
Collaborating for Transformative Resilience: Shared Identity in the U.S. Fire Learning Network

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Wildland fire management in the United States has been in a frustrated transition for nearly forty years. In the 1970s, fire managers agreed to end the war against fire on the wildlands that had dominated U.S. fire management policy and practice for nearly a century (Pyne 2004). However, despite changes in agency rhetoric and fire management policy, fire suppression continues to be reinforced through incentive structures, agency budgets, and professional practice (Arno and Allison-Bunnell 2002). Land management agencies devote increasing resources to suppressing fires that continue to grow in extent and intensity. The system remains self-reinforcing and unable to innovate and adapt, a condition that Gunderson and Holling (2002) call a “rigidity trap.”

Record-setting wildland fire seasons around the turn of the twentieth century created a new opportunity for policy change. Once-insular fire management agencies became subject to greater public scrutiny and congressional oversight, and the agencies unveiled the National Fire Plan in 2001. In addition to these top-down responses, The Nature Conservancy (TNC), USDA Forest Service (USFS), and the land management agencies of the U.S. Department of Interior (DOI) created the U.S. Fire Learning Network (FLN) to build fire managers’ capacities to engage in ecological fire restoration. The FLN enlists participants to develop landscape-scale ecological restoration plans for fire-adapted ecosystems, necessitating collaboration across organizational and administrative boundaries. The network facilitates this collaborative approach and enables learning across scales by operating at landscape, regional, and national levels. Since its inception, the FLN has included some 750 partner organizations distributed across over 130 landscape collaboratives connected to 15 regional networks.

Within this multiscale structure, the FLN uses technologies, planning guidelines, and various forms of media that shape, transmit, and reinforce

assumptions and expectations for engaging in collaborative ecological fire restoration planning and management. We contend that these assumptions and expectations articulate a network-wide social imaginary (Taylor 2004) that coordinates site-based collaboratives without hierarchal authority or mutually supporting social relationships. As professionals enact practices associated with this imaginary, they directly address some of the core challenges that perpetuate the rigidity trap in fire management and influence the conditions that prevent restoration of fire-adapted ecosystems. This chapter focuses on how the FLN has fostered a collective identity among fire professionals, allowing them to speak and act autonomously but with a coherent purpose and set of practices. By engendering the adoption of ecological fire restoration principles and practices among fire professionals, the FLN has the potential to catalyze a “social cascade” (Baumgartner 2006) from within the land management agencies, the primary purveyors of wildland fire management across the nation. In so doing, it may offer a way to spring fire management’s rigidity trap.

The chapter offers an overview of our case study methodology and a brief review of social-ecological resilience and rigidity traps. Then the chapter outlines the potential of multiscalar collaborative networks to spring the trap. We suggest that a “social imaginary” may facilitate the coordination of multiple collaboratives and shape common identities across a distributed network. Next, we specify characteristics of the rigidity trap within fire management. The chapter describes how the FLN was created in response to the fire management crisis and outline how the circulation of people and planning products within and across organizational scales fosters the emergence of a network imaginary that binds participants to assumptions and expectations of landscape-scale ecological fire restoration. Finally, we describe how the FLN serves as an incubator of change, creating the potential for fire management professionals to initiate social change from within fire management agencies. The chapter concludes with broader implications of pursuing multiscalar collaboration to promote social-ecological resilience.

Methods

We have been engaged in the study of the FLN since 2005, focusing on network design, function, and accomplishments. Our research to-date has included more than 140 interviews with network leaders, participants, and high-level staff in participating organizations involved in the formation and continuation of the network. We have attended and recorded audio

at sixteen regional and national level workshops and leadership meetings. Along with our analysis of interview and workshop transcripts, we have reviewed hundreds of documents including fire restoration plans, geographic information systems (GIS) maps and models, interorganizational agreements, meeting agendas and summaries, network newsletters, listserv communications, and media reports.

We have drawn our analytical insights about how the FLN operates as a multiscalar collaborative network from this case study approach, using qualitative methods, aided by NVIVO analysis software, to develop codes and categories to define common interpretations of network action at all levels of the network (Charmaz 2006; Yin 2003). This chapter represents a synthesis of much of our other work, as we have developed new interpretations from the data and analysis. For descriptions of methods we have used to analyze specific aspects of network action, we refer you to our previous publications on the FLN (Goldstein and Butler 2009, 2010a, 2010b; Goldstein, Butler, and Hull 2010).

Resilience and the Social Imaginary

Social-Ecological Resilience and Rigidity Traps

Proponents of social-ecological resilience use a systems vocabulary to define *resilience* as an outcome of interaction between unsettling events and a bioculture that could assume multiple stable states. Resilient social-ecological systems respond to disturbances by maintaining structural and functional complexity within a variety of potential system configurations (Folke et al. 2002; Walker, Holling, Carpenter, and Kinzig 2004). Thus, resilience is not just stability, but it also is the ability to withstand loss and recover identity and structural and functional complexity. Greater resilience is associated with self-organization and capacity to integrate learning and adaptation to restore system functions in the face of perturbation or change (Berkes, Colding, and Folke 2002). These qualities are independent of the temporal, spatial, and organizational scale of analysis, and they can encompass firms, communities, states, and societies.

Gunderson and Holling (2002) developed the concept of “panarchy” to describe how social-ecological systems can change, either gradually or suddenly, across multiple scales through the emergence of adaptation within the system. Panarchy links multiple scales in a system in an interconnected adaptive cycle of crisis (Ω), reorganization/renewal (α), growth (r), and conservation (K) (See figure 14.1 to see an illustration of two-scale panarchy.). The adaptive cycle of a panarchy relies on the circulation of

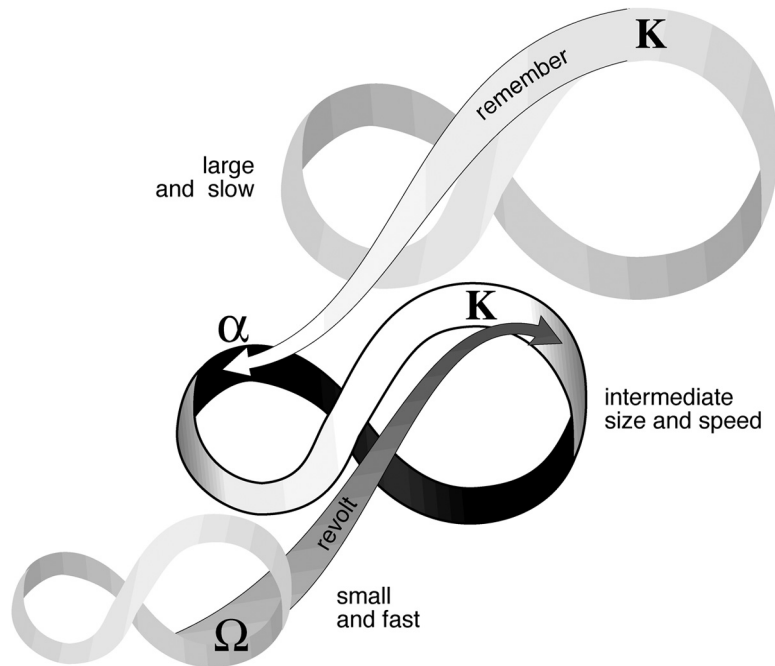


Figure 14.1

Two-scale panarchy, reprinted with permission from Resilience Alliance, <http://www.resalliance.org/593.php>

innovation across nested scales to engender transformative change. Smaller scales are more nimble and generate innovation through experimentation, while larger and slower-moving scales stabilize the system. Smaller scales can initiate “revolts” that can lead to the destabilization of the larger system. New perspectives and practices get folded into the larger scales. At these scales, continuity and conservation stabilize the system, applying characteristics of the “revolt” to broader system dynamics molded by the process of “remember.” As smaller systems initiate revolts, the potential for the larger system to undergo transformative change increases as new practices are codified and institutionalized, and the larger system applies the wisdom of accumulated memory (Berkes et al. 2002; Gunderson and Holling 2002).

Stable and durable institutions can be an obstacle to broader social-ecological resilience, because they maintain themselves through shocks or perturbations that might otherwise catalyze adaptive change (Allison and Hobbs 2004; Carpenter and Brock 2008). Without innovation

and adaptation, a system can get caught in a “rigidity trap” (Gunderson and Holling 2002), unable to break free from the stage of conservation that maintains the status quo. These systems are characterized as self-reinforcing and tightly connected, unable to adapt even in the face of crisis (Carpenter and Brock 2008, p. 41). Rigidity traps were first described in natural resource management bureaucracies that perpetuate themselves at the expense of the productivity and vitality of the ecosystems that they manage (Gunderson and Holling 2002). Resource managers reduce natural variation because dependent industries require predictability and productivity maximization of certain resources. This reduced variation enables the bureaucracy to persist, but negative ecological feedbacks increase the likelihood of catastrophic events and dramatic, unanticipated change (Holling, Gunderson, and Ludwig 2002).

This process can be self-correcting when extreme events such as wildfire or hurricanes foster change in long-established rules and practices (Schusler, Decker, and Pfeffer 2003). However, extreme events may also be accompanied by feedbacks that maintain the status quo, such as financial and/or political support that accompanies continued crisis management. Even when resource managers recognize that things would improve if they approached their work differently, change can be undermined by persistent institutional processes (Repetto and Allen 2006). Change can be threatening as it can disrupt familiar procedures and ways of knowing, require new training, and increase uncertainties associated with reorganization (Goldstein 2007).

Social Cascades

People's willingness to change the status quo is conditioned by the willingness of others to do so, a phenomena that Baumgartner (2006, 43) calls a “social cascade.” People tend to coalesce around certain ideas or frames based on the beliefs of those people they respect, the information they obtain to legitimize a point of view, and the relative number of people who hold that point of view (Bikhchandani, Hirshleifer, and Welch 1998; Sunstein 1999). A cascade occurs when a critical mass begins to form around a common set of beliefs, perspectives, or interpretations and “a rivulet ends up as a flood” (Sunstein 1999, p. 8). Social cascades can lead to broader social change and have been cited in cases such as the anti-slavery and environmental movements in the United States, the rise of Nazism in Germany, and the fall of communism in Eastern Europe (Sunstein 2000).

Collaboration to Initiate a Cascade and Spring the Trap

Some resilience researchers have suggested that multistakeholder collaboration can spring rigidity traps because these processes are inclusive, well-suited to building trust and social capital, and they can enhance innovation by providing a multitude of testing grounds for establishing new relationships and exploring alternative work practices (Cash et al. 2006; Pahl-Wostl et al. 2007; Walker et al. 2002). Multistakeholder collaboration developed as a way to solve disputes that stymied regulatory agencies, representative assemblies, and the courts (Gray 1989; Weber 1998). Collaborative relationships not only enhance problem solving, but they also enable agreements to be implemented, as stakeholders remain engaged with one another and implement the solutions they had devised (Booher and Innes 2002; Healey 1997).

In addition, collaboration can provide an opportunity for individuals to align themselves around new and potentially common notions of how they view themselves and the social worlds around them (Booher and Innes 2002; Hardy, Lawrence, and Grant 2005; Inkpen and Tsang 2005). Participants may come to see themselves as interconnected in new ways and may change how they view their relationships to each other and to the biosphere (Bryan 2004; Poncelet 2004; Roling and Maarleveld 1999). Booher and Innes (2002, 231) suggest that “a central outcome [of collaboration] is that participants in dialogue build a sense of shared identity as part of a system or community.” As collaborators try out new roles and consider new ways of making sense of their experiences, they can build a new individual and shared identity within a place and community (Booher and Innes 2002; Hardy et al. 2005; Healey 1999).

Our work explores how shared identity can be cultivated within a multiscale collaborative network in order to address challenges that are beyond single-sited place-based stakeholder collaboration. Our prior analysis of the FLN traced how participants in a collaborative network develop common assumptions and expectations that enable them to act autonomously in the service of a common purpose (Goldstein and Butler 2009, revised and resubmitted 2010a). The idea of a “social imaginary” provides a framework to understand how a network of disparate participants might build solidarity and foster a common identity, and in so doing, initiate a social cascade to engender more fundamental change in fire management practice.

Common Identity through Imaginary

Anderson (1983, p. xxxi) proposes that the ties of nationality constitute an imagined community, stating that “members of even the smallest nation

will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion.” Taylor (2002, 2004), expanded the concept describing a “social imaginary” as a dispersed collective expectation of how things work now, how they are supposed to work, and how to engage with others to make them work that way. Individuals who adhere to a common imaginary can reinforce solidarity within a group with common struggles and pleasures, despite the absence of personal relationships among all members of the group.

Taylor (2001a) emphasizes that the imaginary is not analogous to institutional rules and norms. An imaginary is an implicit and pre-conscious background, a common sense that ties a community together and legitimates certain communal practices. Rather than constraining individuals, an imaginary provides a framework for their routines, enabling them to exercise judgment and select alternatives within a particular field of action. It subtly articulates the assumptions and expectations of people operating in certain social spheres, shaping who they are, what practices they engage in, and how they judge the actions of others.

Our analysis focuses on how an imaginary can enhance agency by shaping the conditions of possibility for collective action, generating the potential for a social cascade to initiate a “revolt” in the fire management panarchy. We suggest that an imaginary can unify and motivate a distributed network of collaboratives by drawing together dispersed participants around a shared identity. To make this link, we examine how a network imaginary formed within the FLN and describe the practices through which the imaginary is expressed and reproduced among network participants. Then, we suggest how this shared identity can enable a social cascade to initiate a “revolt” throughout the larger system of fire management.

Fire Management’s Rigidity Trap

Wildland fire management in the United States emerged with the establishment of public land management agencies around the turn of the twentieth century. The fledgling agencies were invested in a utilitarian conservationist ethic that focused on maintaining resource production (Hays 1999). In this context, fire was considered an enemy to be eliminated from the landscape (Langston 1995; Pyne 2004). The USFS took the lead and created a national system of fire prevention and suppression (Pyne, Andrews, and Laven 1996).

Since the 1970s, a social-ecological crisis has been growing in the nation’s forests. Fire suppression led to accumulation of woody biomass that

stoked large conflagrations, promoted disease and pest outbreaks, and reduced species diversity. Land management agencies were overstretched and unable to respond to an ever-worsening crisis caused by their overzealous efforts to eliminate fire (Pyne 2004).

In the late 1990s and early 2000s, conflagrations of record frequency and intensity led Congress and the public to scrutinize the previously insular world of fire management (Davis 2006; National Interagency Fire Center 2009). New wildland fire policies emphasized ecosystem restoration, fuels reduction, and community protection (Steelman and Burke 2007). Both the National Fire Plan (USDA Forest Service & U.S. Department of Interior 2001) and the Healthy Forests Restoration Act (U.S. House of Representatives 2003) aimed to curb the cycle of declining ecological health and ballooning fire control budgets by calling for ecologically informed management approaches.

While these new policies highlighted the importance of ecologically informed fire management, they left unchanged the organizational incentives, budget priorities, and professional practices of agency land managers (Arno and Allison-Bunnell 2002; Kennedy and Quigley 1998; USDA Office of the Inspector General 2006). Fire suppression continued to be the agency priority, with 98 percent of all forest fires suppressed, regardless of ignition source (USDA Office of the Inspector General 2006). Despite near-universal recognition of the need for change and a continued crisis in fire management, the system resists reorganization. As Pyne (2004, 52) concludes, “the issue is not that we have failed to cross the divide, but that we have so little to show for having breached it decades ago.”

While various institutional factors play a role in maintaining this rigidity trap, the persistent identity among wildland fire managers as firefighters hinders change on the ground. For more than a century, fire professionals examined the means, not the ends, of fire management. They worked on “imagining new concepts to guide fire protection planning, inventing better tools for firefighting, devising better techniques to detect and hit fires quickly” (Pyne 2004, 93). Despite rhetorical and policy-level support for ecological fire restoration, change was slow to come as ecological restoration required a different set of capacities and range of practices than fire fighting. Jim Hubbard (personal communication, April 27, 2007), the director of State and Private Forestry for the USFS, asserts that although the agencies understood eco-regions and landscape-scale restoration prior to the FLN, “that did not translate through to the land managers making priority decisions . . . where the landscape context was being considered as it should be.”

Officials in the Forest Service have highlighted this difficulty of reorienting fire management professionals acculturated to the assumptions, expectations, and practices of fire suppression as a core challenge in engaging in more ecologically informed fire management practice. As the Education Committee of the Association for Fire Ecology asserts, the “changing scope of fire management” requires a corresponding shift in training, education, and experience to “incorporate new knowledge of fire ecology, fire behavior, and social sciences to tackle the multifaceted issues [fire professionals] will face” (Kobziar et al. 2009, 340). Jim Hubbard identifies the need to “change behavior, change thinking, and change approaches over time,” particularly among fire professionals, in order to build the capacities and practices necessary to achieve landscape restoration goals on the ground (personal communication April 27, 2007). It is this shift in thinking and behavior—an identity shift—that these officials identify as a necessary step to bring about more fundamental change in fire management practice.

U.S. Fire Learning Network

Responding to this lack of capacity among fire professionals to address the fire crisis, TNC, USFS, and the DOI signed a cooperative agreement in 2001 creating the FLN. Federal agencies allotted nearly \$1 million a year to the agreement and TNC hired network coordinators and support staff. Initially, twenty-five landscape collaboratives across the United States took part in a two-year planning process to generate ecological restoration plans on landscapes ranging from 100,000 to 11 million acres. FLN staff grouped landscapes into regional networks in 2003 (Fire Learning Network, March, 2003). As of late 2010, more than sixty landscapes linked through eight regional networks worked to develop collaborative landscape-scale ecological restoration plans for fire-adapted ecosystems. (A map of the active landscapes is shown in figure 14.2.)

Cross-scale Circulation

FLN organizers sought to “foster innovation and transfer lessons learned to other landscape projects . . . to accelerate the implementation of ecologically based and culturally acceptable fuels reduction and fire regime restoration” (TNC U.S. Fire Learning Network 2009). Linking collaborative planning processes across the nation, the network enhances fire managers’ capacities to develop ecological fire restoration plans, facilitates innovation, and increases the application of ecological fire restoration on the ground (Goldstein et al. 2010).

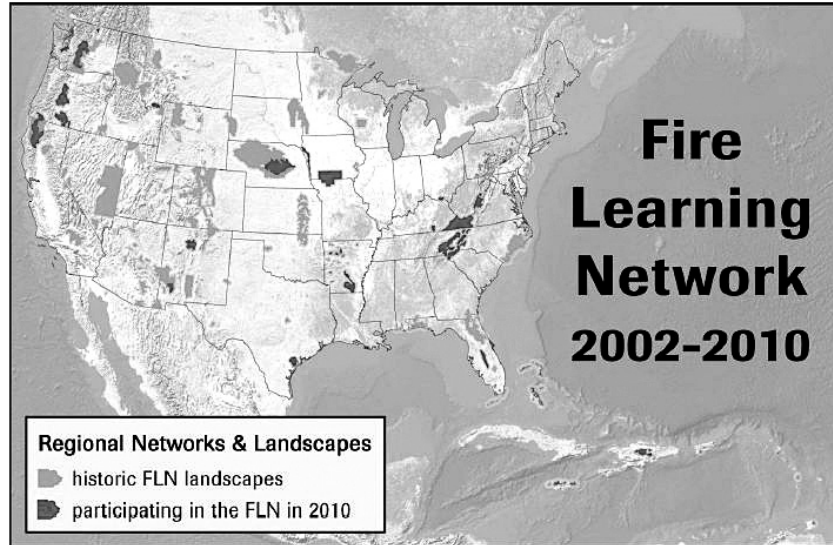


Figure 14.2
Map of the active U.S. FLN landscapes and regions, courtesy of the FLN's director, 2010

The FLN links multiple place-based collaboratives together into a larger network at regional and national scales (see figure 14.3). At the landscape level, diverse stakeholders collaboratively develop ecological fire restoration plans and modeling or mapping tools for those plans. They generate new ideas, field test new practices and share resources to enable landscape-scale management. Regional networks bring together leading landscape participants to compare plans, discuss how they produced these plans, and exchange ideas about overcoming barriers to plan implementation. Through these exchanges, regional participants enhance their capacities in collaboration and in ecological restoration planning and management (Goldstein and Butler 2010a). The national network staff provides funding and support to enable landscape- and regional-level meetings, guide planning processes, and ensure cross-scalar communication and learning.

These activities do not occur in isolation at each level, as both participants and material objects circulate throughout the network. Landscape representatives attend regional workshops to present landscape-level work and obtain feedback as they collectively analyze their respective planning products and generate new ideas. Regional leaders attend landscape-level gatherings to facilitate collaborative planning processes or to disseminate innovative practices emerging from other landscapes and regional forums.

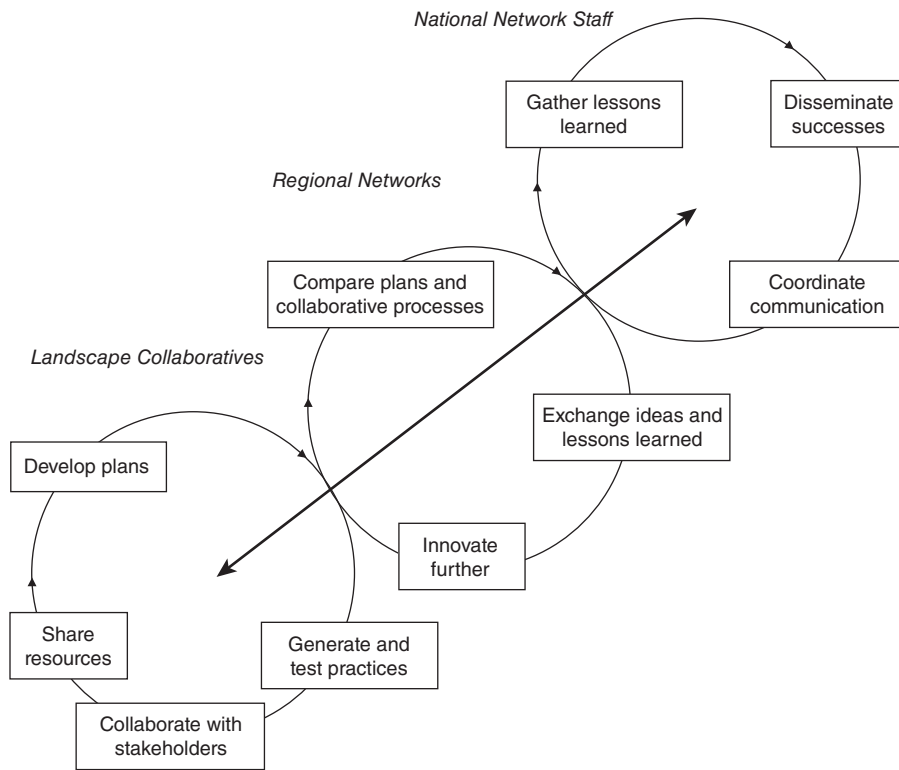


Figure 14.3 Multi-scalar network action in the FLN; cross-scalar circulation of FLN participants, planning products, and media throughout the network

Regional and landscape leaders gather in national meetings to provide input into the design and activities of the overall network, to highlight and share practices with each other, and to seek to develop creative responses to common challenges across the nation. National leaders present at regional meetings and counsel regional leaders as they shape agendas and guide planning processes.

This circulation of people is accompanied by a circulation of planning products, modeling tools, and representations that focus network action and serve as translating devices across network levels. In particular, the FLN relies on a four-step series of planning guidelines and modeling systems based on Fire Regime Condition Class (FRCC) to facilitate decision making in the planning process. The planning guidelines help participants develop a narrative that describes idyllic historic conditions,

sources of present-day decline, and the potential to chart a future of renewal (Goldstein and Butler 2010b). FRCC, a three-part scale that denotes departure from a reference or historic ecological conditions, reinforces the narrative as desired future conditions are often tied to how closely existing conditions can approximate the historic condition (Goldstein and Butler 2009).

FLN leaders maintain network communications through newsletters, field guides, and briefing documents, and by conducting presentations and interactive landscape tours at national and regional meetings. Regional leaders also conduct presentations, host field excursions, publish workshop summaries and tout success stories among their members. Web sites, databases, video conferences and other remote means of communication serve as repositories of network products and communication forums to highlight specific innovations. In this way, both print and performative media serve the function of what Anderson (1983) calls “representations,” conveying and reinforcing a common understanding of appropriate action (Goldstein and Butler 2009).

The FLN Imaginary

In previous work, we describe how the use of certain technologies, in particular planning guidelines and modeling protocols, reinforced shared assumptions and expectations among network participants (Goldstein and Butler 2009). The assumptions and expectations constitute more than a common story about landscape-scale fire restoration, or a set of ecological goals shared by the FLN founders and sponsors. They include an understanding of the historical basis of the problem (largely linked to past fire suppression) and the appropriate strategic and tactical response highlighting ecological restoration planning and management. In addition, they are collectively oriented toward overcoming organizational barriers to restoration action, and they share tacit agreement that fire managers possess the credibility and legitimacy to participate in FLN collaborative efforts. Taken as a whole, these assumptions and expectations support an imaginary among network participants that defines how to engage in landscape-scale ecological restoration of fire-adapted ecosystems. It provides an implicit common understanding that enables partners to carry out the collective practices of the FLN, to identify exemplary planning and management activities among network members, and to discern legitimate practices associated with landscape-scale ecological restoration of fire-adapted ecosystems (Goldstein and Butler 2009).

Shaping Identity

The FLN imaginary helped to define a new professional identity among fire managers. Wildland fire managers share in firefighters' reputation as heroic defenders against an elemental danger. The FLN offered fire managers the chance to be heroes again, although heroes of a different sort, adapting to dynamic landscape conditions to restore ecological health and to protect human communities. As fire managers participated in the FLN, they developed planning products and sought to redeem fire management by undoing a century of fire suppression, removing barriers to restoration, and applying fire to protect communities and to heal landscapes. In the process, FLN participants expressed their desire for ecological and institutional transformation and their belief that they had the capacity to affect change. Identification with the roles, values, and knowledge of ecological restoration allowed fire managers to redefine the meaning of their professional practice and to gain a renewed sense of purpose and orientation for action. As one fire manager put it, "If you are a status quo person, you are going to be very uncomfortable in the Fire Learning Network" (John Andre, USFS, personal communication, March 12, 2009).

FLN assumptions and expectations that sustain the network imaginary do guide individual action, but not in the same way an individualistic ethic does. The FLN imaginary provides a bridge between the fire manager and the emergent collective. A shared goal and purpose provides FLN participants with an understanding of what it means to be a member of the group and with a sense of their role in shared community life, a horizon and context for action that delimits appropriate behavior for self and others in the pursuit of ecological fire restoration. This understanding reinforces their solidarity within a group with common struggles and pleasures, despite limited personal ties or mutual accountability among FLN partners. As one participant points out, the FLN provided a framework for addressing "All the things that I had been wondering about for years that hadn't added up" and helped him to make "a shift in focus from issue-based land management . . . to ecosystem management" (Jim McCoy, personal communication, March 14, 2007).

Rather than provide a set of explicit rules, the FLN imaginary indicates what the rules should be (and the relationship between these rules) by informing partner's self-understandings, practices, and common expectations. While the FLN was founded on the premise that there is a nationwide problem with the degradation of ecological health in fire-adapted ecosystems (The Nature Conservancy 2001), the planning guidelines and technologies enabled each landscape collaborative to situate the FLN

imaginary in participants' own experience and context, through their own actions, collective reasoning, and choices. Rather than being an outgrowth of theory, the imaginary was "nourished in embodied habitus" through practices that were engendered by FLN guidelines and technologies (Taylor 2001b, 189). Practices are possible and make sense within the imaginary's assumptions and expectations of one another, while carrying and legitimating the imaginary. This dialectic supports a "repertory" of collective actions. As Taylor (2002, 106–107) notes, "These understandings are both factual and normative; that is, we have a sense of how things usually go, but this is interwoven with an idea of how they ought to go, of what missteps would invalidate the practice." What the FLN offered to land management professionals and organizations was the opportunity to work through a planning process that would "make them stop and sit down and think through this . . . and apply it to the processes that they work with" in their own organizational and ecological contexts (Jim Hubbard, personal communication, April 27, 2007). This process allowed managers to collaboratively develop plans that were locally applicable and to coalesce around a common framework for validating ecological fire restoration practice.

Initiating a Revolt through Environmental Subjects

As the FLN imaginary facilitated the emergence of new ecological restoration subjectivities among fire managers, it laid the foundation for more fundamental change. Agrawal (2005) describes a similar identity formation process in the forests of the Kuamun state in India. Agrawal proposes that the making of environmental subjects can occur through the dispersal of power, knowledge, and regulation to allow people to reconstruct their identities and to associate themselves with the surrounding natural environment. His concept, which he labels "environmentality," derives from the decentralization of control from government to local populations, allowing the latter to become accomplices in governance by enabling the co-management of ecological landscapes. As Agrawal (2005, 100) contends, "The manufacture of interest and the redefinition of subjectivities play a key role in the construction of fresh beliefs about what kinds of practices are most attractive." Thus, unlike traditional understandings of power as a controlling influence, Agrawal suggests that the "individuality that is supposed to be constrained by the exercise of power may actually be its effect" (Agrawal 2005, 217). He suggests that environmentality can be exercised through more decentralized approaches to governance that encourage co-management and self-regulation to reshape and solidify

human subjects as protectors of environmental quality of natural landscapes (Agrawal 2005).

Extending beyond this reading of localized governance of environmental systems, the FLN shapes subjectivities that introduce new perspectives and practices into the larger governance system. In some cases, FLN participants inform policy-level changes to incorporate more opportunities for ecological fire restoration at the federal or state level (Butler and Goldstein 2010). In other cases, participants introduce ecological restoration perspectives and practices into land management planning efforts in their respective organizational units. For example, Jim McCoy (personal communication, March 14, 2007) joined the Land Between the Lakes National Recreation Area staff, having participated in the network, and thus he “was able to bring FLN information and technology into the process [of land management plan revisions]. I was able to infuse that document with the tenets of landscape-scale prescribed fire ecosystem-based management.” His supervisor, Bill Lisowsky, recalls that McCoy played a fundamentally important role in the plan revisions, bringing “a new source of energy” and a level of fire expertise to the process, infusing the plan with “ecological restoration and fire restoration principles” (Bill Lisowsky, personal communication, November 28, 2007).

Not only did FLN participants spread ecological restoration practices into their respective workplaces, but also the FLN shaped new professional capacities and spread to new locations. The FLN imaginary helped create and maintain the collaborative network, entraining individuals as they circulated through the network in association with planning guidelines, technologies, and media. Fire restoration ideas and practices circulated between landscapes and regions, enabling participants to become experts in landscape-scale ecological fire restoration. As these professionals built capacity in collaborative and technical expertise, acolytes became leaders and mentors in their own right, fostering a growing cadre of fire management professionals dedicated to and capable of engaging in collaborative landscape-scale ecological fire restoration. As they circulated through landscape and regional networks, they expanded the scope of the FLN, establishing and supporting new sites and bringing new members into the network over time (Goldstein and Butler 2010a). The network expanded from twenty-five landscape collaboratives to having included more than 130 landscapes and 750 partner groups over its first eight years.

In the panarchy associated with fire management, the FLN facilitates cross-scalar circulation of ecological fire restoration perspectives and

practices. Through the multiscalar structure of the network, innovation and experimentation becomes introduced into the larger system at multiple levels. FLN participants catalyze the potential transformation at larger scales. Many FLN participants work within the federal agencies involved in fire management (in particular, the USDA Forest Service). As they refine their perspectives and practices in landscape-scale ecological fire restoration within the network, they are able to return to their roles in fire management agencies as ecological restorationists, promoting new ideas and possibilities within their work units. Moreover, as the network itself expands to new locations and new participants are introduced to the network imaginary and its associated practices, the potential for transformation of the system increases.

Conclusion

Place-based multistakeholder collaboration is particularly effective at resolving disputes, generating consensus-based agreements, and fostering learning, change, and identity formation (Gray 1989; Healey 1997; Innes and Booher 1999). However, a bounded and place-based multistakeholder process may not provide resilience to catastrophic events because it cannot bring about structural change across spatial, temporal, and organizational scales. Fainstein (2000) suggests that collaborative planning facilitates changing speech and rhetoric but cautions that more fundamental or structural change requires social mobilization to overcome power imbalances that cannot be effectively erased through “talk” alone.

We contend that the FLN offers a model for how a network of collaboratives might foster the potential for structural change. Like a multistakeholder collaborative, a network of collaboratives relies on communication and deliberation to foster learning and cultivate new identities among participants. What distinguishes a multiscalar network is that it connects multiple sites, fostering the potential to diffuse innovation and to respond to common challenges across geographic space and organizational scales. Such a network can catalyze a social cascade from within rather than through protest and oppositional tactics that frequently characterize social movements.

This process of social change is not sudden. As Jim Hubbard (personal communication, April 27, 2007) suggests, “This is not going to be revolutionary. It will evolve over time. And we will have to have the patience and the determination and persistence to stay with it.” While adaptations within the larger system have been initiated by FLN participants in specific

locations, the metaphorical rivulet has yet to build into a flood. Nonetheless, the movement is growing, both within the network and beyond. Transformation of fire management from its focus on suppression to more ecologically informed alternatives is underway. While the FLN has not reached the tipping point, it has catalyzed changes in policies, plans, and practices at multiple scales in fire management agencies and organizations (Butler and Goldstein 2010), pushing the system closer and closer to more fundamental change.

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