Who's in Charge? The Role of Power in Collaborative Governance and Forest Management

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Collaborative processes for working toward common management goals between individuals and organizations, despite their differences, emerged as one enduring legacy resulting from the Timber Wars in the American West during the late-1980s and the early 1990s. Power imbalances are often cited as a common problem in collaborative processes and can have a lasting, deleterious impact on the collaborative process and its outcomes. For all its importance, however, there is a yet unfulfilled need to understand the extent to which power and power imbalances affect collaborative relationships. Our research uses a case study approach to qualitatively analyze power dynamics within three collaborative efforts comprised of the United States Forest Service and community stakeholders. We identified four sources of power in play within the three case studies examined to include authority, resources, discursive legitimacy, and trust. We also discuss the application of these power sources and the ensuing outcomes. These powers, and the imbalance that sometimes result from their application, are representative of some of the underlying tensions that can be present in collaborative processes.

Keywords: Collaboration, collaborative governance, power, Timber Wars, forest management

The Timber Wars in the American West during the late-1980s and the early 1990s left in their wake many enduring legacies including the emergence of collaborative processes among individuals and organizations who work towards common management goals, despite their differences (Baker and Kusel 2003). While this emergent form of social relations has attracted attention from policy-makers, federal forest stakeholders, and researchers, power imbalances are cited as a common problem in collaborative governance arrangements and can have a lasting, deleterious impact on the collaborative process and its outcomes (Gray 1989). Power imbalances can occur as the result of stronger parties manipulating other parties within the collaboration. Government agencies are often in the position to invite community stakeholders into the collaborative process while, at the same time, being actors in the process themselves. This leads to concerns that agency personnel may opt to dominate the process by including or excluding certain stakeholders. This dominating behavior may also be exhibited by non-governmental members of the collaboration (Lukes 1975; Singleton 2002; Walker and Hurley 2004). Additionally, if stakeholders, including agencies, do not have power in terms of voice, resources, or legitimacy, they risk being co-opted by more powerful stakeholders within the collaborative arrangement (Coggins 1999; McCloskey 1996; Purdy 2012).

For all its importance, however, there is a yet unfulfilled need to understand the extent to which power and power imbalances affect collaborative relationships (Cook 2015; Purdy 2012). Despite the integral role that power-sharing plays in collaborative governance, relatively few empirical studies have been dedicated to understanding the role of power in natural resource management at the field level (Raik, Wilson and Decker 2008). Our study contributes to the empirical analysis of the role of power in collaborative governance arrangements by examining the attributes of power at play in three case studies of collaborative national forest management processes involving the US Department of Agriculture's Forest Service (USFS) and locally-based stakeholders. In this study, we used three research questions to guide our inquiry: 1) What are the sources of power at play in the USFS – community collaboration interactions? 2) How is power being applied in the USFS – community collaboration interactions? 3) What are the outcomes of the application of power and what are the consequences for the USFS's organizational structures and processes?

Background

The Promise of Collaborative Governance

Over the past three decades, collaborative governance has come to the fore as a way to address natural resource management problems that are often complex and contentious (Cestero 1999; Dukes 2001; Scardina, Mortimer and Dudley 2007; Singleton 2002). These collaborative efforts have been created in response to the inability of any single entity to address the interconnected ecological, economic, and social complexities arising from resource management and as a method of answering the public's demand to be more involved in making decisions about the man-

agement activities on public lands. Additionally, as budgets are stretched and human resources constrained in natural resource management agencies, collaborative governance arrangements have been touted as an important avenue for getting on-the-ground-work completed, particularly in the areas of forest planning and forest restoration (Carr, Selin and Schuett 1998; Cheng and Burns 2007; Leach, Pelkey and Sabatier 2002; Selin and Chevez 1995; Selin, Schuett and Carr 1997). Collaboration with community groups, particularly in the western United States, has also proliferated as a way to address threats to life, property, and infrastructure from wildfires (Jakes et al. 2011). As our unit of study in this research, we examine three collaborative groups, composed of the United States Forest Service and community stakeholders, formed for the purpose of enhancing forest restoration activities.

Power Defined

Robert Dahl (1957) in his seminal work, *The Concept of Power* notes that most people have an intuitive sense of what power means, yet scientists have struggled to articulate its precise meaning. A review of the social science and collaborative governance literature proves that a mutual definition remains elusive (Cook 2015; Shively 2011; Gerlak, Heikkila and Lubell et al. 2013). Kanter (1992:46) writes that power "is a function of formal authority, resources controlled, and contingencies managed." Agrawal and Ribot (1999) define power as the authority to create rules and make decisions. Egan, Hjerpe and Abrams (2011) refer to three phases of power; the ability to control the behavior of others or the 'power over,' the ability to authorize the participation of stakeholders who might otherwise be marginalized or the 'power for,' and the 'power to' which he defines as the ability to measure another entity's ability to realize its goals. In its simplest

form, power refers to the influence one person or group has over the other (Weber 1922). We apply Weber's (1922) definition here to collaborative governance. As such, power can be thought of as the desire and ability of a subset of the members of a collaborative group to influence the decision made on behalf of the group as a whole.

Power in Collaborative Governance

Collaboration, by its very nature and definition, involves some level of shared power (Armitage 2005). However, if power is not shared equally among all collaborative group members, it has the ability to prevent equitable relationships from emerging or transform symmetrical collaborative networks into asymmetrical decision-making bodies with the potential to further strain already tenuous relationships. The distribution of power across actors involved in collaboration can affect how problems in resource management are defined and solutions are ultimately implemented (Sturtevant and Donoghue 2008). Despite its critical importance, analyzing power in collaborative processes is challenging, not only because of its inherent complexity, but as Purdy (2012:410) states, "because they [collaborative processes] are ambiguous, complex contexts in which participants, social structures, and processes can change rapidly." In this study, we examine power and ensuing power dynamics through the examination of three observable attributes that constitutes power: the sources of power, the application of power, and the consequences and outcomes resulting from the application of power.

Sources of Power

We borrow from Purdy (2012), three sources of power within collaborative governance

processes; authority, resources, and discursive legitimacy, and include a fourth source, trust, into our analysis.

Congress confers broad authority directly to the USFS through the agency's statutory mission and mandates, along with substantive and procedural limitations to that power (Coggins 1999; Nie 2004). On the one hand, these congressional mandates are vague, thereby vesting USFS administrators with a high degree of discretion over major decisions, from rulemaking to project-level decision-making. On the other hand, these same mandates provide substantive opportunities for public participation in agency decision processes. Stakeholders often seek to limit an agency's authority and discretion by imposing their values and views on the decision-making process; agencies must then negotiate their discretionary authority with stakeholders, effectively defining their 'decision space,' which, over time, can lead to an imbalance of power between agency and community stakeholders (Coggins 1999; Nie 2004). The public also gains authoritative power through litigation and administrative appeals.

Resource-based power is recognized when those organizations that hold important and valuable resources wield that power to their advantage (Purdy 2012). As Purdy (2012:410) states, resources can include such tangibles as: "financial resources, people, technology, and supplies; and intangibles such as knowledge, culture, and capabilities." Expertise, knowledge and information are intimately linked, where the resource-based power of expertise lies in the accumulation and acquisition of a specific body of knowledge through formal academic training or job experience (Greiner and Schein 1988). Weber's (1958) classic research suggests that the element of expertise is indeed, the bureaucracy's primary source of power. It is important to note, however, that these resources, and the power they connote, are not limited

to the agency; other parties within the collaborative group can bring these resources to the table and use them to assert their power (Gray 1985).

Discursive legitimacy refers to a source of power that can be amassed when an organization has the ability to speak on behalf of the public it serves and advances a public discourse on issues of importance and manages the meaning related to the issues (Hardy and Phillips 1998). Purdy (2012:411) writes, "Organizations exercise discursive legitimacy when they act on behalf of the values or norms of society, such as the rule of law, the logic of economic rationality, or principles such as democracy or respect for diverse cultures. An organization with discursive legitimacy draws its power from the status of the values or logic it represents."

Trust is an often overlooked source of power in the collaborative governance literature as it is most often intertwined with other power sources; however, trust is at the foundation of many public natural resource planning processes and is a key determinant in shaping planning outcomes (Lachapelle, McCool and Patterson 2003). It stands to reason that community-agency relations would be heavily based on trust, especially when negotiating the collaborative decision-space; per Nie's (2004) analysis, agencies which enjoy a high level of trust on the part of public stakeholders are more likely to be granted a greater degree of discretion. Smith et al. (2012) describe four dimensions of trust involved in community-agency relations: 1) dispositional trust; 2) trust in the federal government; 3) shared values; and 4) moral and technical competencies. Dispositional trust refers to an individual's propensity to trust or distrust others. Smith et al. (2013:454) comment that dispositional trust is generally a stable personality characteristic attributable to "early-life social interactions." Trust in the federal government stems from an individual's "level of confidence in the ability of the

federal government to carry out its fiduciary responsibilities" (Smith et al. 2013:454) and this level of confidence translates to the level of trust an individual extends to a management agency. A belief that a resource management agency shares an individual's values and holds the same perspectives, opinions, and desired outcomes of resource management portends that individual's trust in the agency. Finally, the trust that an agency will do what it is expected and obligated to do relies on several factors relating to moral and technical competencies. Smith et al. (2013:455) suggest that for trust to exist in the agency-community relationship, "there must be some expectation on the part of the trustor (e.g., local community member) that the trustee (e.g. management agency) will adhere to moral codes, show respect for the trustor's values, and be technically capable and able to perform specific tasks that yield benefits for the trustor."

Application of Power

Purdy (2012) provides a framework for assessing power in collaborative governance processes by examining how three sources of power – authority, resources, and discursive legitimacy – are applied in three separate arenas: the participation arena, the process design arena, and the content arena. The participant arena considers who the participants and leaders will be in the collaboration process. Purdy (2012:411) notes that participants need to include those "with formal power to make a decision, those affected by a decision, and those with relevant information or expertise." Those who possess the power of authority can apply their power by determining who will be invited to participate in the collaboration process and what range of interests the participants represent. The power of resources, when applied in the participation arena, can influence how deeply participants

engage in the collaborative process by influencing the number of people to be involved and level of information and expertise brought to the collaboration. Discursive legitimacy is applied when judgment is passed regarding who deserves to be involved in the collaboration and who can be trusted to follow through on commitments made on behalf of the organizations that the participants represent (Purdy 2012).

The second arena in which power can be applied, according to Purdy (2012), is the process design arena. Process design occurs prior to the formation of the goals of the collaboration and determines the "where, when, and how" of the collaborative process (2012:411). Purdy (2012), following Straus (2002), stresses that the process design must be adaptable to allow for trial and error as the collaborative process proceeds. Authority is applied when participants feel they 'own' the process and have a right to impose their expectations about how the process will unfold and the degree to which other participants will be active during deliberations and negotiations. The availability of resources has the ability to shape the collaborative process by facilitating or limiting factors such as meeting location and frequency, access to technology, and other costs associated with meeting hosting and attendance. Those holding the greater amount of power derived from discursive legitimacy "can lead to domineering behavior and one-way flows of information" (Purdy 2012:411). Discursive legitimacy can also be applied as a gatekeeping function and can aid in determining the status of other participants and how and with whom the collaborative process is discussed (Purdy 2012).

The final arena in which Purdy (2012) suggests that power is applied is the content arena. Applying power in this arena determines the issues that the collaborative effort will address, and which desired outcomes will be pursued. As Purdy (2012:412) writes, "authority allows an organization to set the agenda and establish other participants' expectation regarding the outcome of the process." The participants who hold the power of resources have the ability to control avenues of communication such as meeting documentation, which, in turn, as Purdy (2012) suggests, might influence future meetings. Discursive legitimacy is applied in the content arena when participants attempt to influence the prioritization of issues and how those issues are framed (Purdy 2012).

The Consequences and Outcomes of the Application of Power

For all its promise of beneficial outcomes, collaborative governance is not without its pitfalls. Purdy (2012:409) notes that many of the pitfalls of collaboration can be "linked to power disparities among participating organizations and how power affects such issues as representation, participation, and voice." A review of the collaborative governance literature indeed shows that a jockeying for power is common in collaboration processes (Gray 1989; Short and Winter 1999; Susskind and Cruikshank 1987; Tett, Crowther and O'Hara 2003). Inconsistent expectations of the collaborative process and lack of commitment of necessary resources have been labeled as obstacles that can impede, if not derail, collaborative efforts (Moote and Becker 2003; Walker and Hurley 2004). Critical interests may not be adequately represented (Leach 2006) and negotiations that seek to balance private interests with public authority are not always successful (Walker and Hurley 2004). Power differences between the parties can heighten conflict and often result in a depletion of human resources as well as the potential to harm the very resources which the collaboration was trying to protect (Buckles and Rusnak 1999). A lack of trust between agencies and stakeholders (Davenport, Leahy, Anderson et al. 2007; Leach 2006; Schuett, Selin and Carr 2001) and an

unwillingness to compromise on strongly held, value-based positions often result in difficult and sometimes unsuccessful collaborative efforts (Donoghue and Sturtevant 2008). At its best, power can be used to level the playing field, giving all participants of a collaborative group equal representation (Purdy 2012). At its worst, power imbalances can create scenarios in which the more powerful stakeholders can co-opt the process and in some cases "capture" the agency with whom they are collaborating (Seidenfeld 2000; Singleton 2000).

Despite collaboration's importance and proliferation, there is a need for more research on the role of power in those processes (Cook 2015). This gap in the collaborative literature is especially troublesome in the face of the potential deleterious consequences such as co-option and agency capture (Ansell and Gash 2008; Cook 2015; Imperial 2005; Purdy 2012). This study aims to address this gap in the literature.

Methods

Case Study Approach

Three case studies encompassing the USFS and community collaborative efforts were selected as units of study. The three collaborative groups were selected because they were similar in purpose, with each group working with their respective national forests on forest restoration issues in the aftermath of timber management conflicts (Table 1). The focus was on the ranger district and supervisor office levels of the USFS in each case study. To protect the anonymity of interviewees, we use pseudonyms for each of the collaborative groups and the national forests. The three case studies that were chosen as units of analysis were: 1) The Northmont Forest Restoration Coalition (NFRC) – USFS Region 6; 2) The Lone Mountain Forest Restoration Collaborative (LMFRC) – USFS Region 4; and

3) The Meadow Valley Forest Collaborative (MVFC) – USFS Region 2.

The NFRC collaborates with the Bear Valley National Forest (Bear Valley) in the northwest region of the United States and is the oldest collaborative effort among the three case studies. The community in which the ranger district and supervisor offices under study reside has a population of just below 5,000 people and most employment in the area relies on the timber, agriculture and mining industries, along with state and national government offices. The timber industry in the area has experienced dramatic changes in production from federal forests, and the region figured prominently in the Timber Wars; the relationship between the timber industry and environmental groups has been a contentious one and the area has a long history of conflict between the two entities. The NFRC was founded in 2002 for the purposes of ameliorating this conflict and for improving forest health through restoration practices, protecting the community from wildfire, and creating community economic viability. At the time of this study, the NFRC consisted predominately of representatives from the industry and conservation interests. In 2003, the NFRC and the Bear Valley formalized their working relationship by signing a Memorandum of Understanding (MOU). While the wounds that came out of the Timber Wars are still observable today, the NFRC and the Bear Valley have collaborated on over 25 forest management projects as of the date of this research, ranging from stewardship contracting to forest planning.

The LMFRC was formed in July 2006 and collaborates with the River Point National Forest (River Point) in the intermountain west region of the United States; it represents a 'middle-aged' case study. The community in which the USFS offices reside has a population of just over 3,000. The area's current economy is based chiefly on ranching

Table 1. Summary of Characteristics of Case Studies

Group name (Pseudonyms)	USFS region	Group mission/focus	Years active	Type of participants	Formality of agreements with the USFS
Northmont Forest Restoration Coalition (NFRC)	6	Demonstrate the full potential of restoration forestry to enhance forest health, public safety, and community economic vitality.	2002 - Present	USFS agency representatives, timber industry, environmental community	Memorandum of Understanding and 'Collaborative Work Plan' (a pseudonym)
Lone Mountain Forest Restoration Collaborative (LMFRC)	4	Enhance forest health and local economies in the county through stewardship contracting and restoration activities	2006 - Present	USFS and other federal agency representatives, landowners, timber industry, environmental community, community leaders, non-federal government representatives	Memorandum of Understanding
Meadow Valley Forest Collaborative (MVFC)	2	Use collaborative approaches to improve the health and long-term resilience of mixed-conifer forests and the communities located near them.	2010 - Present	USFS agency representatives, landowners, timber industry, environmental community, scientists, community leaders, elected officials, non-federal government representatives	No formal agreement at the time data were collected

with some minor logging and mining operations. Until the mid-1990s, the area was home to several small, locally-owned sawmills, log home manufactures, post-and-pole operations, and commercial firewood businesses which provided employment for the community's citizens. Mill closures in the late 1980s

and early 1990s cost the local economy 250 jobs. Today, the remaining forest product businesses lack the capacity to process enough timber to make a large contribution to the area's economy. Recreation and tourism are now the major contributors to the area's financial resources. Prior to the formation of the LMFRC, the River Point was mired in gridlock, facing appeals and litigation over

forest management issues from protecting old-growth stands to firewood sales. Today the LMFRC is a self-governed group comprised of landowners, timber industry representatives, retired USFS personnel, the environmental community, non-federal government entities, and community leaders. The LMFRC, through an MOU between the River Point and the collaborative group, works to restore the forest to a condition that mimics the historic range of variability in terms of stand structure, composition, and disturbance regimes. At the time of this writing, the group had completed one major restoration project with two more slated as future activities.

The MVFC is the most newly formed of the collaborative efforts studied, with inauguration in the fall of 2010. The MVFC works collaboratively with the Sunset Ridge National Forest (Sunset) in the Rocky Mountain Region of the United States. The community in this case study has a population of approximately 1,700 people. The area experienced intensive, albeit short-lived, logging between 1890 and 1945. By the 1970s, a dwindling supply of large-diameter trees spelled the end of major logging operations in the area; administrative appeals and citizen lawsuits of timber projects hastened the decline of commercial timber harvesting in the area. Today, the forest provides recreational and aesthetic benefits to the community's citizens, many of whom have taken an interest in forest health issues on the Sunset. The MVFC was established to include stakeholders' perspectives and to collaboratively develop science-based forest management priorities. One of the group's early successes was the award of a long-term stewardship contract in June of 2012.

Data Collection and Analysis

Data were collected between March and August 2012 using qualitative social science research methods encompassing semi-structured individual interviews and participant observation of group meetings. Written reports created by the collaborative groups, meeting minutes, and official collaboration documents, such as MOUs were also collected. The intent of adding these documents to the analysis was to enhance the reliability of results by data triangulation (Golafshani 2003). We conducted twenty-six semi-structured, open-ended interviews across the three cases. Of the twenty-six interviews, 16 were with agency personnel (staff and line officers) and 10 were with community stakeholders. Line officers encompass district rangers

as well as forest supervisors. We chose interview respondents by both purposive and network sampling (Granovetter 1976). A key informant from each stakeholder group was determined based on professional relationships with the authors. These key stakeholders were contacted and they, in turn, provided a list of other group members. Similarly, we identified the key USFS contact in each group (e.g. line officer, planner, or resource specialist) and they provided us with a list of potential USFS interviewees. All identified persons were contacted via email or telephone. In all three case studies, we timed our field visits to coincide with collaborative group meetings, which we attended. Interview notes were transcribed verbatim into a text format for content analysis and coding. Accuracy of interview data was verified by sending transcripts to each respective interviewee. Changes were made to the final transcripts based on interviewee comments and clarifications.

We conducted a content analysis via coding and constant comparison for 26 interviews and all generated and collected documentation employing a modified grounded theory approach (Strauss and Corbin 1990). We modified the coding process as described by grounded theory in that, in addition to identifying emergent codes, we developed *a priori* codes based on the sensitizing concepts derived from the literature and structurally-driven codes that were derived from our research goals and questions (DeCuir-Gunby, Marshall and McCulloch 2011).

Findings

In this section, we present the dominant storylines developed from the data, represented as the sources of power and their application and the associated outcomes. Selected quotations from interviewees are presented. Evidence obtained from documenta-

tion such as meeting minutes, agreements between the USFS and the collaborative groups, and personal observation notes are also presented. We use non-identifying means when presenting quotations to protect the anonymity of participants. The analysis of the 26 interviews revealed four sources of power in play within the three case studies examined: 1) authority; 2) resources; 3) discursive legitimacy; and 4) trust. We use Purdy's (2012) framework for assessing collaborative power, with the addition of trust (Smith, Leahy, Anderson et al. 2013), to organize our data. Below we provide a summary these findings.

Power of Authority

Evidence of the power of authority was found in all three cases with the NFRC providing the strongest evidence of shifting power dynamics with seven of the 10 quotations coming from that group. In the participant arena, the LMFRC and the MVFC had representation from a broad spectrum of interests and perspectives and were open to including new members. For example, the LMFRC includes representatives from: local outfitters, state fish and game, timber industry, conservation organizations, and Bureau of Land Management. The range of stakeholder interests represented in the NFRC was narrower, involving only the agency and timber industry and conservation organization representatives. One line officer from the NFRC spoke about the need to include other stakeholders and commented, "I think there is an opportunity to make this less of an insular collaborative group so that there is more representation, more voices."

Leadership is also an important mechanism for applying the power of authority in the participant arena and the application of leadership was varied across the three case studies. In the MVFC the line officer that works with the collaborative group is clear about the agency's role in decision-making

and claims his leadership authority when working with the group. He states,

> I chose to be very clear with the [collaborative group] that the Forest Service is the ultimate decision-maker, and that it was not their role to be decision-makers. It was to understand how the Forest Service gets to a decision.

No participants from the LMFRC mentioned leadership in the context of the application of the power of authority during the interviews, however, their MOU clearly defines the limits of the collaborative group by asserting that the agency is the ultimate decision-maker. The MOU states, "the USFS shall: Make all decisions or determinations for National Forest Systems lands."

In stark contrast to the LMFRC and the MVFC, six interviewees from the NFRC made comments that suggest the USFS line officers were relinquishing some authority to the collaborative group. The way leadership was applied had consequences in the process arena where some participants felt that they had the right to impose their expectations on the group as a whole. It was not uncommon for USFS participants to use language such as, "the [collaborative group] are always saying things like we will 'allow' you to do this or that."

In the content arena, the analysis of the NFRC yielded evidence that the non-agency members of the collaborative group were defining the group's agenda and expectations of outcomes through the group's Collaborative Agreement Acceptance Framework – a pseudonym (CAAF) for collaborative action. The CAAF details what the NFRC calls a 'holistic management strategy' and was first drafted through a multi-stakeholder processes with foresters, scientists, conservation groups, USFS, the state depart-

ment of natural resource, and forest practitioners, recreation and tribal interests. Despite the fact that the CAAF was developed through a multi-stakeholder process, its application is for use only by the collaborative group members and the USFS. The CAAF was in effect during the time of this research and was considered by the collaborative group, including the USFS, as the basis for negotiated decision space in determining forest management allocations. There is an implied understanding between the collaborative group and the USFS that if the guidelines of the CAAF are followed, the collaborative group will not file objections to those decisions. However, during an informal conversation with one line officer, we were told that the collaborative group was planning to file an objection to an action that the USFS considered in alignment with the CAAF. The outcome from working with the CAAF was expressed by the USFS personnel interviewed as a continuum of responses ranging from frustration to the perception of the abdication of authority on the part of the USFS. The following quotation by one line officer aptly illustrates this point, but it also hints at the rationale for allowing such a practice:

> I think that there is bitterness here - there is a culture of experts in the Forest Service and I think you'll find some staff have attitudes that suggest we give too much to the [collaborative group], we give them too much power, we let them make our decisions. If I go ahead and make this one decision based on what the collaborative group wants, which may be different than what is on the CAAF, I will hear about it. There will be some employees who say that I caved in. I tell a different story about that. I don't consider it caving at all. I consider it an investment in something bigger than just that project. I will visit with the staff about that how

they feel, but that is real difficult, especially when people go to school and learn how to do silviculture prescriptions and do the right thing and then we come in and compromise their integrity. As professionals, they see it that way sometimes. We are asking them to sell out on their profession for the [collaborative group].

These findings suggest that in the LMFRC and the MVFC, the power of authority remains predominantly in the hands of the USFS. Evidence suggests that in the NFRC, however while no change is occurring in the organization's regulatory authority, the agency is using its administrative discretion to negotiate its decision space to include the collaborative group in a substantial way. When the leadership accepts pressure from the collaborative group and effectively abdicates some measure of power to the collaborative group, agency personnel often become frustrated that their authority and expertise are questioned and often ignored.

Power of Resources

As Purdy (2012:410) notes, resources "include tangibles such as financial support, people, technology, and supplies; as well as intangibles such as knowledge, culture, and capabilities." The acquisition and allocation of resources is a dynamic process and as such, the application of power stemming from resources is mutable. Interview participants from all three case studies mentioned the importance of resources. Sharing knowledge through the transfer of information and data was the most commonly reported resource mentioned by interviewees.

The USFS was founded on the premise that professional foresters, who had obtained specific scientific training in forestry, would manage the nation's trust forests (Kaufman 1960; Tipple and Wellman 1991).

Indeed, it is this professional knowledge and the culture of expertise that has placed the USFS in the position of having influence over the citizens who rely on the forests for commodity extraction, recreation, and ecosystem services. In the participant arena, three USFS staff from the NFRC mentioned that sharing knowledge with the collaborative group constituted much of the time and effort they put forth in the collaborative relationship and that they are sharing information and data that they would not ordinarily share with the public. The level of information and data required by the collaborative group suggests that the non-agency members of the group are attempting to become experts in their own right. The NFRC then uses this knowledge to influence the decision-making process and as such, the USFS is conveying a portion of its power to the collaborative group in the NFRC. While two USFS staff members from the LMFRC and the MVFC noted that they do share information with their respective collaborative groups, comments by collaborative group members such as, "the USFS are the experts, we rely on their expertise", indicate that the USFS continues to hold its power that is rooted in specialized knowledge in these two case studies. By retaining expertise, the USFS keeps stakeholders from having the ability to make well-informed demands on the USFS, thereby restricting the influence of the stakeholders in the decision-making process.

In the process arena, three participants from the LMFRC noted that the collaborative group has contributed to the funding available to the USFS for restoration projects through the stewardship contracting process. Briefly, stewardship contracting provides a mechanism for the USFS to work more closely with local communities by using existing funding to hire local contractors for forest management projects (Moseley and Davis 2010). Prior to its involvement with the collaborative group, the USFS did not frequently use the stewardship contracting process for restoration projects, due to, what one USFS staff member called, "internal barriers." These barriers included lack of support for stewardship contracting from those in administrative positions. In this case, because the collaborative group expressed their desire to use stewardship contracting, the USFS began using it and was continuing to do so at the time this research was conducted.

Three participants from the NFRC also noted an increase in funding for projects owing to the collaborative relationship. Non-agency members of the NFRC regularly lobby in Washington D.C., which has affected local USFS budgets. According to one USFS line officer, "I would say the constituents of the NFRC have a large impact on what budgets and the amount we receive."

In the content arena, one USFS staff member from the NFRC implied that the non-agency collaborative group members controlled the avenue of communication by requiring meeting minutes to be approved by the non-agency members before they are distributed. In discussing his role in the collaborative group the USFS staff member commented, "presently, anytime we have a meeting with them I am usually there to take notes and then I send out those notes to the NFRC for their approval."

These findings suggest that knowledge is shared across all three case studies, but that the dependence by the collaborative group on the USFS to provide information that the agency would otherwise not share is most prevalent in the NFRC. The data also suggest that in the LMFRC and the NFRC, the USFS is benefiting from the collaborative governance arrangements by receiving increased funding. However, the mechanisms the collaborative groups use to obtain funding differ between the case studies. Finally, evidence from the NFRC suggests that the non-agency members of the

group exert their power by controlling one source of communication via the approval and distribution of the meeting minutes.

Power of Discursive Legitimacy

According to Purdy (2012), those wielding the power of discursive legitimacy can display domineering behavior that may restrict who has access to certain information or with whom and how the collaborative process is discussed. Evidence of domineering behavior was found only in the NFRC and was mentioned by two participants. Falling in both the participation and content arenas, one USFS line officer noted that the agency and representatives from the timber and conservation interests are paid for their work in the collaboration by the organizations they represent. In the case of the NFRC, we found the perception within the community that the fact that the timber industry and conservation interests are paid allows the non-agency collaborative group members to dominate the direction of collaborative actions to that benefit only their limited interests. The NFRC has excluded other interests from joining the collaborative effort by its frequency and timing of meetings. As such, the interests represented by the paid members of the collaborative group, representatives of the timber industry and conservation community, often take priority over the interests of other publics from the community.

In the process area, one line officer commented that because of the history of collaborative success and an on-going relationship between the stakeholders and the Secretary of Agriculture, the non-agency members of the collaborative display an air of 'righteousness' when dealing with the USFS. The following quote by a USFS line officer describes how the collaborative group controls the collaborative conversation and sometimes displays domineering behavior.

The conversation we have with [collaborative group] is often rooted in their ego. They think because they have all of this wonderful history, that they are world famous, and that the secretary of Agriculture talks to them – so USFS you need to do this our way because we're great. There's this ego thing going on with this, I'm sorry, but it just isn't flying well with me and I think that it's potentially dangerous. I think that it keeps us stuck if we are not careful. They have every reason to be proud of their success, there is no question about that, but when it is used to strong-arm us, something critical has to change in the way we relate to them. I want to honor the history of success and all the work that they did to come together, that is real and important, but I want to change the nature of the conversation and I just don't know how to.

Power of Trust

Interwoven into the power dynamics of all collaborative relationships between the stakeholder groups and the USFS is the power of trust. Following the framework laid out by Smith et al. (2013) an individual's trust in an agency is predicated on the belief that the agency shares an individual's values and will act in a manner that results in the outcomes that are important to the individual. Four USFS staff members from the NFRC noted that they spend a significant amount of time and effort in 'justifying,' to non-agency members of the group, their recommendations for specific management prescriptions. This finding suggests that mistrust exists between the agency and other stakeholders. The non-agency members of the collaborative group perceive that the agency's priorities and values are not shared with them (Smith et al. 2013) or conversely, that they do not share the same values and expectations as the

agency.

One non-agency collaborative group member from the NFRC summarized this perception of the lack of alignment between stakeholder values and agency actions leading to a lack of trust with the USFS in the following comment.

Hopefully, the upcoming workshop will be similar to the one that we did years ago and it will have us all talking and building trust and relationships because we need that. A lot of things came up and we thought they would be addressed in this forest plan, but they weren't. In fact, all the collaboration that had gone on, not only [collaborative group], but a lot of other stakeholders, was completely ignored in the proposed action for the forest plan. That was a reality check. It's like wow…we thought we were in the line with the Forest Service but really it doesn't look like we are.

In contrast, evidence was found in the LMFRC that a concerted effort on the part of the USFS to build trust with the collaborative is underway, and that the agency's actions are in alignment with the priorities of the collaborative group. The following quote by one USFS staff member summarizes this premise.

We presented the data about the proposed project and basically asked [collaborative group] to consider this data in light of the actions that we're proposing. And then we…we're willing to listen to their proposals. We took them seriously. For example, we know that road list is a significant issue. From the onset of the [proposed project] we immediately got into dialoguing and talking about the ROW [right of way] list so, there wasn't a fight. We

understood that we could still be effective with this project even if we couldn't treat [remove trees] in the ROW list. And I also think that as a result of this coming together - one of my objectives was - that if we could build enough trust to get this one project through, anybody could judge us based on the product. And the idea was integrity. We will do what we said we will do. We will not do what we said we won't do. We will have integrity in this project.

It is clear from these two disparate examples that trust is not necessarily a function of the length of time a group has collaborated with the USFS. The NFRC had been operational for more years than the LMFRC, yet there is an apparent lack of trust in the NFRC. Issues of the power of trust did not emerge from data collected from the MVFC. Within LMRRC and the MVFC, the collaborative groups have been able to avoid issues of trust through proactive and inclusive processes that include the USFS acting on collaborative agreements and sharing similar goals and values with stakeholders. In fact, one USFS staff member from the MVFC summed up his perception of the role of power, including trust, in the collaborative effort by saying, "there are no power struggles with this group."

Discussion

The results from this study indicate that, for the three case studies examined herein, the power dynamics at play within the collaborative governance arrangement include authority, resources, discursive legitimacy, and trust. These powers, and the imbalance that sometimes result from their application, are representative of the underlying tensions that can be present in collaborative governance arrangements.

At its best, collaborative governance can provide solutions to complex and contentious natural resource problems through power-sharing arrangements (Cestero 1999; Dukes 2001; Scardina et al. 2007; Singleton 2002). It can lead to positive changes in the organizational structure and processes of natural resource agencies and can result in getting more on-the-ground work completed (Carr et al. 1998; Cheng and Burns 2007; Leach et al. 2002; Selin and Chevez 1995; Selin et al. 1997). Such is the case for the LMFRC and the MVFC. The USFS office in the LMFRC has seen an increase in their funding through the ability to use stewardship contracting for restoration projects, an organizational process not fully utilized by the USFS prior to its engagement with the collaborative group. Likewise, in the NFRC, the USFS noted that they had experienced an increase in funding through the lobbying efforts of the collaborative group.

Our findings also suggest that the application of power does not always lead to beneficial actions (Purdy 2012). In the case of the NFRC, when power imbalances occur, authority is challenged, frustrations arise, community and political relations are strained, stakeholders are excluded, and trust is difficult, if not impossible to maintain. In essence, the very factors that are required for an effective collaborative effort may be violated when one party within the collaborative network exerts their power in ways that give them advantage over other community interests (Cestero 1999; Cheng and Sturtevant 2012; Gerlak et al.; Schuett et al. 2001; Wondolleck and Yaffee 2000). Previous studies that look at power in natural resource decision-making are often theoretical in nature (Raik et al. 2008) or examine only a single case study (Cook 2015; Purdy 2012). Our study is important in that it reveals that power is applied in varying ways between case studies resulting in different realized and potential consequences.

As mentioned above, power associated with resources, beyond financial advantages, plays a predominant role in the power dynamics between the agency and collaborative groups. The non-agency members of the collaborative groups in the LMFRC and the MVFC, acknowledge and accept the USFS position as experts. In the NFRC, however, non-agency members of the collaborative group question the actions of agency personnel and are aiming to become experts in their own right. Assuming the old adage that knowledge is power, it would appear that the NFRC is seeking to accumulate power by acquiring knowledge. However, contextual factors other than the quest for power could be driving the NFRC's desire to obtain specialized information and knowledge. Applying Smith et al.'s (2012) framework, the requests for specialized information from the agency by the NFRC could stem from a concern that the agency does not share the same values and expectation of outcomes as the community stakeholders. The storied history of the relationship between the agency and community members is rife with conflict. During the Timber Wars, disputes over forest management often resulted in intensively strained relationships between the community and the USFS and the community experienced harsh economic downturns. While the collaborative effort between the USFS and the NFRC has resulted in a decrease in litigation and increased funding for restoration projects, the wound from the aforementioned difficulties has not completely healed. The economy of the community in which the NFRC resides is still timber-dependent and as the largest employer in the community, is influential in the area. Many of the NFRC's members are individuals who were involved in the earlier conflicts and their memory is long. Although the community that encompasses the LMFRC shares a similar, albeit less contentious history with the NFRC, the economy of the area is no longer dependent upon timber and many

of the timber operations in the area have closed. A desire on the part of the non-agency stakeholders to become 'experts' could also be driven by other contextual factors. Timber industry representatives make up a portion of non-agency stakeholders in the NFRC. A need to ensure that any treatments or plans that the USFS executes meet timber industry objectives could be a driving factor in the desire of some stakeholders to fully understand USFS's methodologies and the agency's justifications of proposed actions. Even if the initial motivation in obtaining specialized information is not to gain power, the result of doing so places the non-agency stakeholders in the position of having knowledge, with which they could exert power should they chose to do so. A limitation of our research is that we do not delve deeply into the antecedents of the power relationships at play, especially from the community's perspective. A future research direction that would prove useful to collaboration scholars and practitioners alike is to elucidate the perceived motivations for the community stakeholder's actions of information and data transfer.

An even more noteworthy finding of this study is that power is unlikely to be applied independently as some sources of power can be applied across more than one arena and the sources themselves can be interwoven with other power sources. Such is the case of the role of trust and the application of power. It is apparent, in this study, that the USFS in the NFRC is transferring a measure of its decision-making power to the collaborative group beyond what would typically be expected in a collaborative governance arrangement. This was not found to be the case in the LMFRC and the MVFC.

In the NFRC, a tension between the power of authority and the power of trust results in struggles over discursive legitimacy across the arenas of participation, process design, and content. As Nie (2004) noted, the U.S. Congress sets up this power dynamic through its devolvement of oversight of the agencies through the public involvement mandate. It is through the community-level collaboration that the power dynamic is manifested and the consequences are played out. We see this reflected in the actions of a line officer in the MVFC who asserts the USFS's authority by drawing a line in the sand when it comes to decision-making, thereby making the collaboration process more closely resemble the traditional public involvement process. The NFRC, however, presents a very different story. Even though the USFS possesses authoritative power, a lack of trust by stakeholders, as seen in the NFRC, can undermine that power and open the space for contests over participation, process, agendas, and management actions. The consequence of this tension is that the USFS personnel can feel that their expertise and credibility are being threatened, and they react with negativity and resistance to the collaborative effort that only further increase the tension. In the NFRC, even though there was some USFS staff resistance at first, line officers seemed open to the collaborative group's involvement in defining management goals and actions, and the stakeholders themselves placed trust in the USFS. However, the collaborative group, because of its narrow stakeholder representation, has continued to exert its power across boundaries and into areas that have heretofore been the purview of agency personnel. It should be noted, however, that Rudeen et al. (2012) found that a full representation of interests in a collaborative effort did not guarantee the avoidance of tensions over power. Future research that further examines the relationship between stakeholder representation and power relationships would improve the understanding and practice of collaboration in natural resource management.

Conclusion

An intricate and dynamic process of jockeying for power and negotiating decision space between the USFS and community stakeholders plays out in the collaborative governance of federal forests in the post-Timber War American West. The level of trust between the stakeholders and the agency, and in particular, the level of shared values and the perception of the alignment of agency goals and actions with the desires and expectations of the collaborative group are key components of how power is distributed within the collaborative relationship. As collaboration becomes increasingly institutionalized as a favored policy tool to address federal forest management challenges, it is increasingly likely that power dynamics will intensify (Schultz; Jedd and Beam 2012). This places a high burden on collaboration conveners and facilitators to develop and sustain the capacity to address power dynamics through structured, transparent, and accountable processes. In turn, this necessitates an investment in collaborative capacity to match the high expectations placed on locally-based collaboration to address the complex and still-contentious issues facing federal forests.

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