access claims are denied) is regarded as a social objective of forest management.

8.2. Dominant conceptions of working forest

Table 2 presented above summarizes the distribution of definitions according to our coding scheme. While a majority of our survey respondents view working forests as areas producing multiple goods and services, the clear focus of management is timber harvest. Twenty four percent of respondents understand working forest to be land from which timber is harvested with no qualifying mention of ecological, recreational, or other functions. An additional 61% of respondents, those we coded as multiple use-oriented, identified timber harvest as a defining criterion. Collectively, 85% of respondents explicitly identified timber harvesting as a management objective for working forest. Conversely, 8% define maintaining recreational or environmental attributes as the primary function. These data suggest that there is not symmetrical support for logging and preservation under the rubric of working forest. Conservation in this context is a function of sustainable exploitation.

8.3. Effect of community setting on working forest discourse

Sixty seven percent of all responses coded as timber harvest-centered are from our timber-dependent site, while 75% of all ecosystem-centered responses are from our amenity-oriented site (Table 3). Cross-tabulation and chi-square test of these frequency distributions indicated statistically significant results at the level of 90% confidence interval ($p = 0.086$). Substantial deviations from the expected distribution were observed for two of the four discourses. The multiple use responses and those identified as not codable in our framework were roughly evenly distributed between study sites. While our data do not support inference to the populations of these communities, we identify potentially important differences between the actors most directly engaged in forest politics and forest management.

Future research involving a larger number of communities is needed to refine our understanding of these relationships, but the observed pattern of responses indicates that locality plays a role in shaping local discourse, as reflected in definitions ascribed to working forest. Saranac Lake’s economic fortune and its identity are ostensibly linked to aesthetically pleasing, healthy forests. For the people oriented toward production and consumption of tourism and recreational experiences, an unlogged forest works ‘better’ than a logged forest. Boonville, on the other hand, ostensibly derives its livelihood from timber harvesting and wood processing. In this context, a forest works by providing jobs, industrial feedstocks and tax revenues (see, Klein and Wolf, in press for a detailed analysis of these arguments).

Characteristics of localities and local people, shape discourse. Reciprocally, discourse shapes communities and local people. Thus, social construction of environment mediates and is mediated by structural attributes of communities including geography and natural endowments, demography and economic profile. In characterizing discourses we must be explicit regarding the setting, as well as the social position of the actor, and his/her relationship to the environment.
Working forest definitions between study sites

<table>
<thead>
<tr>
<th>Working forest definition</th>
<th>Boonville Timber-centered study site</th>
<th>Saranac Lake Amenity-oriented study site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber harvest only</td>
<td>Count: 16</td>
<td>Count: 8</td>
</tr>
<tr>
<td></td>
<td>% within discourse: 67</td>
<td>% within discourse: 33</td>
</tr>
<tr>
<td></td>
<td>% within community: 29</td>
<td>% within community: 17</td>
</tr>
<tr>
<td>Environmental and ecological services only</td>
<td>Count: 2</td>
<td>Count: 6</td>
</tr>
<tr>
<td></td>
<td>% within discourse: 25</td>
<td>% within discourse: 75</td>
</tr>
<tr>
<td></td>
<td>% within community: 4</td>
<td>% within community: 13</td>
</tr>
<tr>
<td>Multiple use, explicitly including timber harvest</td>
<td>Count: 33</td>
<td>Count: 30</td>
</tr>
<tr>
<td></td>
<td>% within discourse: 52</td>
<td>% within discourse: 48</td>
</tr>
<tr>
<td></td>
<td>% within community: 60</td>
<td>% within community: 63</td>
</tr>
<tr>
<td>Not corresponding to categories 1, 2, or 3</td>
<td>Count: 4</td>
<td>Count: 4</td>
</tr>
<tr>
<td></td>
<td>% within discourse: 50</td>
<td>% within discourse: 50</td>
</tr>
<tr>
<td></td>
<td>% within community: 7</td>
<td>% within community: 8</td>
</tr>
<tr>
<td>Total within community</td>
<td>Total count: 55</td>
<td>Total count: 48</td>
</tr>
<tr>
<td></td>
<td>% within discourse: 53</td>
<td>% within discourse: 47</td>
</tr>
<tr>
<td></td>
<td>% within community: 100</td>
<td>% within community: 100</td>
</tr>
</tbody>
</table>

Note that the six definitions obtained from regional organizations—i.e. respondents not tied to a specific study site—have been omitted here.

Zimmerer, 1996). Consideration of socio-political discourse (discourse from ‘nowhere’) informs our understanding of the general contours of actors’ references and priorities, but important local differences are observed.

Social construction of rural development and environment is well recognized, thus we must attend to language and discourse, a principal medium of social construction. Through such analyses, we can better understand diversification and transformation of rural regions of industrialized nations. Our analysis provides an opportunity to compare regional, and in some sense global, policy logic to local actors’ positions in order to assess congruence and incongruence. This juxtaposition allows us to identify local constraints to the realization of regional policy strategies and to assess the relevance of these policy strategies with respect to the political and material projects of local people. Further, this analysis helps us to understand the interests and frames of actors, enhancing ability to promote dialogue and facilitate emergence of creative local solutions (Hajer and Wagenaar, 2003).

Unsurprisingly, working forest is defined in different ways by different people. While the majority of actors define working forest in terms of accommodating various uses and non-uses of the forest, substantial numbers of policy actors and local people do not stake out a middle ground position on the issue. Of these voices, those who privilege timber over all other uses are far more visible or numerous than those who support a preservation or ecological restoration agenda. While there is a clear measure of economic self interest involved, a portion of the reactionary tendency stems from a perceived erosion of property rights in a region with a legacy of controversial, externally imposed land use restrictions and high levels of persistent poverty (Jacoby, 2001). As one respondent defined working forest, “I find the term obnoxious, as it is an artificial construct created by no use and limited use advocates to define forestry and forests within the narrowest context which suits them.”

A parallel level of frustration exists among those who see timber extraction and short term parochial thinking as dominant. As one ecologically concerned respondent stated, “The term working forest is unfortunate because it implies that protected or wilderness forest is somehow not working, or not functional.” Much of the debate regarding working forest is framed in terms of rebuttal and delegitimation. While pointing to conflict, this finding indicates the vibrancy of regional and local dialogue. Actors are clearly not talking past one another, a prerequisite for meaningful deliberation and self-critical reflection.

When Senators Leahy and Rudman commissioned the Northern Forest Lands Study in 1988, they were “seeking reinforcement rather than replacement of the patterns of ownership and use that have characterized these lands” (Northern Forest Lands Council (NFLC) (1994), p. A-13). Those patterns were unmistakably timber reliant. Real estate development prompted many environmental groups to embrace the timber industry’s claim that “the most dangerous critter in the woods is not a man with a chainsaw but a man with a lawnmower” (Wilderness Committee, 2006). In this context, common ground has been forged between logging interests and environmental (i.e., open space) advocates, all of whom fear real estate development. Common ground, in this context, is defined in terms of timber harvest.

Out integrated analysis of policy-level and community-level forest politics indicates broad support for timber harvesting in the Northern Forest. Some of this support is rooted in what we might consider to be a reactionary constituency, one that does not seem to recognize the legitimacy and complementary benefits of non-timber values in forests (e.g., recreation, ecological integrity). A second and larger constitu-
ency, a more moderate group that includes many people that would self identify with environmental positions, identifies timber production as legitimate. The constituency that does not recognize timber extraction as an appropriate objective of forest management in the Northern Forest represents a rather weak position in the policy and management debate. In a situation in which logging is an essential component of the moderate political position, taking a position in which timber harvesting is unacceptable is extreme or radical. These results offer a chance to reflect on the status of natural resources in contemporary construction of sustainable development. The strong environmental protection positions of the latter part of the 20th century would appear to have been weakened by (i) a reactionary anti-environmental backlash, (ii) a reflexive tendency within the environmental movement leading to a general rejection of deep ecology thinking and movement toward inclusive, people-centered problem solving, and (iii) a pragmatic turn growing out of dissatisfaction with rates of progress in environmental protection following the heydays of the 1970s. Of course, some have identified these tendencies as manifestations of capitalism’s ability to subsume an ecological critique and, in a more grounded sense, the cooptation of the environmental movement. Applied to forest management in industrialized nations as represented by the case of the Northern Forest, this general development takes the form of broad re-legitimation of silviculture within a portion of the conservation community. A sentiment of ‘the forest that pays is the forest that stays’ dominates, raising the question of if and where support for adversarial politics and progressive engagement of the state in conservation planning resides (see McCarthy, 2005 for related critique). This pragmatic turn suggests a need for future research on the strategies and constraints operating among both public and private conservation organizations.

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