The Role of Trust in Collaborative Natural Resource Management

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ABSTRACT

This dissertation examines how trust develops in landscape level collaborative natural resource management efforts. I took a case study approach to research four projects in the Collaborative Forest Landscape Restoration Program (CFLRP). I conducted qualitative analysis of interviews, notes and observations from site visits and archival documents to understand the role and function of trust within my four case studies. The results are organized into five chapters: an introduction chapter, three manuscripts intended for stand-alone publication (Chapters 2-4), and a conclusion chapter. Chapter 2 reports on the development and function of trust within the four collaboratives I studied. Chapter 3 discusses the roles of facilitators and coordinators for engendering and maintaining trust. Chapter 4 examines three of the four case studies and compares the observed trust outcomes to the literature on traditional forms of public involvement. Finally, Chapter 5 synthesizes the findings from Chapters 2-4. These results provide useful information about the types of trust that contribute to successful collaborative efforts, as well as identify some of the practices and structures that engender those types of trust.

Dedication

For Ben, who left his beloved Vermont and moved to Virginia so I could pursue this degree. And for Nicholas, who spent most of his first few months strapped to my chest in a baby carrier while I wrote this dissertation.

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Attribution

The work represented in this dissertation was primarily carried out by me. However, Chapters 2 – 4 are journal article manuscripts, which I wrote with co-authors. The co-authors contributed to the manuscripts by clarifying ideas, suggesting alternative framing, improving the writing, and reorganizing arguments and key concepts. The co-authors are listed in the order that they will appear in journal articles and the order of authorship represents the level of contribution made by each author. All three manuscripts will be submitted for publication in the near future.

Chapter 1

Introduction

The Collaborative Forest Landscape Restoration Program (CFLRP) was established in 2009 to address increasing frequency, severity, and costs of forest fires (Schultz et al. 2012). Through the CFLRP, the federal government made up to $40,000,000 available annually for fiscal years 2009 through 2019 to conduct landscape restoration work on National Forest System (NFS) lands. Currently, 20 landscape-scale forest restoration projects have been funded through this legislation and three more exist outside the legislation but under the same conceptual framework.

The CFLRP projects require collaboration between the United States Forest Service (USFS) and diverse stakeholder groups (Monroe and Butler, 2015). The National Environmental Policy Act (NEPA) and issues related to the large scale of these projects pose significant challenges to successful collaboration (Keele et al. 2006, Siegrist et al. 2005, Stern and Mortimer 2009, Stern and Predmore 2010). Previous research has demonstrated that trust is critical to successful collaboration (Ostrom 1990; Wondolleck and Yaffee 2000), but questions remain about which types of trust matter most for collaboration and under which conditions. This dissertation employs Stern and Coleman's (2015) four-dimensional model of trust (discussed in the following chapters) to examine which types of trust contribute to successful collaborative efforts, what practices and structures engender those types of trust, and how to recognize opportunities for trust-building when they arise.

To explore themes related to trust and collaborative natural resource management, I conducted qualitative case studies (Yin 1994) of four CLFRP collaboratives to build theory about how different forms of trust influence collaboration in different conditions. To protect the anonymity of the collaborative members in our case studies, we will refer to the projects as Collaborative A, Collaborative B, Collaborative C, and Collaborative D. The cases studies are as follows:

1. Collaborative A represents a collaborative with highly formalized processes: it employs a facilitator who oversees the collaborative; it relies on official decision-making processes; has an established steering committee; has written rules for membership; meets monthly; and utilizes established working groups.

2. Collaborative B represents a highly informal process. It does not have: an appointed facilitator or coordinator who oversees the collaborative (although it does have a monitoring coordinator); a formal decision-making process; a steering or executive committee; formal rules for membership; meetings held at regular or predictable intervals (meetings occur on an ad hoc basis); or a formal working group structure.
3. Collaborative C represents a collaborative with somewhat formalized processes because: it employs a collaborative coordinator; has an established executive committee; holds annual meetings; and establishes a formal working group structure. However, Collaborative C does not have a formal

decision-making process, and it only has formal membership rules for the executive committee (not for the full collaborative).

4. Collaborative D represents a collaborative with somewhat informal processes because it employs a collaborative coordinator and hosts quarterly meetings. However, it does not have a formally established decision-making process; a steering or executive committee; formal rules for membership; or a formal working group structure.

I drew on data from all four cases for the research presented in Chapters 2 and 3. Chapter 4 deals with relationships between the USFS and environmental groups. Although Collaborative C did involve members of environmental groups on a project by project basis, they were not included in broader collaborative planning. Thus Chapter 4 reports on data from Collaborative A, Collaborative B, and Collaborative D.

I employed three data collection methods for the case studies: interviews with project participants, site visits and observation, and the collection of archival documents such as meeting notes, websites, e-mails, and publications. To identify interviewees, I first contacted the facilitator or coordinator of each of the four cases and requested their help in two ways: first, I asked them to e-mail collaborative members and inform them of my work and that I would be getting in touch to request interviews; second, I requested they provide me with a list of collaborative members and their affiliations outside the collaborative (i.e. who they represented in the collaborative). I used these lists to identify and interview individuals who represented particular interests and those who play particularly important roles in the collaborative. Interviews were conducted in person or over the phone. Interview questions were crafted to identify organizational structures of the projects (e.g. decision-making processes, committee structure, and strategies for information dissemination) and practices that enhance (or erode) trust. Interviews focused on the emic perspectives and opinions of interviewees. I also made two visits to each case and recorded observations of both formal and informal interactions between stakeholders to not only observe trust (and distrust) in action, but also to identify the roles individuals (and/or their groups) played in the collaboratives. Finally, I collected archival documents, such as meeting minutes, reports, and e-mails.

To develop theory about trust and natural resource management, I followed Eisenhardt (1989) and established preliminary themes within individual cases. I then compared across cases to flesh out the theory and add nuance. Next I compared findings with existing literature to refine the theory further. I sought to answer the following questions:

1. How does trust develop in landscape scale initiatives?
    a. What practices and behaviors engender different forms of trust or distrust at the landscape scale?
    b. What collaborative structures (definition of roles, membership requirements, etc.) facilitate or curtail the development of different forms of trust at the landscape scale?
    c. Which decision-making processes (e.g. ad hoc informal consensus vs. formal voting process) facilitate or curtail the development of different forms of trust at the landscape scale?

2. Which forms of trust and distrust enhance and/or erode collaboration in landscape scale initiatives?
    a. Which forms enhance collaboration under what conditions?
    b. Which forms (or combination of forms) are beneficial for accomplishing what actions?
    c. How do the different forms interact and lead to one another?
    d. What alternative functions (coercion, control systems, etc.) to trust exist?

The findings are organized into three manuscripts, each intended for stand-alone publication. Chapter 2 discusses how trust developed and functioned during the initiation of each collaborative. Chapter 3 deals with the roles of facilitators and coordinators in engendering and supporting trust development. Chapter 4 addresses the development and function of trust between environmental groups and USFS. The final chapter, Chapter 5, synthesizes the findings from these three manuscripts into an overarching proposal of how the types of trust outlined by Stern and Coleman (2015) develop and function within collaborative natural resource settings. Ultimately, this research helps illuminate which types of trust support collaboration. Specifically, it reports on the types of trust that contribute to successful convening of collaborative efforts, the practices and structures that engender those types of trust, and implications for trust relationships between the USFS and stakeholder groups.

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Chapter 2

The Roles of Different Forms of Trust in Collaborative Natural Resource Management

Kimberly J. Coleman and Marc J. Stern

ABSTRACT

Successful natural resource management increasingly requires collaboration across boundaries and between diverse stakeholder groups. Collaborative efforts are emerging to address a number of transboundary natural resource issues such as wildfire management, pest outbreaks, and others. Thus, there is a need to understand the factors that both catalyze and support successful collaboration. Using a four-dimensional model of trust, we examined trust as a key driver of the collaborative process. We conducted case studies of four landscape-level initiatives in the Collaborative Forest Landscape Restoration Program (CFLRP). Using qualitative analysis, we sought to uncover how different forms of trust catalyze the initial formation of these groups as well as support and enhance the collaborative planning and implementation of management strategies. Our findings begin to illustrate how affinitive, rational, and procedural trust support collaborative groups. Lessons learned from this work extend existing theory about the role of trust in collaborative natural resource management, particularly the power of trust derived from rules and procedures (procedural trust). Our findings represent opportunities for collaborative practitioners, who may find the article a useful tool, as well as researchers interested in the role of trust in natural resource settings

Introduction

Successful collaboration is important for landscape level natural resource management because it provides an avenue for diverse stakeholders to make collective decisions and implement action regarding important issues. Although collaboration offers promise for resolving conflict and building consensus, it poses many challenges. In particular, pre-existing relationships are important because no collaborative emerges without historical context. Trust between stakeholders may help ease challenges by reducing the risk felt by stakeholders in the process (Ostrom 1990; Wondolleck and Yaffee 2000). However, there are questions about which forms of trust enhance collaborative efforts in which contexts, and how those forms of trust develop.

We posit that trust is a multi-faceted concept that influences multiple stages of the collaborative process. Stern and Coleman (2015) delineated four forms of trust applicable to collaborative natural resource management: rational trust, affinitive trust, dispositional trust, and procedural trust. This paper examines four case studies from the Collaborative Forest Landscape Restoration Program (CFLRP). Through the CFLRP the United State Forest Service (USFS) collaborates with stakeholder groups to work on forest restoration activities. Although the efforts are collaborative, the USFS retains decision-making authority in all cases. We conducted case study research of CFLRP projects to build on existing theory about trust in natural resource settings by examining the roles that different types of trust play in supporting and enhancing the collaborative process.

Background

Collaboration refers to "an approach to solving complex problems in which a diverse group of autonomous stakeholders deliberate to build consensus and develop networks for translating consensus into results" (Margerum 2011 pg. 6). Collaboration has been lauded for producing a variety of ecological and social benefits, including conflict resolution, better decision making, and improved chances that natural resource decisions are implemented (Innes 1996, Wondolleck and Yaffee 2000). However, collaboration comes with its own set of challenges: adversarial relationships between stakeholder groups may make arriving at consensus difficult; translating consensus into implementation may be a long and complex process; and regulatory barriers may present additional challenges.

Trust may play an important role in easing these challenges. We define trust as a psychological state in which an entity (a trustor) accepts some level of vulnerability (i.e., risk) based on a positive expectation of another entity (a trustee) (Hardin 2002). The trustor is typically an individual person, whereas the trustee may refer to an individual, an organization, an object (such as a map), or a process. Distrust is the antithesis of trust, where an individual believes that another entity will act in a way that is wrong or harmful. Distrust differs from a lack of trust, where an individual is not sure how another entity will act. For example, an individual may lack information about another entity, and thus lack trust, but have no reason for active distrust. Trust and distrust form between different entities based on various antecedents. Stern and Coleman (2015) identify four types of trust relevant to collaborative natural resource management, labeled by the different antecedents upon which they are based: rational trust, affinitive trust, dispositional trust, and procedural trust. We discuss each type of trust below.

Rational trust is based on the perceived likelihood of a positive outcome resulting from another entity's action(s). It occurs when an individual has adequate information to make a prediction about another entity. This information reduces uncertainty to a point where actions are made more predictable, thus allowing for a more confident judgment of likely outcomes. Rational trust is often based on assessments of past performance (e.g. an individual may trust another because he or she has always performed consistently in the past).

Affinitive trust stems from social connectedness with, or an affinity for, another entity. Affinitive trust can come about from many sources, such as shared social experiences, assumptions of similar values, positive social relationships, charisma, membership in common groups and communities, and responsiveness or active listening. It differs most distinctly from rational trust in that the trustor need not actively be concerned with predicting the specific outcomes of a relationship or calculating their costs or benefits (Braithwaite 1998). Rather, affinitive trust focuses on perceptions about the trustees themselves.

Dispositional trust is based on a propensity to trust others rather than be skeptical of them. As such, it is a pre-existing characteristic of the trustor rather than an element that is heavily impacted by the actions of others. Sonderskov (2011) found that dispositional trust can be important in large-scale efforts because the number of actors can be too high for individuals to gain the information needed to develop rational or affinitive trust with all other entities. However, Smith et al. (2013) found that dispositional trust is often low in collaborative natural resource processes, because those with high forms of this type of trust typically see less need to get involved.

Procedural trust is grounded in the existence of control systems. Control systems refer to procedures, rules, contracts, or other monitoring mechanisms that guide behavior (Mayer et al. 1995). Control systems may be positive or negative. Positive control systems create procedural trust by governing the way entities interact such that their interests are protected, where as a negative control system may erode or eliminate trust. For example, rules may reduce or entirely eliminate the need for trust, such that if the rule was removed trust would be lower than if the rule was never put in place (Stern and Coleman 2015). Procedural trust is created when rules and procedures are perceived as fair and transparent (Tyler 1990). Clearly documented decision-making processes, clear memoranda of agreement, or jointly developed rules for interactions can contribute to procedural trust (Schoorman et al. 2007). Procedural trust lowers the risk associated with collaboration, as stakeholders are protected against untrustworthy behavior. With this type of trust, trust is placed in the control system itself, rather than individuals.

The antecedents for distrust may be similar to those for trust (dispositional, rational, affinitive, and procedural). For example, rational distrust occurs when an individual has information about the likelihood of negative outcomes of trusting another entity. Affinitive distrust may be based on social enmity or perceptions of incompatible values and experiences. Dispositional distrust occurs when an individual is actively skeptical of existing authority or of others in general. Procedural distrust may occur when a process or procedure is perceived to be unfair and/or illegitimate.

Our work examines how different forms of trust support and enhance collaboration by conducting case studies of four projects within the CFLRP. For greater detail on the CFLRP, see Schultz et al. (2012). We differentiate phases of the

collaborative process. We use the term "convening" to refer to the process and context in which stakeholders initially come together. Convening encompasses what Margerum (2011 pg. 53) terms "initial assessment," during which a few individuals get together and have conversations aimed at defining the issue, determining goals, identifying interested parties, settling on convening steps, and determining resource needs. Throughout this paper, we use the term "initial assessment" to refer to the first stage of convening where conveners engage in critical conversations about the possibility of collaborating. Convening also includes identifying and engaging participants; securing resources (e.g. grants, trainings, hiring); and planning and organizing the consensus-building process (Margerum 2011). These stages of convening come after "initial assessment." We use the term "convener" to describe members that were involved with the initial assessment (Carlson 1999, Margerum 2011) and the term "joiners" to describe members that were recruited during the second stage of identifying and engaging participants. Once convened, a collaborative group may begin to collectively work together to create and carry out an action plan to achieve their group's goals. We use the term "deliberating" to refer to the process and context during which both conveners and joiners work together to plan strategies. This paper explores the types of trust that are important for supporting successful convening and deliberation.

Methods

The purpose of this study is to build theory about the role of different forms of trust in collaborative natural resource management, with a specific goal to develop falsifiable hypotheses for future researchers to explore. To do so, we conducted qualitative case studies (Yin 1994) of four CLFRP collaboratives. We followed Eisenhardt (1989) and use our cases to develop theory by first looking within individual cases to establish preliminary themes, and then looking across cases to sharpen those themes and identify nuances within them. The research was conducted in close collaboration with colleagues who, at the time of our case selection, had completed 60 interviews with participants in the 10 CFLRP projects funded in 2009 during the first round of grant applications. Their interviews focused on the nature of collaborative interactions regarding the transition between planning and implementation. We read those interview transcripts, looking for themes and patterns specifically related to trust. Information from these transcripts helped us to better understand the contexts of the projects and to develop an interview guide for use in our case studies.

Information gleaned from our colleagues' transcripts additionally informed the case selection process. We chose cases to ensure variation in the degree of formality of their operating procedures, because of the theoretical relationship between control systems and trust. The cases provided the opportunity to explore how trust develops and supports convening within different structures of governance. Based on the work done by our colleagues (see Monroe 2015), we identified six criteria to gauge the formality of operating procedures: the existence of an appointed facilitator or coordinator who oversees the collaborative, the documented (i.e. written) official decision-making processes, the establishment of a steering or executive committee, specificity of rules for membership, the frequency and regularity of meetings, and the nature of working group structure (Table 1).

Table 1: Case Selection

	Highly Formalized: Collaborative A	Highly Informal: Collaborative B	Somewhat Formalized: Collaborative C	Somewhat Informal: Collaborative D
Is there an appointed facilitator or coordinator who oversees the collaborative?	Yes	There is an appointed monitoring coordinator but not a coordinator that oversees the entire collaborative	Yes	Yes
Are there formal decision-making processes?	Yes	No	No	No
Is there an established steering or executive committee?	Yes	No	Yes	No
Are there formal rules for membership?	Yes	No	Formal rules exist for membership in the executive committee but do not exist for the larger collaborative	No
Are meetings held at regular, predictable intervals?	Yes	No	Yes	Yes
Is there a formal working group structure?	Yes	No	Yes	No

We employed three data collection methods: 33 interviews with project participants, eight site visits (two per site), and the collection and review of archival documents, such as meeting notes, websites, emails, and publications. The interviews were conducted in person (n = 12) and over the phone (n = 21). Because of the geographic location of the collaboratives, the feasibility of in-person interviews varied by collaborative. In Collaboratives A and B, we conducted half of the interviews over the phone and half in person. The majority of interviews with members of Collaborative C

were conducted over the phone, while the majority of interviews with members of Collaborative D were conducted in person. We acknowledge that rapport, and subsequently better data, are more easily established with in-person interviews. As such we conducted interview in person whenever possible. We used purposive sampling to ensure we interviewed individuals who represented diverse interests (e.g., environmental groups, industry, and governments) as well as those who played particularly important roles in the collaborative, such as work group chairs. Interview questions were crafted to identify organizational structures of the projects (e.g. decision-making processes, committee structure, approaches to planning processes, and strategies for information dissemination) and practices that enhance (or erode) trust. We did not ask interviewees directly about the specific aforementioned forms of trust and distrust. Rather, we allowed stories about trust to emerge organically through the interview by asking interviewees about challenges, achievements, motivations for joining, relationships between members, and the organizational structures listed above. All but two interviews were recorded and transcribed. These two were not recorded at the request of the interviewees.

During site visits, we recorded observations of both formal and informal interactions between stakeholders to not only observe trust (and distrust) in action, but also to identify the roles individuals (and/or their groups) played in the collaboratives. We thematically coded all interview transcripts, observation notes, and archival documents using HyperResearch software. This process involved an iterative approach to data analysis in which we looked for recurrent themes and sought to identify patterns and linkages among them. We first coded the data for emergent themes. Examples of these codes include the stages of collaboration. We then coded for themes specific to our trust framework. Examples of these codes include the four types of trust. We conducted the coding in this order so emergent themes, such as themes related to the roles of collaborative coordinators, would not be overlooked in favor of themes that fit our framework. Finally, we outlined theoretical linkages between themes based on our observations and coded the data for evidence to support or refine these relationships. This paper most directly focuses on analytic codes related to trust development, its antecedents, and its consequences during the convening of the four collaboratives.

Case Descriptions

Collaborative A was established in 2009, bringing together approximately 30 to 40 individuals from diverse public interests, non-profit organizations, and Native American tribes to work with the USFS on collaboratively planning and implementing forest restoration on 154,000 acres, including 130,000 acres of National Forest Lands (NFL) and 20,000 acres of private land. The governance arrangement includes a steering committee of six individuals that sets the direction of the group and monitors the process; content area working groups, which range in membership size, that conduct analyses and make recommendations on technical issues to the larger group; a trained consensus-building professional who facilitates the process and enforces a mutually agreed upon charter; and a broad collaborative group that votes on final decisions.

Collaborative B was also funded through the second round of CFLRP competitive grants in 2012 and brings together non-profits and private industry to collaborate with the USFS on planning and implementing forest restoration activities on 210,000 acres on

NFL. The governance is extremely informal, with no rules of engagement or protocol for decision making. One non-profit organization has an MOU with the USFS and is responsible for organizing monitoring activities. Two ad hoc working groups also exist to coordinate volunteer efforts and to monitor populations of Zuni Bluehead Sucker (*Catostomus discobolus yarrowi*), an endangered fish species. Membership in these groups is open to any interested parties, and the number of volunteers that participate in monitoring shifts depending on need. There are approximately 5-10 "regulars" that participate in ad hoc meetings. At the time of our research, the group did not have formal procedure for decision making about the recommendations the group forwards to the USFS[*].

Collaborative C encompasses 920,000 acres that span National Forest Lands, land owned by a Native American tribe, state-owned land managed by two state agencies, and private land owned and managed by a non-profit organization. The group received funding in 2009. Each of the five landowners has equal representation on an executive committee (one primary representative and one alternate), which sets the direction of the collaborative and directs the work done by the larger group of members. Approximately 20-30 individuals attend an annual meeting and participate in the larger collaborative. There are no formally established rules or protocols for how the executive committee makes decisions about the recommendations the group forwards to the USFS, but consensus is generally the goal.

Collaborative D was funded through the second round of CFLRP competitive awards in 2012. It brings together non-profit organizations and state agencies to collaborate with the USFS on planning and implementing forest restoration activities on 40,000 acres[†] of NFL. Although the USFS officially plays the role of lead organization in Collaborative D, the governance is very informal. Approximately 20-25 individuals attend quarterly meetings and participate in the larger collaborative, although interviews revealed that closer to 10-12 individuals do the majority of the work. There is no formal procedure for decision making about the recommendations the group forwards to the USFS, although consensus is generally the goal.

Results

Our cases suggest that affinitive, rational, and procedural trust all enhance collaboration in different ways at different stages of the collaborative process. In our cases, we found that affinitive trust supported first stage of convening, "initial assessments," while rational trust mostly strongly supported engaging participants. In the only case that used strong governing protocols and rules, Collaborative A, we found that procedural trust created a platform for the development of other forms of trust once the collaborative had moved into deliberation. Across all four of our cases studies, we found that procedural trust played an important role in the long term function of the collaborative. Throughout the results section, we discuss preexisting levels of trust within the cases and describe how each form of trust supported the collaborative process.

[*] At the time of this writing, members of the collaborative were considering the possible implementation of a charter to formally outline governance of the collaborative.

[†] The project area included 50,000 acres in accordance with the grant requirements. However, the treatment area encompassed 40,000 acres.

Preexisting Trust Relationships

The CFLRP favors grant applications that can demonstrate a history of successful collaboration among prospective stakeholder groups (Monroe and Butler, forthcoming). In all four collaboratives, many of the stakeholders had been working together prior to the start of the CFLRP projects and had a history of interacting with each other. For example, many of the stakeholder groups in Collaborative A had been interacting with each other around natural resource issues for decades prior to 2009. In some cases, relationships between stakeholders had historically been adversarial, sometimes litigious, in nature. Many of the players involved in Collaborative D had been working together around conservation issues for years as well. When the official collaborative was formed in 2012, the key players recognized and acknowledged that they were in agreement about the majority of the goals and objectives for forest restoration on the landscape. In Collaborative B, which was also established in 2012, collaborative work on the landscape had been going on since 2003 via a state sponsored program. Prior to the formation of Collaborative C in 2009, the Forest Service had partnered with the state agencies and the non-profit group to work together at conservation and restoration efforts. In 2007, the Native American tribe joined and the group became Collaborative C.

Through repeated interactions, many stakeholders had already established varying levels of trust and distrust for the other entities involved. In two of these cases, Collaborative A and Collaborative C, interviewees expressed starting the project from a place of procedural and rational distrust in the USFS, which stemmed from a lack of transparency about how decisions had been made and a perceived lack of follow through on promises. One stakeholder from Collaborative A described her pre-existing trust in the USFS:

> "I don't trust the USFS because they're made up of all these different components that voice their views about things, but there's a lot of lack of clarity about who's in charge and how they're gonna respond. So it's difficult to trust that agency."

A stakeholder from Collaborative C similarly explained levels of distrust:

> "We've all been on this landscape for a long time and we've been dealing with issues and there's always been at some level, and depending on the resource area, a huge amount of distrust. Huge."

We did not encounter similar reports of distrust in Collaborative D and Collaborative B. In Collaborative B, high levels of trust existed from years of previous work. One individual said:

> "We've always tried to be as open and transparent about everything…that really brings a lot of trust into the civics with everyone. And I think we've also been working together for a long time, a lot of us…I think it was like 2004 or 2005. We've really had a lot of experience with working together."

In Collaborative D, members made a conscious decision when writing the CFLRP proposal to only address and work on areas of known pre-existing agreement. One collaborative member explained, "What made it into the proposal were ideas that everyone participating agreed on." Interviewees referred to this as the "80% rule," indicating that the collaborative collectively recognized that its members were in agreement on 80% of the work to be done on the landscape. By choosing to focus their efforts on this 80%, and only this 80%, group members were assured that everyone was in agreement about project goals and objectives. Setting this parameter established an effective control system, enabling a degree of initial procedural trust in the collaborative as a whole by providing assurance to collaborative members that the work done by the collaborative would not veer outside of the pre-agreed upon scope. This reduced the concern that any one stakeholder group might try to coopt the project to meet their own objectives. Because it reduced this concern, entities were willing to join the collaborative. These varying levels of initial trust and distrust impacted the collaboratives in different ways and set the stage for future trust development and different forms of work.

Affinitive Trust and "Initial Assessments"

Across all four case studies, "initial assessments" were sparked by the presence of two factors: the opportunity to attempt a new management strategy (collaboration) and the presence of affinitive ties across stakeholder groups. Across all four cases, conveners sought collaboration as a means of achieving previously unattainable results. In one of our cases, conveners were exasperated with current forest conditions, the stalemate that existed between stakeholders, and the recognition that the status quo was not achieving meaningful results. In the other three cases, conveners recognized that collaboration and the CFLRP grant provided opportunities to achieve results that no one organization could achieve alone. The motivation to collaborate was not enough in and of itself to prompt convening, however. In our cases, at least one initial affinitive trust tie across interest groups catalyzed conveners to act on their motivation to collaborate. Regardless of the motivation (exasperation with current conditions, recognition of opportunity, or something else entirely), we suggest that affinitive trust may be necessary to some degree for convening collaboratives.

In Collaborative A, initial conversations about collaboration began between stakeholders from historically opposing organizations. These individuals reported developing trust for each other after a few interactions. When asked how that trust developed, one convener described affinitive antecedents: "Hearing them talk about their perspectives, talking with them informally, riding with them in the truck on a field trip, getting to know them, getting to know them personally and hearing more about their situation." Coupled with the realization that the current status quo was not achieving any of their goals for forest restoration and management, this affinitive trust allowed the conveners to have early conversations about potential collaboration. These conversations eventually led to the assembling of the group of diverse stakeholders that became Collaborative A.

In Collaborative B, several key members had worked together for years and had come to develop relationships and affinities towards each other. One convener explained

that he felt comfortable participating in initial conversations because he believed the other stakeholders were "good people." Coupled with the recognition that the CFLRP presented a unique opportunity, these affinitive relationships sparked the collaborative.

In Collaborative C, members described how affinities between conveners allowed for initial conversations about the possibility of managing across geopolitical boundaries. One interviewee stated: "_____ and I were able to sit out there on a log one day and look around and say 'wouldn't it be neat if?'"

In Collaborative D, affinitive relationships also enabled conveners to discuss potential collaboration. One convener described how, upon hearing about the CFLRP grant application, he approached another convener who had won his trust through affinitive antecedents like active listening:

> "I realized immediately that it would be good for the District because geographically, meteorologically, ecologically, … and I met _____ … and was impressed with his open-mindedness. And ____ further had fostered some respect in me by listening to a lot of the input I had given on a timber sale that had great opportunities for restoration."

In all of the four cases, affinitive trust relationships among initiators, along with some desire to approach land management differently, served as the catalyst for "initial assessment".

Rational Trust and Recruiting Participants

Recruiting collaborative members is the critical second stage of convening (Margerum 2011). Across all four of our cases, interviewees described rational trust relationships as critical for recruiting joiners. Interviewees stated that, in order for them to invest time and energy in this early stage of the collaborative, they needed to be able to trust that good work was going to get done. Although we did not ask specifically about trust, stakeholders identified it as crucial and used the word "trust" in interviews. One stakeholder from Collaborative A said the following about trusting in a USFS employee: "That was frankly one of the reasons why we were interested in initially thinking we might get some success out of this, is because we knew she was capable."

Similarly, in Collaborative D, rational trust was critical during the writing of the CFLRP grant application. To invest the time necessary to put together the grant, stakeholders needed to trust that the USFS would follow through on its commitments. One stakeholder put it this way, "there needed to be some trust there, believing that the Forest Service was actually going to get this project going, and really, once they got all the money, that they were actually going to use it appropriately." In both Collaborative B and Collaborative C, interviewees reported that a history of working with collaborative members and producing deliverables and positive outcomes had generated trust. This trust was critical for their decision to sign on to the collaboratives.

Procedural and Rational Trust during Deliberation

One of our cases, Collaborative A, used formalized rules and procedures to govern the collaborative. For example, the collaborative established rules about behavior during meetings. These rules included limits on speaking time during meeting, so that individuals could not grandstand, and provided guidelines on courteous communication to discourage members from insulting each other during debates. Other rules were related to decision-making procedures. We observed that these rules engendered procedural trust, which then set the stage for additional trust development and collaboration. For example, during one meeting, we observed members vote on a controversial topic. A working group made up of a subset of collaborative members first gave a presentation on the topic, including a proposal of their recommendations based on available science and the work they completed. The working group then answered questions about the topic. Following the presentation, the facilitator coordinated a collaborative-wide vote in which collaborative members each indicated their support for or against the working group's recommendation. The facilitator tallied the votes, shared the results, and the collaborative endorsed the recommendation. During subsequent interviews, members stated that they trusted in that decision making process. Because rules and procedures allowed members to engage with each other without fear of negative consequences, they created the opportunity for individuals from diverse backgrounds to have shared experiences and develop rational and affinitive trust. One stakeholder described how procedural trust initially allowed him to engage, and over time, rational and affinitive trust developed between him and other stakeholders. When asked how that trust developed, he responded:

> "I think trust develops as you work with people and you get to know them and you understand their point of view and you get to the place where maybe you don't agree with it, but you can accept that they'll always develop compromises that work. So when you have that trust and when people say things you tend to listen to them, you tend to believe them, and that just makes the collaboration work better."

Another stakeholder echoed a similar sentiment about increased trust over time:

> "As a whole, what I've seen is that a lot of individuals have come in with…their guard up…but…as time goes on, those people stick around. They open up to a certain degree and look at the collaborative process as a new vehicle for coming up with mutually agreeable solution."

Without procedural trust to safeguard interests during initial interactions and promote trustworthy and predictable behavior, members of Collaborative A may not have experienced opportunities to develop rational and affinitive trust.

Across all four of our cases studies, we found that procedural trust played an important role in the long term function of the collaborative. In the cases that experienced low rational trust or rational distrust, we found that procedural trust was important for retaining members. In the two cases with high levels of rational trust among

collaborative members, we found that procedural trust was important for concerns about turnover.

Retention

In Collaboratives A and C, some rational distrust existed between joiners. In these cases, procedural trust played an important role in retaining members. In other words, procedural trust was necessary to make up for the rational distrust some members had for each other.

In Collaborative A, some collaborative members experienced rational distrust for each other at the outset of the project. These members would not have collaborated with each other without procedural trust in formalized rules and procedures. The existence of a charter engendered the procedural trust necessary for these members to collaborative. The charter outlined rules about membership, a formal procedure for decision-making, guidelines for behavior during meetings, and a protocol for media and outreach. Interviewees discussed how these rules elicit trust in the processes of Collaborative A and allowed members to participate without concerns of negative outcomes. The collaborative additionally hired a professional facilitator to oversee group processes and enforce the charter. For example, we observed the facilitator remind individuals about rules regarding courteous communication when one collaborative member sent disparaging message about another member to the collaborative e-mail list. The implementation of these measures created procedural trust that was critical for bringing stakeholders together to collaborate and sustain that collaboration. One stakeholder explained:

> "I like structure; people can trust that they're safeguarded, that there are venues to be heard, there are processes that are supported by the group. Whether we like what someone might want to discuss or not, there's a freedom in the structure to allow, for example, joint fact finding on an issue if there is a disagreement about it, and we can trust that will happen."

Collaborative C provides an example of what can happen when a collaborative both lacks strong procedures and suffers from a failure to produce results. Although rational trust ties catalyzed the recruitment of collaborative members, the group was slow to accomplish goals and rational trust among members waned. Interviewees expressed concerns about transparency and inclusivity with regard to decision making. This led to procedural distrust in the collaborative, as members outside the decision-making body, which was the small executive committee, remained unclear about how decisions were made. One stakeholder referred to the decision-making body of the collaborative as "a black box" while another called it "a country club." Another stakeholder commented on how the lack of an inclusive decision-making protocol had resulted in missed opportunities to build trust and achieve other social objectives:

> "If it's just the governments talking to each other, they may be building trust with one another, but it isn't meeting any broader social objective of building capacity within communities, building trust between citizens and governments, and

> connecting working and conservationists and scientists and folks from different disciplines"

At the same time, a number of individuals reported feeling like the collaborative was slow to produce results. One individual described how, even though he had developed affinitive trust with individual people in the collaborative, he did not have rational trust in the collaborative itself because it had failed to produce beneficial deliverables:

> "Maybe you enjoy some similar interest; you both have a family and similar background. That's fine and dandy. And you can trust people and go play softball together, whatever you want to do. But what are the results that we're achieving? That's the bigger question."

Without rational and procedural trust, collaborative members became frustrated with how the project was functioning, where it was headed, and whether participating would continue to be a good use of time. This highlights the importance of rational and procedural trust for the retention of collaborative members in addition to their initial recruitment.

Concerns about Turnover

In Collaborative D and Collaborative B, we found that a lack of procedural trust played an important role in members' concerns about long term collaborative function. In these two cases, while there were not formally documented rules and procedures that governed decision-making and group work, members relied on affinitive and rational forms of trust. This reliance, however, caused concern about the long term functionality of the collaborative. Interviewees worried that these trusting relationships could be lost if key individual members got new jobs, retired, or left the collaborative for any number of other reasons. One stakeholder from Collaborative D expressed concern over the possibility of losing key relationships:

> "I'm a little concerned about, what if I got a great job offer and went somewhere else to work and I wasn't involved in the project? Or if a number of key people retire, that sort of thing. Because it is built largely on personal relationships and trust."

One stakeholder from Collaborative B echoed that sentiment when he described what might be lost if a key USFS employee moved on to a new position:

> "I think that the biggest thing that I don't like about _____, and just very bluntly, because I believe he is a mover and a shaker and a doer. I suspect that he will climb up the ladder, and I'll lose him. And that's a very self-serving attitude but nonetheless, I would hate to see him go down the road to a better job, frankly. I don't think that would be a good thing for us. We need him here."

Without strong procedural trust, stakeholders relied on rational and affinitive trust relationships. Turnover of key personnel thus poses a greater risk in these cases, and members of Collaboratives D and B worried about the impact such turnover could have on the long term function of the collaborative.

Discussion

The results of our research begin to illustrate how affinitive, rational, and procedural trust support collaboration at different stages. We present our findings below, written as falsifiable hypotheses, such that other researchers can test them in a wider array of cases:

1. At least one affinitive trust tie across stakeholder groups is necessary to catalyze convening.
2. Joiners' rational trust for conveners is necessary to recruit collaborative members.
3. Procedural trust establishes an environment in which rational and affinitive trust can further develop amongst the broader body of participants.
4. Procedural trust supports long term collaborative function.
    a. When rational trust is low, procedural trust is needed to retain members.
    b. Even when rational trust is present, procedural trust protects against the risk associated with turnover.

Our first hypothesis is that affinitive trust among conveners is necessary to catalyze convening. Specifically, at least one affinitive trust relationship was critical for facilitating "initial assessment" in each case. Previous work has demonstrated that successful conveners must be trustworthy (Margerum 2011, Morse 2010). Our results elaborate on that claim and suggest that successful conveners possess characteristics to engender affinitive trust. Stern and Coleman (2015) assert that affinitive trust assessments are based in perceptions of an entity's benevolence, integrity, and other social characteristics that may exist between two entities, such as social connectedness, positive shared experiences, perceptions of shared identities, or assumptions of the similarity of salient values. "Benevolence" refers to the perception that the entity in which trust is placed will act from a place of well-meaning, whereas "integrity" refers to the perception that an entity consistently adheres to an acceptable (i.e. moral) set of norms (Mayer et. al 1995). Our work suggests that successful conveners are individuals who are perceived by others as benevolent and acting with integrity. What happens when an initiative lacks such conveners? Can a collaborative still get off the ground without affinitive trust? Given that all four of our cases possessed affinitive trust sufficient to spark these conversations, we were not able to explore potential alternatives for achieving the same results. Future research efforts could focus on alternatives to affinitive trust for catalyzing collaboration.

Our second hypothesis is that rational trust is necessary to recruit collaborative members. Across all four of our cases, rational trust played an important role in getting people to the table in order to collaborate; a wider range of stakeholders were willing to participate if they believed positive outcomes would be achieved. Specifically, potential joiners needed to have rational trust in the conveners, who recruited them to participate in the collaborative. Whether or not joiners have rational trust for conveners may stem from assessments of past performance (Jennings 1998). Past performance failures, therefore, may limit stores of rational trust and create challenges for the recruitment of collaborative members (Stern and Baird 2015). For example, if a convener has failed to follow through

on a commitment to a joiner in the past, the joiner may be wary of participating in the collaborative.

Our third hypothesis is that procedural trust establishes an environment in which rational and affinitive trust develop amongst broader membership of the collaborative. Previous work suggests that procedural trust may reduce the need for other forms of trust (Stern and Coleman 2015). Our work builds on that notion by demonstrating that, in addition to serving as an alternative to other forms of trust, procedural trust may catalyze their development. If rational and affinitive trust are low amongst the broader membership at the start of a collaborative, the presence of strong procedures, such as mutually agreed upon rules of engagement, decision making protocols, and other process-related procedures may protect interests and promote trustworthy behavior. Over time, stakeholders may then experience positive interactions working together if the procedures are explicitly designed to engender trust, such as with Collaborative A's case. These positive experiences may lead to the development of affinitive trust as individuals spend time together and share experiences. Similarly, these experiences may lead to rational trust as individuals gather information about each other's competence.

Our fourth hypothesis is that procedural trust is critical for the retention of collaborative members. Our results suggest that in collaboratives with low rational trust or rational distrust, procedural trust protects against member attrition. This supports Stern and Baird's (2015) suggestion that procedural trust may buffer against rational trust disturbances. Further, even in collaboratives with high rational and affinitive trust, stakeholders may grow concerned about the long-term sustainability of projects if they lack strong procedural trust to ensure consistency. In the case of Collaborative C, a lack of clear and transparent processes on the part of the executive committee led to procedural distrust among broader members and led members to question if they should continue to participate. The executive committee may have limited broader participation in their work for the purpose of efficiency. However, interviewees suggested that Collaborative C was slow to produce results. This supports Stern and Predmore's (2011) assertion that a focus on process-compliance and efficiency might come as the cost of achieving desired outcomes, in this case successful collaboration.

Finally, because rational and affinitive trust are highly dependent on relationships built between individuals, they may be lost if key parties retire, take new jobs, or otherwise move on from the collaborative. Similarly, our results show that a lack of rational trust may lead collaborative members to question the value of participating if the collaborative does not produce desired outcomes. Stern and Baird (2015) assert that the presence of strong procedures may buffer against these risks because fair and transparent procedures allow individuals to focus on relationship building and address performance failures.

Conclusion

Results from our research provide insight into the role that different types of trust and distrust can play for collaboratives. In particular, our work highlights the power of procedural trust. Because it may buffer against a lack of rational trust (or rational distrust) and creates a platform for rational and affinitive trust development, it may be a tool for supporting collaborative natural resource management. This represents an

important opportunity for collaborative practitioners, who may be able to design rules and procedures that establish the procedural trust needed to support collaboration.

Questions exist, however, about the characteristics and function of such procedures. Thus, the promise of procedural trust in collaborative contexts presents an interesting arena for future research to explore. What are the limits of procedural trust as a buffer against other types of trust failures? Can it serve as an alternative for multiple forms of trust at once? Who should enforce the rules that engender procedural trust? Further, how do the characteristics of the enforcer influence the development of procedural trust? These questions should guide future research.

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Chapter 3

Facilitation, Coordination, and Trust in Landscape-level Collaborative Natural Resource Management

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ABSTRACT

Large scale natural resource management efforts often employ the services of coordinators and facilitators. These individuals perform a range of tasks in support of the collaborative. We explore how facilitation and coordination differ in terms of trust development and, subsequently, supporting collaboration. To explore this topic, we conducted case studies of four landscape level collaboratives. Three of our case studies employed coordinators, whose jobs focused mainly on administrative duties. The fourth employed a facilitator, whose job included managing the collaborative process and relationships. Our results suggest that differences in roles and responsibilities translate into differences in trust development. Specifically, our work revealed that the coordinators promoted both rational and procedural trust. The facilitator promoted the development of rational trust in a similar manner to that of the coordinators, engaged in a greater number of procedural trust-building activities than the coordinators, and additionally engaged in activities directly focused on building affinitive trust between stakeholders. These results provide guidance for practitioners interested in hiring a facilitator, coordinator, or both. Results also expand on existing theory about how trust develops in collaborative natural resource settings.

Introduction

Many pressing natural resource issues cannot be solved with quick, easy solutions. Wildfire, invasive pest outbreaks, drought, and other landscape level management challenges can be difficult to define, divisive in nature, and occur on a scale too large to be addressed by one organization or agency alone. To address these wicked problems, many land management agencies have attempted collaborative approaches to problem solving. For the purpose of this paper, we use the term "collaboration" to refer to "…an approach to solving complex problems in which a diverse group of autonomous stakeholders deliberates to build consensus and develop networks for translating consensus into results" (Margerum 2011 pg. 6). We use the term "collaborative" to refer to groups that use collaboration as their primary approach to resource management and problem solving. Within these collaboratives, agencies work alongside non-profit organizations, private citizens, indigenous groups, and others to devise management solutions that account for a range of interests and concerns.

The last several decades have seen a proliferation in collaborative governance of natural resources in the United States. While collaboration offers a range of benefits and opportunities, there are also a number of challenges associated with bringing together diverse, sometimes contentious, stakeholder groups. These challenges include poor communication between collaborators, issues resolving conflict, personality differences, long histories of antagonistic relationships, power and resource disparities among stakeholder groups, lack of capacity, high turnover among agency and non-profit staff, and lack of financial resources (Margerum 2011). To help ease some of these challenges, many collaboratives employ the services of facilitators and coordinators. Facilitators and coordinators vary widely in terms of professional background, affiliation, and ability. They may be either paid or volunteer. They may be either third party or members of interested organizations. They may be trained professionals or laypeople.

Given trust's critical role in collaborative efforts, we explore how facilitators and coordinators contribute differently to the development and maintenance of trust within collaborative efforts. We conducted case study research in four collaboratives in the Collaborative Landscape Restoration Program (CFLRP). The CFLRP is a federal program that brings together diverse groups of individuals and organizations to collaborate on forest restoration on National Forest System (NFS) and adjacent lands. These "collaboratives" deal with complex issues with multiple projects occurring at once[‡]. The relationships involved are often contentious, as values and motivations differ across stakeholders. Three of our case studies relied on coordinators to track and manage ongoing work. The fourth case study employed a facilitator who, in addition to tracking ongoing work, was responsible for managing the collaborative process and relationships. We use these cases to build theory about the roles of coordinators and facilitators in engendering trust to support collaborative efforts.

Background

[‡] For example, a collaborative may be considering multiple options for restoration while simultaneously drafting a plan for multi-party monitoring and preparing fieldtrips to inform the general public about their work

Within collaboratives, trust between members as well as trust in the process are often cited as being key to successful collaboration and, subsequently, effective management (citations). Trust is defined as a psychological state in which one actor accepts some form of vulnerability based upon positive expectations of another entity (Stern and Coleman 2015). Stern and Coleman (2015) outline four types of trust relevant to collaborative natural resource management: dispositional, rational, affinitive, and procedural trust. *Dispositional trust* is based on an individual's pre-disposition to trust others. As such, it is a pre-existing characteristic of an individual, rather than an element that is heavily impacted by the actions of others within a collaborative. *Rational trust* stems from an evaluation of the likelihood of a positive outcome based on the predictability of another entity's action(s). It occurs when an individual has adequate information to make such a prediction. Rational trust is often based on assessments of past performance (e.g. an individual may trust another because he or she has always performed consistently in the past) or perceptions of competence. *Affinitive trust* is based on an affinity for another entity. It can come about from many sources, such as shared social experiences, assumptions of similar values, meaningful relationships, charisma, membership in common groups and communities, and positive relationship building behavior like active listening. Finally, *procedural trust* refers to trust in processes, procedures, and/or rules (Stern and Coleman 2015). For example, procedural trust may be created in a collaborative by establishing and enforcing rules for decision-making, behavior at meetings, members guidelines, among other procedures. Stern and Baird (2015) argue that rational, affinitive, and procedural trust are all actionable. That is, they can be built-up or eroded. They also argue that all of these three forms of trust are necessary for the long-term functioning of collaborative natural resource management institutions.

Facilitators and coordinators play an important role in trust development. Many collaboratives rely on facilitators and/or coordinators to help guide their work (Margerum 2011). The term "facilitator" refers to an individual who is responsible for cultivating productive dialogue and decision-making (Leach and Sabatier 2003). Facilitators engage in activities like crafting and enforcing ground rules, proposing and brokering compromises, designing and moderating interactions, and training stakeholders in listening and collaborative skills. The term "coordinator," on the other hand, refers to an individual who assumes administrative or secretarial duties, such as scheduling meetings, setting agendas, recording and disseminating meeting minutes, and serving as a contact person for the general public (Leach and Sabatier 2003). These two roles may play out very differently within collaborative settings, with facilitators managing interactions, relationships, and group processes, and coordinators focusing on tasks aimed at accomplishing discrete project objectives.

Previous studies have discussed the importance of having a facilitator (e.g. Brummell et al. 2010, Bojorquez-Tapia et al. 2004, Reed 2008). Others indicate the importance of both a coordinator and a facilitator for project success (Ansell and Gash 2007, Margerum 2011, Leach and Pelkey 2001). Margerum (2011) suggests that leadership responsibilities, such as promoting participation, helping make decisions, and creating trust among stakeholders, are often assumed by both coordinators and facilitators. Facilitators and coordinators may impact the various types of trust in different ways. They may engender affinitive trust between individuals by highlighting

similarities and creating opportunities for building positive social relationships. They may promote the creation of rational trust by vouching for individuals' competence or providing opportunities for demonstrations of reliability. They may bring about procedural trust by ensuring the collaborative process occurs in a fair and transparent way through the establishment of rules and procedures, which may clarify roles and responsibilities, establish how decisions are made, and set forth consequences for rule-breakers. Prior research suggests that transparent decision-making processes, clear memoranda of agreement, and jointly developed rules for interactions in particular can contribute to stronger procedural trust (Schoorman et al. 2007).

Although facilitators and coordinators may both support trust outcomes, differences in their roles and responsibilities likely translate into variability in the ways different types of trust are developed or maintained. Previous research has demonstrated that each role can produce different collaborative outcomes. For example, in a study of 50 watershed partnerships, Leach and Sabatier (2003) found that having an effective coordinator was important for developing human and social capital, while having an effective facilitator was important for reaching agreement. Additional work has pointed out that individual facilitators and coordinators vary greatly in their ability to effectively carry out their assigned duties because of differences in skill and training (Reed 2008, Kolfschoten et al. 2007). Thus, potential influences on trust development may vary based on the position held (facilitator v. coordinator) and/or by the characteristics of the individual in either role (e.g., novice v. experienced). This paper explores how a facilitator and three coordinators supported trust development, and, by extension, successful collaboration, in four collaborative initiatives. Because trust is critical for successful collaborative natural resource management, understanding how facilitators and coordinators impact trust outcomes can inform future collaboratives.

Methods

We conducted qualitative case studies of four CFLRP collaboratives to understand what makes collaboration work in a landscape level context. For greater detail on the CFLRP, see Schultz et al (2012). To protect the anonymity of the coordinators and facilitators in our case studies, we will refer to the projects as Collaborative A, Collaborative B, Collaborative C, and Collaborative D. The presence of a facilitator on Collaborative A, as opposed to coordinators in the other cases, offered an opportunity to examine the roles of each in trust development. To do so, we first examined the extent to which the facilitator on Collaborative A and the coordinators in the other cases adhered to each role, as defined in the literature. This provides a basis for considering the generalizability of the findings of these limited cases. We then compare the influences of each upon the different forms of trust within each collaborative.

We employed three primary data collection methods: 33 interviews with project participants, eight (two per site) site visits, and the collection of archival documents, including meeting notes, websites, e-mails, and publications. The interviews were conducted in person (n = 12) and over the phone (n = 21). Because of the geographic location of the collaboratives, the feasibility of in-person interviews varied by collaborative. In Collaboratives A and B, we conducted half of the interviews over the phone and half in person. The majority of interviews with members of Collaborative C were conducted over the phone, while the majority of interviews with members of

Collaborative D were conducted in person. We acknowledge that rapport, and subsequently better data, are more easily established with in-person interviews. As such we conducted interview in person whenever possible.

We used purposive sampling to ensure we interviewed individuals who represented diverse interests (e.g., environmental groups, industry, and governments) as well as those who played particularly important roles in the collaborative. To do this, we obtained membership lists from the facilitator and coordinators and identified the various stakeholder groups. We then requested interviews with several members of each group. All but two interviews were recorded and transcribed. These two were not recorded at the request of the interviewee but extensive notes were taken during the interviews. During site visits, we recorded observations of both formal and informal interactions between stakeholders not only to observe trust in action, but also to identify the roles individuals (and/or their groups) played in the collaboratives. We thematically coded all interview transcripts, observation notes, and archival documents using HyperResearch software.

To develop theory about the role of facilitators and coordinators in supporting trust for collaborative outcomes, we followed Eisenhardt (1989) and established preliminary themes within individual cases and then compared across cases to flesh out our theory and add further dimensions. We inductively developed preliminary themes about facilitators and coordinators within each case. We then compared the case with the facilitator to the other three to sharpen our preliminary ideas and highlight key differences between the two roles. Finally, we compared our findings with literature on facilitation best practice to see if our findings diverged from existing theory.

Results

Several themes emerged from our data. As anticipated, coordinators and facilitators assumed different roles and responsibilities within the collaboratives we studied. Differences in roles and responsibilities translated into differences in the types of trust engendered. Table 1 provides a synopsis of how the different roles and responsibilities of facilitators and coordinators promoted the various types of trust. A "Yes" indicates that we observed that the facilitator or coordinators assumed the corresponding role, whereas a "No" indicates that we observed the role was not assumed by coordinators in our cases. The column labeled "Trust Outcomes" lists the types of trust that were engendered by the corresponding roles.

Table 1: Observed Roles and Trust Outcomes for the Facilitator and Coordinators in Four CFLRPs

Observed Roles	Facilitator	Coordinators	Trust Outcome
Scheduling and organizing meetings and events	Yes	Yes	Encourages procedural trust.
Sending agendas	Yes	Yes	Makes process transparent (i.e. people know what will be discussed),

			thus, may encourage procedural trust.
Taking meeting minutes	Yes	Yes	Increases transparency and thus encourages procedural trust.
Reminding people of assigned tasks and due dates	Yes	Yes	Promotes rational trust by encouraging members to accomplish goals in a timely manner.
Moving people from position- to interest-based negotiation	Yes	No	Develops affinitive trust between individuals if they realize they have shared goals and values.
Establishing and enforcing ground rules	Yes	No	Increases procedural trust by assuring the rules are followed.
Promoting democratic decision-making (i.e. overseeing votes)	Yes	No	Increases procedural trust if process is fair and transparent.

Roles and Responsibilities

Collaborative B, Collaborative C, and Collaborative D all relied on coordinators to oversee at least part of the collaborative. The majority of their duties were administrative (see Table 1). Collaborative B relied on a non-profit organization to provide a monitoring coordinator for the partnership. This individual was fully employed by that organization and funding for his role as the monitoring coordinator was provided through the CFLRP grant. He was responsible for planning, scheduling, and organizing the monitoring activities for the collaborative. He also recruited and managed the volunteers that would carry out the monitoring and organized field days to educate collaborative members about monitoring efforts. In addition to these formal monitoring-related duties, he acted as an informal coordinator for the broader collaborative by scheduling meetings, sending out notes and updates, and keeping members updated.

Collaborative C relied on a part-time (20 hours per week) coordinator who was employed by a member non-profit organization. The coordinator's time was largely devoted to managing the collaborative's executive committee, a small governing body within Collaborative C that was responsible for setting the direction of the collaborative and guiding the activities of the larger collaborative. The coordinator was responsible for scheduling meetings and setting agendas for the executive committee, recording and disseminating minutes for those meetings, reminding executive committee members of

tasks and due dates, and organizing an annual meeting of the larger collaborative. The coordinator also facilitated some communication between the executive committee and the larger collaborative on an as-needed basis.

Unlike Collaboratives B and C, the Collaborative D coordinator held a full time position and was an employee of the U.S. Forest Service (USFS). This individual was responsible for scheduling meetings, setting agendas, and recording and disseminating meeting minutes. The coordinator was also responsible for tracking and managing federal budget reporting requirements and was additionally charged with acting as the main point of contact for the general public.

Collaborative A was the only collaborative we studied that employed a professional facilitator. Because Collaborative A was formed to deal with contentious issues, the founding members of the collaborative recognized a need for third party support and reached out to a facilitation organization. The members contracted with the organization and hired a facilitator using CFLRP grant funds. When this original individual moved on to a new position, the role was filled by the facilitator discussed in this paper (also employed by the aforementioned facilitation organization). The responsibilities assigned to these facilitators included coordination duties such as setting meeting agendas, sending out meeting minutes, and reminding members of upcoming due dates, but they also included monitoring the process of the collaborative and encouraging individuals to interact in productive and respectful ways (see Table 1). Process management tasks included establishing and enforcing ground rules as well as democratic decision-making (i.e., holding votes). This individual also actively worked to manage relationships and resolve conflicts between stakeholders, responsibilities not assumed by the coordinators in the other three collaboratives. In other words, the facilitator preformed all the same tasks as the three coordinators plus addition tasks related to process and relationships management (see Figure 1).

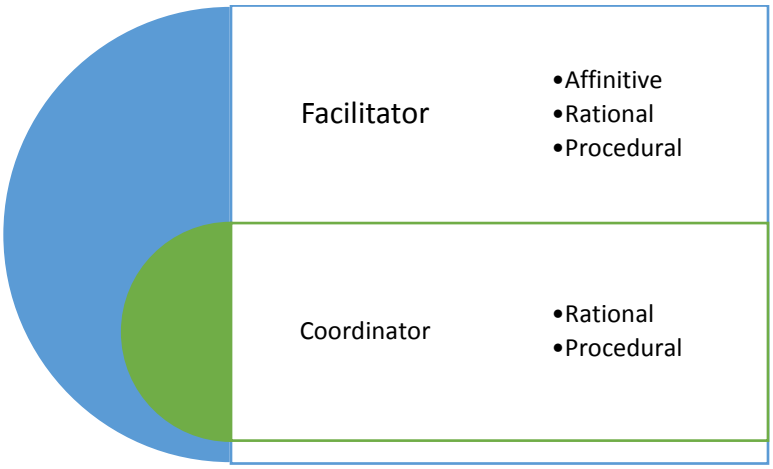

Figure 1: Facilitators versus Coordinators. The facilitator we studied took on many of the roles and responsibilities of coordinators while additionally engaging in activities that build affinitive trust.

All three of the coordinators we studied were employed by organizations that participated in their respective collaboratives. As such, they, as members of a stakeholder group, held positions about the outcome of the collaborative and were not

neutral. In the case of Collaborative A, the facilitator was not a collaborative member and did not participate in voting or decision making beyond guiding the process (i.e. he did not cast a vote). He was employed by a third party organization and was hired for the explicit purpose of facilitating the collaborative process.

Commonalities in Engendering Trust Development

The facilitators and coordinators each encouraged stakeholder behavior that brought about rational trust. For example, the Collaborative D coordinator engendered rational trust by keeping work on track and encouraging the likelihood of positive outcomes. Collaborative D experienced a period of time without a coordinator. During that time, rational trust waned, as no one was actively driving the process and stakeholders began to question the likelihood of achieving desired outcomes. When the new coordinator was hired, rational trust was restored as the new individual began to get work back on track. One interviewee described how without the coordinator, he doubted if certain tasks would actually get achieved. When asked for an example, he responded:

> "Having someone take the lead on stuff like fieldtrips and activities and that type of thing, it makes them actually happen. If no one's pushing for a fieldtrip or for monitoring, and monitoring is actually a good example, because that's something that tends to fall behind when people have too much to do. Monitoring is kind of the first thing that falls off and so without a coordinator, there wasn't really much monitoring taking place."

Coordination activities in the other three collaboratives had similar effects. Collaborative A facilitator, for example, regularly sent out follow-up e-mails and meeting minutes to keep work on track, ensuring the timely accomplishment of outputs. Over time, performance expectations rose, creating rational trust between actors. In Collaborative B, interviewees attributed expectations of positive outcomes to the actions taken by the monitoring coordinator to ensure that beneficial work occurred in a timely manner. Similarly, members of the executive committee in Collaborative C stated they believed the executive committee would continue to engage and move toward productive outcomes because the coordinator kept them on track and encouraged them to do so.

We also found that the facilitator and coordinators each contributed to procedural trust by enforcing and promoting fair and transparent rules. All four individuals scheduled meetings, sent out agendas and meeting minutes, and updated the larger collaborative about the progress of work. This kept collaborative members informed, increasing transparency and subsequently procedural trust. One stakeholder in Collaborative D described how hiring a coordinator led to an increase in procedural trust, "So I really feel that communication increased, which increases trust between the partners and us because they feel like we're being more transparent as well." As another example, a collaborative member in Collaborative B reported feeling confident in the monitoring, because the monitoring coordinator actively publicized the monitoring plans and hosted field days to educate members about the process.

Trust Engendered Only by Facilitation

Interviews revealed that the facilitator played a larger role in the development of procedural trust than did the coordinators. Additional responsibilities included establishing and enforcing ground rules and democratic decision-making. The ground rules were established through the creation of a charter, which was crafted with the guidance of the facilitator. It outlined the collaborative's charge and deliverables, the organizational structural, the planning and decision making processes, and procedural guidelines for stakeholders, including membership requirements and responsibilities. It also outlined rules for behavior during meetings. For example, it included requirements that individual members behave respectfully towards each other and refrain from unproductive behaviors such as grandstanding and name-calling. The three other collaboratives did not formally outline appropriate and inappropriate behavior.

The facilitator directly contributed to legitimizing the charter by leading the drafting process and by facilitating a process through which collaborative members voted to adopt the charter as their governance document. The members mutually agreed to adhere to the rules and structures outlined within the charter. In order to be an active voting member in the collaborative, members had to commit to following the rules and procedures outlined in the charter by signing on to the document. Individuals who elected not to sign the document were allowed to continue to attend collaborative meetings, but were not permitted to vote on collaborative decisions. This was critical for establishing the legitimacy of the document. Interviewees reported that they believed others would follow the charter because everyone in the collaborative had accepted it. Thus, everyone participating in full had agreed to do so in good faith. As the collaborative evolved, the facilitator assisted the group in updating and modifying the charter so that it would continue to serve the needs of the group.

The Collaborative A facilitator additionally enforced the charter. Interviewee testimonies revealed that the existence of the charter and the knowledge that it would be fairly enforced by the facilitator gave stakeholders enough confidence in the process (i.e. procedural trust) to allow them to participate, even in cases where they did not actually have trust in the other members. Stakeholders were able to participate in good faith because they believed they were protected by the procedures. The facilitator described his contribution to establishing procedural trust in this way:

> "And the other piece is managing the process, and there's where things like clear governance, which include clear, representative structure, clear structure of the actual function groups, steering committee, work groups, whatever it might be, clear decision-making process – are you working towards consensus? What happens if you don't get consensus? What is your decision-making role? The same thing, what's the process for membership? I mean, all this. And then there's sharing information with the Forest Service, with the public. Is the actual decision document actually reflective of the core concerns that were expressed by the collaborative? So there's that piece around trust in the process. "

The facilitator monitored and refereed the ways in which individuals engaged with each other in addition to keeping members informed of the collaborative's work. For example, when one member of the collaborative made disparaging remarks about

another member in a public e-mail, the facilitator responded and reminded the group that such remarks violated the charter. This represents a major difference between the role of the Collaborative A facilitator and the roles of the other three coordinators. The facilitator operated more broadly, paying attention to the overall functioning of the collaborative. The coordinators, on the other hand, were mostly focused on smaller incremental tasks, such as sending out meetings minutes, which kept members informed but were not explicitly designed to address members' behavior.

The Collaborative A facilitator also differed from the three coordinators in that he actively sought to create affinitive trust between stakeholders. He accomplished this by purposefully crafting situations in which stakeholders became aware of salient value similarity[§] between them. Salient value similarity has been linked to affinitive trust (Stern and Coleman 2015). The Collaborative A facilitator directly (often deliberately) took action to increase affinitive trust by employing interest-based negotiation (IBN). IBN is a strategy for achieving consensus by employing four principles: separate people from the problem, focus on interests instead of positions, invent options for mutual gain, and insist on using objective criteria for evaluating decisions and outcomes (Fisher and Ury 1981). Within IBN, "positions" refer to outcomes or outputs that a given party is arguing for, whereas "interests" refers to the reason they are arguing for that outcome or output. Interest-based negotiation encourages people to realize that, although their positions are different, they may have similar interests. For example, one interest group may hold the position that no new roads should be built in a restoration area. A second interest group may hold the position that a new road is needed to accomplish certain restoration goals. Both groups may have a shared interest in increased forest health, despite differences of opinion in how to best achieve those interests. In the case of Collaborative A, the facilitator was able to engender affinitive trust between members by uncovering shared interests, thus demonstrating common values and eliciting affinitive ties between members.

In another example, the facilitator implemented a trust-building activity in which individuals discussed why they valued a particular treatment area. The discussion, as intended, led to the realization of shared interests. In an interview, the facilitator described how one person who had identified herself as a member of an off-road vehicle group shared a story as part of the activity about boating and bird-watching with her children. That story led other collaborative members to realize that she valued the restoration area for more than just opportunities for off-road vehicles; they had a shared interest in forest health. The facilitator commented that, through these trust-building activities, "people would come to better understand their interests and realize they're actually not that much apart." The facilitator went on to describe that activities like this often led to increased trust among collaborative members, which ultimately helped them to work together more easily. We have no observations or reports of the coordinators engaging in similarly deliberate affinitive trust-building activities.

Finally, we observed that the facilitator did not remain completely neutral throughout the process. Instead, he was upfront about his knowledge and ideas on decisions facing the collaborative. He did, however, regularly remind participants that his

[§] Salient value similarity refers to a situation in which one entity perceives that another has similar goals and values to them (Seigrist et al. 2000).

ideas should not necessarily have any impact on the eventual decision made by the group. This served to combat ideas that the facilitator was disingenuous and even endeared him to members of the collaborative. When asked what made him an effective facilitator, one Collaborative A member stated that he was "fair even though he's not neutral" and added, "I'm not sure that you can ever be completely neutral." He went on to explain that transparency regarding the facilitator's ideas was critical, given that remaining completely neutral in terms of one's opinions would be almost impossible. Being upfront and open about his opinions, and then remaining fair to all sides despite those opinions, allowed the Collaborative A facilitator to be effective in his work.

Implications

We observed key differences between the coordinators and the facilitator in our cases in terms of supporting trust development. While our cases are limited, we believe certain functions served by each role within these collaboratives may have broader implications for both collaborative groups and researchers. We discuss each below.

Implications for Research

Our work contributes to what is known about facilitation and trust. Specifically, Collaborative A case provides an example of how a good facilitator can develop trust. However, as mentioned in the background, not all facilitators possess the same skills and abilities. In the case of Collaborative A, the facilitator was an experienced professional and was perceived as legitimate by members of the collaborative. Work by Tyler (1989, 1994, 1997) highlights the importance of perceived fairness for establishing trust. Thus, facilitators may earn trust when they act fairly and are perceived as legitimate. In Collaborative A, the facilitator elicited trust in himself, in addition to engendering procedural trust in the collaborative, by enforcing and following the rules and procedures of the group.

The Collaborative A facilitator also gained trust because of his role as hired and trained professional. Mollering (2006) refers to this as "received trust". We suggest that facilitators often benefit from received trust, especially when they are trained professionals who are paid for their work. This assertion is supported by Wardale's (2008) observation that facilitators are often given "carte-blanche" to plan sessions and suggest procedures and protocols, possibly because group members view them as professionals who are to be trusted to do a good job. We posit that facilitators may garner trust both because of their position and the actions they take as they carry out their work.

Our work did not, however, focus on the impact of perceptions of trustworthiness of the facilitator or coordinator and how those perceptions impact trust-building within a collaborative. If the coordinator or facilitator is perceived as trustworthy, the system (rules, processes, procedures, decision-making, etc.) will be more likely to be perceived as fair (Lind and Tyler 1988). The opposite might be true as well; a fair and well developed set of ground rules may not engender procedural trust if the individual enforcing them is viewed as incompetent or untrustworthy. Perhaps the procedure or rule is only as good as the person who enforces it. Thus, future research should ask if an

individual (coordinator or facilitator) indeed increases procedural trust by enforcing rules or if they are actually increasing trust in themselves. In other words, is trust in the facilitator or coordinator a proxy for procedural trust? Furthermore, if the trust in these individuals is indeed a proxy for procedural trust, what would happen if they were replaced or the position lost all together? Would the current store of positive interactions, shared experience, existence of procedures, and newly established norms be enough to maintain trust?

Implications for Collaboratives

The differences we observed between facilitators and coordinators may be of particular interest to collaboratives making decisions about how to structure their group. Because hiring a facilitator, coordinator, or both may require substantial financial resources, collaboratives may want to be judicious in their decisions about employing individuals to fill one or both roles. That decision may, at least partially, be informed by the presence or lack of different forms of trust. In collaboratives with low affinitive trust, facilitators may be able to construct activities intentionally designed to build affinitive trust between collaborative members. Facilitators who engender trust in themselves (for the reasons discussed above) may also support the development of procedural trust by enforcing ground rules and democratic decision making. Coleman and Stern (in prep) suggest that the creation of procedural trust may set the stage for other types of trust development. A facilitated process that supports procedural trust development may therefore lead to increased levels of affinitive and rational trust as well. Thus, collaboratives in which stakeholders perceive values dissimilarities or have a history of conflict may do well to employ the services of a facilitator.

A facilitator, however, may not be necessary in all situations. Collaboratives that are made up of like-minded constituents may have adequate stores of affinitive trust and may be better served to spend their resources on something other than hiring a professional facilitator. Based on our case studies, we posit that a facilitator may be appropriate when levels of affinitive and procedural trust are low and need to be increased. When affinitive and procedural trust are present, we posit a coordinator may be appropriate. Partnerships with limited resources (who may not be able to afford both a facilitator and coordinator) should consider their current trust levels and needs when identifying the appropriate role (see Figure 2). We believe that highlighting these differences may help future collaboratives decide if a coordinator, a facilitator, or both are best suited to help with their efforts.

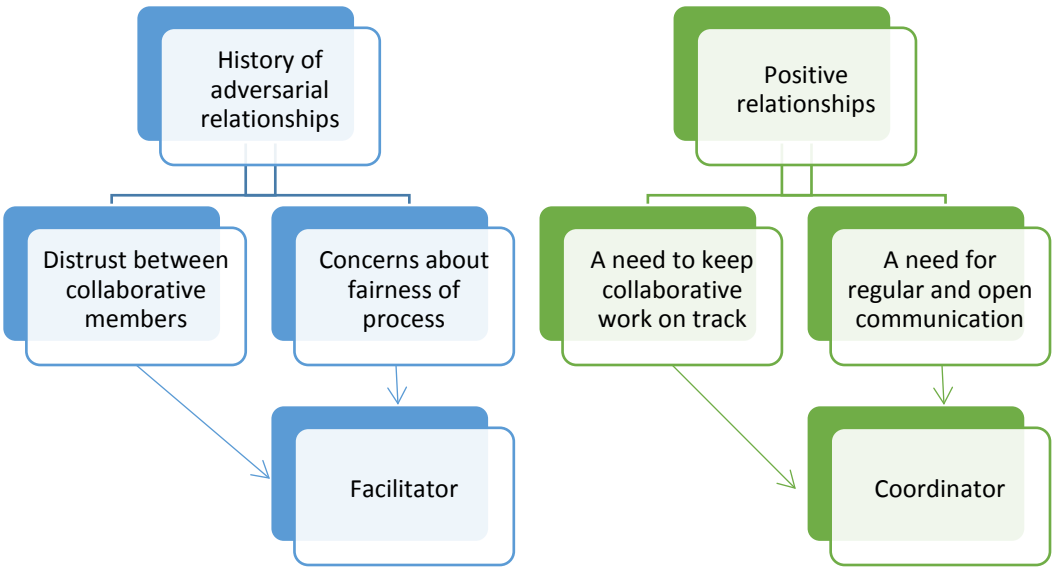

Figure 2: Decision Tree. Collaboratives with a history of contentious relationships between stakeholders may experience high levels of distrust. These collaboratives should consider using resources to employ a trained facilitator. If the needs of a collaborative are primarily project management focused, the collaborative should opt for the services of a coordinator.

Implications for Facilitators

Numerous publications cite the ability to build trust among group members as a key competency of facilitators (Creighton 2005, Schuman 2005, Schwarz 2002). However, few discuss specific techniques empirically shown to build that trust. One exception is King (2000), who details the experience of one facilitator who actively sought to build trust within a small group of stakeholders. Our results begin to create a picture of the actions facilitators take that lead to trust development. Some reflect general best practices that already exist within the literature on facilitation. For example, one frequently discussed best practice is keeping the group on track and focused (Creighton 2005, Schuman 2005, Schwarz 2002). Our results show that keeping a group on track, by sending out meeting minutes, reminding members of upcoming deadlines, etc., leads to the creation of rational trust among members because it creates the expectation that work will be done well and on time. Another frequently cited best practice for facilitation involves suggesting procedures or problem-solving approaches (Creighton 2005, Schuman 2005, Schwarz 2002). Collaborative A provides an example of how creating and adhering to fair and transparent procedures can lead to procedural trust in the process. This notion is additionally supported by the ideas related to procedural justice outlined above.

One of our findings, however, appears to go against previously reported best practices for facilitation. Many sources suggest that facilitators must remain neutral (e.g. Poirtras 2009, Creighton 2005). Our findings add nuance to this idea. In the case of Collaborative A, the facilitator earned a reputation for being genuine and transparent by being up front about his ideas. We believe remaining fair to all parties and not using

one's position to influence outcomes should indeed be a best practice of facilitation. We suggest, however, that attempting to project an image that one does not hold opinions regarding a given group's work might create the sense that the facilitator is disingenuous. This assertion is similar to work on transparency in public involvement; when agencies fail to reveal their positions to the general public, perceptions of insincerity, or even conspiracy theories, emerge (Smith and McDonough, 2001, McCool and Guthrie, 2001). For example, in a study about relationships between local residents and protected areas, Stern (2010) found that when agencies focused on adherence to bureaucratic procedures at the expense of candidness and transparency, perceptions of disingenuousness were common. Our work illustrates this may apply to facilitators. In both contexts, facilitators or agencies may engender distrust by failing to disclose their true positions. We suggest that being open and transparent about personal beliefs may help to facilitate greater trust in the both the facilitator and the process if the facilitator can demonstrate fair treatment of those with whom he or she may disagree.

Conclusion

Our work highlights the power of a facilitator to build the trust needed to support collaborative natural resource management. Furthermore, this paper brings attention to the importance of perceived fairness and procedural justice in the creation of that trust. Facilitators may only be able to support trust development between collaborative members if they themselves are viewed as trustworthy, and evaluations of that trustworthiness may be strongly linked to perceptions of fairness and genuineness. Our findings may have limited generalizability, however. We examined 4 cases, one of which used a facilitator. Future studies should include more cases such that trends among many facilitators and coordinators can be identified.

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Chapter 4

Collaborative Planning, Trust, and Boundary Spanners

Kimberly J. Coleman and Marc J. Stern

ABSTRACT

Some scholars have suggested that involving environmental groups in collaborative planning may serve as a way to increase their acceptance of land management agencies' decisions and enhance planning processes through incorporation of the ideas and knowledge of multiple stakeholders, as well as through personal relationships that diffuse conflict. We analyzed case study data from three landscape level collaboratives to understand how involving these environmental groups in the planning of such efforts has played out in actual collaborative settings. Our results show that members of environmental groups developed trust within the collaboratives, considered new view points and previously unacceptable management options, and then advocated for the work of the collaborative among external parties. However, while some members did bring new ideas and information back to their home organization, most stakeholders maintained the objectives of their organization as their primary goal for collaboration. Our results also show that participating in the collaborative did not necessarily mean environmental groups would not litigate and that USFS employees were aware of this risk. These case studies demonstrate both the potential and limitations of collaborative planning as a tool to diminish risk associated with litigation and other forms of conflict.

Introduction

The United States Forest Service (USFS) faces a number of challenges involving the public in the management of federal lands, including the risk that stakeholders may object, appeal, or litigate against the agency. In particular, environmental groups often oppose management decisions made by the USFS (Broussard and Whitaker 2009, Portuese et al. 2009, Schindler 2002). Other scholars have suggested that involving these groups in collaborative planning may increase the likelihood they will accept management decisions and limit the likelihood of legal action against the agency (Wondolleck and Yaffee 2000), possibly because of trust built through the collaborative process (Vaske et al. 2007, Schindler 2002).

Although the USFS has been involving the public in land management since at least the early 1970s, collaborative planning has only become widespread in the last several decades. We compare collaborative planning to what is known about traditional forms of public participation. We analyzed case study data from three projects in the Collaborative Forest Landscape Restoration Program (CFLRP). The CFLRP is a federal program that funds collaborative landscape restoration work on National Forest System (NFS) and adjacent lands. The program brings together diverse groups of individuals and organizations to collaborate on forest restoration, including a number of environmental groups. These cases highlight the role and function of trust in collaborations between environmental groups and land management agencies. Results shed light on how members of environmental groups can develop trust in the USFS within collaborative settings and how that trust functions.

Background

The USFS has a long and varied history with public involvement in land management. Since the passage of the National Environmental Policy Act (NEPA) in 1969 and the National Forest Management Act (NFMA) of 1976, the USFS has been required to include the public in planning efforts (Gericke and Sullivan 1994). The passage of these Acts established a process through which the USFS sought to educate the public about the agency's plans and also solicit public input on future decisions. Public hearings and review and comment periods became ubiquitous methods for meeting legal requirements around public participation (Gericke et al. 1992, Innes and Booher 2004). Later, public opinion polls, focus groups, and surveys became popular methods for collecting public input (Innes and Booher 2004). For the purpose of this paper, we will refer to these strategies as "traditional forms" of public involvement. These efforts primarily sought to educate the public about planning efforts and collect public feedback. As such, they primarily supported the flow of information between the USFS and the public, rather than interactive dialogue between stakeholder groups (Innes and Booher 2004). Public hearings did allow stakeholders to interact, but not through collaborative dialogue. Although public hearings bring multiple stakeholder groups together in one place, they often pit groups against each other as they attempt emphasize the importance of their own positions (Innes and Booher 2004).

Public frustration with these processes grew (Leach 2006) and by the early 1990s, dissatisfaction with USFS planning and the number of appeals had grown beyond what was ever anticipated by the agency (Gericke and Sullivan 1994). Simultaneously, widespread gridlock around environmental issues was increasing (Butler et al. 2015), as

exemplified by the spotted owl crisis in the Pacific Northwest (Moore 1993). Throughout the 2000's, public discontent with USFS planning continued. From 2001 to 2008, the USFS was sued more than any other federal agency (Miner et al. 2014). This is significant because fear of litigation can impact USFS decision-making (Stern et al. 2014). For example, many stakeholder groups use NEPA as a tool to stall or stop other groups with whom they disagree, allowing for some players to participate in the process (via litigation) without engaging in meaningful dialogue (Moote et al. 1997, Stern and Mortimer 2009, Stern and Predmore 2010). In the majority of legal cases against the USFS during this time period, the plaintiffs were members of environmental groups (Broussard and Whitaker 2009, Portuese et al. 2009).

As a response, the USFS began incorporating conflict resolution strategies into their public involvement processes (Leach 2006). "Collaborative stewardship" emerged as a means for reaching consensus between diverse stakeholder groups (Innes and Booher 2010). Collaboration in USFS planning is now encouraged in many programs and reinforced through cooperative agreements and legislation (Butler et al. 2015).

Throughout this paper we follow Margerum (2011 pg. 6), referring to "collaborative planning" as "an approach to solving complex problems in which a diverse group of autonomous stakeholders deliberates to build consensus and develop networks for translating consensus into results". Proponents of collaborative planning cite a number of positive outcomes: improved communication, shared understanding of the problem and context, conflict management, and increased social, political, and intellectual capital (Innes and Booher 2010, Ansel and Gash 2008). Some scholars have suggested that collaboration builds trust among participants (e.g. McKinney and Field 2008, Conley and Moote 2003). For example, McKinney and Field (2008) conducted an analysis of 50 cases of collaboration on public lands in the western US. Their results showed that across their cases, trust increased among stakeholders as they participated in the collaborative. The potential of collaboration for trust building is important because trust is associated with a number of benefits relevant to public land management (Beierle and Konisky 2000; Davenport et al. 2007; Siegrist et al. 2000; Smith et al. 2013). In particular, trust has been shown to play an important role in conflict resolution (Ostrom 2003).

We define trust as a psychological state in which an entity (a trustor) accepts some level of vulnerability (i.e., risk) based on a positive expectation of another entity (a trustee) (Stern and Coleman 2015). The trustor is typically an individual person, whereas the entity in which trust is placed may refer to an individual, an organization, an object (such as a map), or a process. Distrust is the antithesis of trust, where an individual believes that another entity will act in a way that is wrong or harmful. Distrust differs from a lack of trust, where an individual is not sure how another entity will act. For example, an individual may lack information about another entity, and thus lack trust, but have no reason for active distrust.

In theory, collaborative planning should support the development of trust among stakeholders and thereby reduce conflict and increase agreement in the long-term around management plans. Collaborative approaches center on dialogue between interest groups, aim to be inclusive of all interested parties, and seek to achieve shared agreement and collective understanding (Innes and Booher 2004). Collaborative approaches engage participants in meaningful conversations, which, over time and through repeated

interactions, build relationships. Ideally, those involved learn about new ideas, come to recognize others' viewpoints as legitimate, are able to work through conflict, and build new trusting relationships (Innes and Booher 2004). This represents an advantage of collaborative planning over the traditional forms of public involvement practiced by the USFS in previous decades. Unlike traditional forms of public involvement, collaboration is aimed at thoughtful and genuine interaction between multiple stakeholder groups. The goal of this paper is to use three contemporary collaborative efforts to compare collaborative planning to what is known about more traditional forms of public involvement in an effort to understand its potential to build trust and consensus and diminish risk associated with litigation and other forms of conflict.

Methods

We conducted qualitative case studies of three CFLRP collaboratives. The research was conducted in close collaboration with colleagues, who, at the time of our case selection, had completed 60 interviews with participants in the 10 CFLRP projects funded in 2009 during the first round of grant applications. Information gleaned from our colleagues' transcripts informed our case selection process. Because our broad research goal was to build theory about trust in collaborative natural resource management, we chose cases with a variety of governance structures. For greater detail on case study selection, see Coleman and Stern (in prep).

We employed three primary data collection methods: 25 interviews with project participants, six site visits (two per site), and the collection of archival documents, including meeting notes, websites, and publications. The interviews were conducted in person (n = 10) and over the phone (n = 15). We noted that certain individuals played an important role in trust development between environmental groups and the USFS. We refer to these stakeholders as "boundary spanners." Boundary spanners are individuals that serve as a connection between two constituencies (Williams 2002). In each case study, there were 1-3 individuals who represented an environmental group and who engaged in boundary spanning activities. We conducted follow-up interviews with key members of the environmental groups, including those we identified as boundary spanners. All interviews were recorded and transcribed. During site visits, we recorded observations of both formal and informal interactions between stakeholders to not only observe the dynamics of relationships, but also to identify the roles individuals (and/or their groups) played in the collaboratives.

We followed Eisenhardt (1989) to develop theory about the potential for collaborative planning to lead to increased trust among stakeholders and the differences it might make. We thematically coded all interview transcripts, observation notes, and archival documents using HyperResearch software. This process involved an iterative approach to data analysis in which we looked for recurrent themes and sought to identify patterns and linkages among them. Finally, we compared our findings with relevant literature. For example, we created codes related to historical relationships. We then conducted multiple rounds of coding to look for themes related to trust and relationships. We then analyzed the data for linkages among and between themes. Through this iterative coding and analysis of interview transcripts and notes, we sought to understand what happened when boundary spanning members of environmental groups established trust within the collaborative. How did they influence the collaborative? How did they

influence their home organization? Did their accountabilities change? Did they bring new information back to their home organizations?

Results

Across all of the cases we studied, distrust and disagreement around management was present between the USFS and stakeholder groups that self-identified as environmentalists, such as wilderness advocacy groups, as well as between those environmentalists and stakeholders that self-identified as members of the forest products industry, such as mill owners. Across all three case studies, individuals who self-identified as environmentalists reported coming into the collaboration skeptical about the motivations of both the USFS and members of the forest products industry; they believed that timber harvest, rather than forest health, was the primary goal for both groups. The following sections focus on the stakeholders who identified as environmentalists and how they influenced the collaborative and others outside the collaborative.

Shared Understanding and Trust

Within the projects we studied, participation in the collaborative moved members of environmental groups towards shared understanding and, ultimately, compromise with other groups regarding management. Individuals reported that, after hearing from other interest groups, they were more accepting of USFS actions that were not necessarily in line with the beliefs and positions they held when they first joined the collaborative. Environmental group members described how listening to other collaborative members voice their concerns and points of view increased their awareness about economic and social issues related to forest restoration. Ultimately, listening to and interacting with individuals from diverse perspectives led members of environmental groups to become more willing to compromise and accept actions that met a wide range of interests. One individual described the process this way:

> "I am now more sympathetic to the economic implications for local communities of forest thinning… I appreciate that the necessity for collaboration has brought about a series of compromises that should result in healthier forests."

As the quote above illustrates, it was the process of collaborating that created opportunities for listening and shared understanding. If public participation had taken place through more traditional forms, there may not have been the same opportunity to engage with members of other stakeholder groups and learn about their perspectives. Collaborative planning provided a chance for participants to engage in dialogue with and learn from and about each other, in addition to interacting with USFS staff.

In addition to becoming more sympathetic to the interests of other stakeholder groups, members of environmental groups also developed trust in the USFS and its processes via participation in the collaborative. In particular, trust increased as theUSFS demonstrated through presentations and fieldtrips that they were making evidence-based decisions and that they were skilled at their jobs. In one instance, a USFS silviculturist

put together a presentation to outline the many considerations that went into marking a treatment site. Members of environmental groups reported in interviews that this presentation demonstrated the silviculturist's knowledge and competence regarding forest management. Members of environmental groups also reported that as they learned about the USFS's work and the employees carrying it out, their concerns about negative impact began to decrease. For example, one individual described how a number of stakeholders gained trust for a USFS employee via interacting with her throughout the collaborative process: "her expertise and her commitment to her job is something we've picked up on."

Additionally, by participating in fieldtrips and attending workshops and meetings, stakeholders learned not only what the USFS was doing in terms of restoration work, but also why they were proposing certain treatments and who, in terms of staff members, was carrying out this work. One individual described that evolution of trust this way:

> "At first there was a certain amount of skepticism from some of the [group] members, but those who went on the field trips sponsored by the Forest Service and the [other group] were pleased to be educated in the purpose of the restorations, and subsequently have much more positive attitudes toward the process."

The individual went on to describe how this ultimately led her to be more open to treatments she previously opposed. When she initially joined the collaborative, she did not support harvesting, but as she attended fieldtrips and presentations, she learned more about the various proposed actions and the individuals carrying them out. For example, before joining the collaborative, she had never learned that removing certain trees could be beneficial to the overall health of the forest. By speaking with USFS employees and attending informational sessions, she learned that reducing stocking density of trees could improve forest health and help prevent crown fires. Additionally, as she visited treatment sites and observed the work the USFS was already doing in the area, she came to trust the individuals involved. She eventually came to support a number of treatments, including some harvesting. As members of environmental groups learned that the agency had both sound reasoning behind their actions and employed skilled and competent individuals to do the work, trust increased. This theme emerged consistently across all three case studies.

Boundary Spanning

We additionally found that as trust developed, some stakeholders played an important role in brokering compromise among collaborative members as well as advocating for the collaborative with external parties. In our case studies, these boundary spanners connected their organizations and the collaborative effort. They were able to work towards outcomes that met a wide range of interests. One individual explained:

> "[T]here are few trusted, I wouldn't call them brokers, but there are a few trusted representatives…they're known to be pragmatic and not ideological… So it's not like the environmental person is just trying to push the environmental line hard, and everyone else is still just following along meekly. It's more like they can see

that person is really working consistently in the interest of the group to try to find something that they're supportive of but also that works for the FS and for the other interests at the table."

Boundary spanners also advocated for the work of the collaborative, as well as on behalf of the USFS, with external parties. One individual, who was a member of a wilderness advocacy group, highlighted this through a story she told during an interview. She described how she had an acquaintance who was categorically against harvesting trees. He was in the habit of touring restoration sites and taking photographs of harvested areas he felt should not have been harvested and e-mailing them to USFS employees along with irate comments. The interviewee described how, through many conversations, she attempted to explain the rationale behind these harvests. The interviewee herself had been skeptical of harvests when she joined the collaborative but had then learned about, and ultimately came to support, restoration treatments. She was able to relay her new knowledge and opinions to her acquaintance. At first, the acquaintance resisted her explanations as well as her invitations to attend collaborative meetings and learn more. However, over time, she was able to convince him to meet with USFS employees to voice his concerns. At the time of this writing, the acquaintance is engaging in regular, cordial dialogues with USFS personnel.

These boundary spanners often brought new information back to their organization to educate their constituents as well. In some instances, they influenced and ultimately changed the primary stances of their home organizations. Several interviewees described representative organizations with strict "no cut" policies, i.e. their organizations did not support any tree harvesting. However, as the boundary spanners learned about, and came to agree with the USFS rationale for harvesting some trees for restoration purposes, they brought that information back to their home organizations. Boundary spanners that belonged to smaller, local non-profits described successful efforts to update policies based on new information. For example, one smaller non-profit decided that tree harvesting was acceptable if it improved forest health conditions, and they updated their policy to reflect this more nuanced understanding of harvesting practices. Because the collaborative was the source of new information, the organization's policies may have not been updated if a member had not participated in the collaborative and brought back new information.

Individuals who belonged to larger, national organizations reported bureaucratic and political challenges associated with changing policies. For example, one individual explained how it would require a nation-wide vote to change his organization's no-cut policy. He went on to explain that such a vote was unlikely to happen and unlikely to pass if it were to take place. Because he did not believe organizational change was likely at the national level, he continued to try to build support for the collaborative within his local chapter.

Participation in a collaborative does not guarantee acceptance

Our research revealed that collaborative planning did not necessarily mean that organizations involved in the collaborative would accept the ultimate decision. Many members' primary purpose for participating in the collaborative was to advance their

organization's objectives. Achieving those objectives remained the goal throughout their involvement. One member put it this way when she described the "tools," or strategies (e.g. collaboration, public comments, appeals, objections, or ultimately litigation), her organization selected from when trying to achieve their mission: "[Collaboration] is the first opportunity to engage outside of NEPA. I mean our mission is to see that resources are protected, and we're going try all sorts of tools…" Another interviewee said, "[C]ategorically, being in the collaborative doesn't mean you don't litigate." Thus, although some boundary spanners came to new understandings through participation in the collaborative, others continued to view litigation as an option if participating in the collaborative did not lead to the achievement of their objectives.

Concerns about litigation persist despite collaboration

Our interviews revealed that USFS employees' concerns about litigation persisted even when members of environmental groups were included in collaborative planning. USFS employees described being aware of the competing accountabilities that pulled on members of environmental groups. Although they acknowledged that trust and mutual understanding were indeed built through collaboration, they were also aware that the primary purpose for their participation in the collaborative was to advance environmental objectives. One USFS employee described the trust and relationship building as "tenuous." Another described it this way:

> "So they're trying to be responsive to their own people, and we're trying to follow our rules and trying to find that common ground, and we hope, as we've gone through, that in some cases we've built trust. Hopefully, that trust is that you may not like what we're doing, but we're trying to minimize what we do so that we don't get litigated and try to maintain that trust and not feel like we're going to stab them in the back and do something other than what we said we did, and vice versa with them as well."

The interviewee went on to describe these trusting relationships as ephemeral, stating that sometimes it seems as though it's "solid", and then the next moment it seems as if it's turned to "quicksand." We observed that relationships were perceived as "solid" when dialogue led to shared understanding and general consensus about a planning decision. On the other hand, perception about sinking in "quicksand" came about when general agreement around an issue could not be reached, and concerns grew that environmental groups might object or appeal a decision because their position, or something close to it, was not achieved. For example, one collaborative struggled to reconcile the need to remove snags for forest fire prevention with one environmental group's concerns that doing so would damage pacific fisher (*Martes pennanti*) habitat. A USFS employee described in an interview that she was not confident that the likely decision went as far as the environmentalists wanted with regard to protecting the habitat. She expressed concerns that, even though the environmental group had been involved in collaborative planning, they could still object the decision. A follow-up e-mail with the interviewee revealed that the group did not ultimately take action against the decision.

Discussion

Our case studies highlight the ability of collaborative planning to build mutual understanding and trust. Interviewees in our study suggested that this trust developed from learning that the USFS was following sound, evidence-based processes for making forest management decisions and that competent employees were carrying out the work. Further, we found that members of environmental groups gained new appreciation and understanding other stakeholders' points of view. Our results are similar to work by Lafon et al. (2004), which shows that participation in collaborative efforts may increase knowledge about management issues, positively affect opinions of management professionals, and increase toleration of other stakeholder groups. We contend the trust outcomes in our study would not have been achieved through more traditional public involvement practices, such as public hearings and review and comment periods. These practices do not focus on dialogue between stakeholder groups (Innes and Booher 2004) and as such would likely not have led to shared understanding. Collaborative dialogues led members of environmental groups to consider management options that they previously would have found unacceptable and, subsequently, members of environmental groups advocated for the collaborative among external parties. These findings support Innes and Booher's (2004) assertion that stakeholders will consider new positions if they engage in collaborative efforts that create space for dialogue and the creation of shared understanding.

Our results also illustrate the role of boundary spanning in collaborations between environmental groups and land management agencies. Across our case studies, boundary spanning individuals brought new ideas from the collaborative to those outside the group. We suggest this happens because stakeholders in a collaborative enter each other's reference groups. Reference groups are collections of individuals that people use to measure their own values and actions (Merton 1967). Individuals thus evaluate themselves and form opinions and attitudes based on other individuals who they feel are important to them. We suggest that collaboratives create the opportunity for stakeholders to enter one another's reference group and influence each other's opinions and attitudes.

In our case studies, some boundary spanners brought these new opinions and attitudes back to their home organizations and shifted official policies or stances. We observed this happen with smaller, local organizations, but not with larger, national organizations. Following Hannan and Freeman's (1984) logic on structural inertia, smaller organizations may commonly be more able to nimbly navigate organizational change, whereas larger organizations tend to be slow to adapt and make structural and organizational shifts (Hannan and Freeman 1984). Thus, we suggest that while collaborative planning may indeed lead boundary spanners to consider or even adopt new points of view, the size of their home organization will likely be a factor in their ability to influence that organization's stance and policies, particularly if the boundary spanner is not a position to leverage such change (e.g. if the boundary spanner is not in a leadership position).

Although involving environmental groups in collaborative planning led to trust and willingness to consider USFS decisions, our results highlight that this may not necessarily lead to the acceptance of those decisions. Other scholars have suggested that involving environmental groups in collaborative planning may help to increase the likelihood that they will accept a decision (Cvetkovich and Winter 2003, Lachapelle and

McCool 2012, Schindler 2002). A number of papers have suggested that trust is the mechanism that leads to such acceptance (e.g. Shindler et al. 2009, Vaske et al. 2007). Our findings, however, are more in line with work conducted by Parkins and McFarlane (2015) which suggests that trust does not always predict satisfaction with agency management. They write, "… we are cautious about overdrawing a connection between social trust and satisfaction when it comes to judging public perceptions of resource management activities" (Parkins and McFarlane 2015, pg.149).

The extent to which CFLRP projects, like our case studies, are litigated by participating members remains to be seen. While we did not observe litigation in our cases, multiple stakeholders stated that it remained a possibility if the collaboratives failed to achieve results in line with their goals. Shultz et al. (2012, pg. 389) predict there may indeed be "litigation from groups that were partners in promoting individual CFLRP projects." Agency personnel in our study also continued to be mindful of the risk of litigation, even though they were actively collaborating and building trust with potential litigants. Given that concerns about litigation persisted in our case studies, we suggest that USFS employees' decision-making will continue to be influenced by fear of litigation even when environmental groups are actively involved in collaborative planning efforts.

Conclusion

Results from our study highlight the promise and limitations of collaborative planning. Within our cases, collaboration led to shared understanding and trust development. Members of environmental groups developed trust within the collaborative, considered new viewpoints and previously unacceptable management options, and then advocated for the work of the collaborative among external parties. These outcomes would likely not have been achieved through traditional public involvement methods, such as public hearings and comment periods, because those methods would not have facilitated the same level of interaction between diverse stakeholder groups.

Our cases also demonstrate the value of collaboration for engendering compromise through relationship development. The collaboratives we studied created opportunities for stakeholders to learn about each other's values and skills. This paved the way for individuals to consider new ideas rather than maintaining hardline positions. In many cases, stakeholders in our cases experienced evolution in their understanding of forest restoration and management. Thus, compromise in our cases did not simply involve tit-for-tat negotiation, but rather grew out of the creation of shared understanding.

Despite the fact that environmentalists developed trust and understanding for other stakeholders and the USFS, they also held true to the objectives of their organization. Members of environmental groups stated during interviews that participating in the collaborative did not necessarily mean they would not litigate. Yet, no litigation has emerged within these cases. USFS employees reported awareness that the trust between their agency and these groups might be tenuous. While collaboration produced the benefits of trust and shared understanding, its effects on public support for implementation and litigation are yet unknown.

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Chapter 5

Conclusion

The goal of this work was to understand how trust supports collaborative natural resource management. Chapters 2 and 3 explored how that support differs by type of trust. Chapter 2 discussed how trust developed and functioned during the initiation of each collaborative. Chapter 3 dealt with the roles of facilitators and coordinators in engendering and supporting trust development. Chapter 4 examined the overarching concept of trust without breaking it into different dimension and addressed the development and function of trust between environmental groups and the USFS. When taken as a whole, this research begins to illuminate how trust develops and functions within landscape level collaboratives. Specifically, Chapters 2 and 3 details the importance of the three actionable forms (affinitive, rational, and procedural). Results from those two chapters are synthesized and organized in Table 1 and described below.

Table 1: Development and Function of the Three Actionable Forms of Trust

Type of Trust	Antecedent	Source	Function
Affinitive	Social connectedness between collaborative members.	Entities may have social trust at the start of the collaborative (Chapter 2), may develop it through working together as part of collaborative process (Chapter 2), or it might be engendered by a facilitator through strategic activities like interest-based negotiation (Chapter 3).	Mostly strongly supports initial assessments in convening collaboratives (Chapter 2).
Rational	Collaborative produces deliverables and collaborative members are perceived to be competent.	Entities may have rational trust at the start of the collaborative (Chapter 2), may develop it through working together as part of collaborative process (Chapter 2), or its development might be supported by a facilitator or	Mostly strongly supports the recruitment and retention of collaborative members (Chapter 2).

		coordinator (Chapter 3).	
Procedural	Fair and transparent rules and procedures for governance and decision-making	Formal, written charters, rules of engagement, and decision-making protocols (Chapter 2). Facilitators can support the development of procedural trust by leading collaborative groups in the drafting of such elements and by enforcing them (Chapter 3).	Mostly strongly supports the recruitment and retention of collaborative members and creates a foundation for further development of rational and affinitive trust (Chapter 2).

Results from this work demonstrate that affinitive trust is critical for catalyzing the convening of collaboratives (Chapter 2). In each of the four case studies, at least one affinitive tie between stakeholder groups was necessary to spark the collaborative process. Across our cases, affinitive trust between stakeholders allowed collaborative conveners to engage in conversations and brainstorming about the potential to collaborate. I posit this represents a risk for those conveners, particularly if they were members of conflicting stakeholder groups and may have risked damaging their reputation by engaging with each other. Thus, I propose that affinitive trust allows stakeholders to go out on the proverbial limb and take a risk on collaboration. Affinitive trust is derived from social antecedents (Braithwaite 1998; Cvetkovich and Winter 2003; Stern 2008). As such, affinitive trust may predate the collaborative if entities have a history of interaction and have developed social connectedness. This was the case among conveners in each of the four collaboratives. Affinitive trust may also develop through the collaborative process, as individuals work together and develop affinities for each other (Chapter 2). Finally, facilitators may be able to engender affinitive trust between stakeholders by using activities intentionally designed to build relationships, such as interest-based negotiation (Chapter 3).

Rational trust served a number of important functions within the collaboratives I studied. It was crucial for the recruitment of collaborative members as stakeholders needed to trust that their participation in the effort would results in desirable outcomes (Chapter 2). It was also important for the retention of collaborative members; collaborative members who were disappointed with the lack of deliverables reported that they questioned whether or not participation in the collaborative continued to be a wise use of their time and energy (Chapter 2). In my four case studies, rational trust developed when individuals demonstrated that they were competent at their jobs and when the collaboratives succeeded in producing deliverables (Chapters 2 and 3). Similar to affinitive trust, rational trust between collaborative members may predate the collaborative if members have a history of working together or it may develop through

the collaborative process (Chapter 2). Its development may also be supported by facilitators or coordinators who increase positive outcomes by keeping the work on track, reminding members of upcoming due dates, etc. (Chapter 3).

Across the four case studies, procedural trust functioned similarly to rational trust in that it was important for both the recruitment and retention of collaborative members (Chapter 2). It additionally set the stage for further development of rational and affinitive trust by creating the space for collaborative members to engage despite interpersonal distrust between them (Chapter 2). Procedural trust is created when there are rules or regulations governing the way the stakeholders interact such that their interests are protected. It is grounded in the existence of positive control systems. Control systems refer to rules, contracts, or other monitoring mechanisms that guide behavior (Mayer et al. 1995). These control systems may come in the form of documented decision-making procedures or memoranda of agreement, which serve to reduce the risk assumed by the trustor (Schoorman et al. 2007). Positive control systems create procedural trust by protecting stakeholders against untrustworthy behavior. With this type of trust, trust is placed in the control system, i.e. the rules and procedures. Results from Chapters 2 and 3 suggest that procedural trust can be engendered through the establishment and enforcement of fair and transparent rules that outline how stakeholders will engage, make decisions, communicate, and behave when working together. Existing work demonstrates that, to engender procedural trust, these rules must be perceived as fair and transparent (Tyler 1990), and should be developed jointly by all stakeholders (Schoorman et al. 2007). Facilitators may support the development of procedural trust by leading the development of fair and transparent rules and also by enforcing those rules (Chapter 3).

While affinitive trust seems to be most critical for getting a collaborative off the ground, my results suggest that procedural and rational trust are also necessary for long-term collaboration. I posit that stakeholders need to feel like it's worth their time to engage in collaboratives, especially because they may have other options for achieving their desired outcomes (e.g. objections, appeals, litigation). If the collaborative fails to help them achieve those outcomes, their energy may be spent elsewhere. The importance of likelihood of positive outcomes is exemplified by a quote from Chapter 1:

> "Maybe you enjoy some similar interest; you both have a family and similar background. That's fine and dandy. And you can trust people and go play softball together, whatever you want to do. But what are the results that we're achieving? That's the bigger question."

Similarly, a quote from Chapter 3 highlights that outcomes are the primary goal and that stakeholders remain open other means of accomplishing those outcomes if collaboration proves to be an inefficient use of their time:

> "[Collaboration] is the first opportunity to engage outside of NEPA. I mean our mission is to see that resources are protected and we're going to try all sorts of tools, as long as we have the capacity, we're going try a variety of tools, and you know, in a retrospective way, we'll look and see that tool, was it efficient? Or was it not efficient?"

In other words, all three types of actionable trust contribute to the successful of collaborative efforts. This observation supports Stern and Baird (2015) ideas about the ecology of trust: the presence of multiple types of trust creates a more resilient system. In the cases I studied, the three forms of actionable trust played different, sometimes overlapping roles. I posit that having strong forms of all three types creates the redundancy necessary to buffer against potential trust failures and thus maintain resilient and successful collaboratives.

Given these findings, the USFS, as well as other agencies involved in collaborative natural resource management, may be well served to take specific steps to engender and preserve all three forms of actionable trust. For example, presentations by agency staff may be an important opportunity to demonstrate professional competence. Similarly, agencies may be able to engender procedural trust by planning field days designed to clarify decision-making and other processes. Finally, employing facilitators and/or coordinators may help to aid the development of procedural and rational trust. Facilitators may also be able to support affinitive trust development. Results from this dissertation suggest that these actions, and trust subsequently created by them, are important for supporting collaborative natural resource management.

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Appendix A
Internal Review Board Approval

VirginiaTech

Office of Research Compliance
Institutational Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
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MEMORANDUM

DATE: July 24, 2013

TO: Marc J Stern, Kimberly Jane Coleman

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)

PROTOCOL TITLE: Trust Theory and its Application to Landscape Level Collaboration

IRB NUMBER: 13-654

Effective July 24, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	**Expedited, under 45 CFR 46.110 category(ies) 6,7**
Protocol Approval Date:	**July 24, 2013**
Protocol Expiration Date:	**July 23, 2014**
Continuing Review Due Date*:	**July 9, 2014**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Appendix B

Example of Recruitment E-mail

The following is an example of an e-mail that was sent to potential interviewees:

Hello,

My name is Kimberly Coleman. I am a Ph.D. student at Virginia Tech and I am conducting my dissertation on CFLRP projects. I'd like to interview you regarding your involvement with [insert name of CFLRP]. The goal of the study is to learn about the challenges associated with collaboration in landscape level natural resource management. I'll be interviewing as many people as I'm able within each of four CFLRPs.
The interview will last between 1 and 2 hours and will focus on your experience with the project and your thoughts on the collaborative process. We could either talk by phone or during my upcoming trip to your area (insert travel dates.) If you'd like more information before you commit to an interview, I'm happy to answer any questions you have. Otherwise, please let me know a time that would be convenient for you to chat.

Many thanks,
Kimberly Coleman

Appendix C
Verbal Consent Script

Verbal consent script:

"I'd like to interview you regarding your involved with [insert name of CFLRP]. I am conducting this interview to collect data as part of my Ph.D. research project at Virginia Tech. The goal of the study is to learn about the challenges associated with collaboration in landscape level natural resource management. I'll be interviewing as many people as I'm able within each of for CFLRPs. All of the interviews will be confidential. I won't be associated your name with anything you tell me at any point. I'd like to record the interview if that's OK with you. This will allow to me to focus more on our conversation than on taking notes. It will also allow me to share the transcript of our conversation with other members of the research, who are my advisor at Virginia Tech, Marc Stern, and a professor and graduate student at Florida State University, Will Butler and Ashley Monroe. No one else will have access to the transcripts.

This research will eventually produce my PhD dissertation and also allow me to publish the findings in scholarly journals and elsewhere.

Your participation is voluntary and you can withdraw from the study at any time. Additionally, you can choose not to answer any question that makes you feel uncomfortable. If you have any questions regarding the interview procedure or the study, please do not hesitate to ask.

Are you OK with being interviewed? Is it alright if I record our conservation?

Appendix D
List of Interview Questions

Interview Questions
Kimberly Coleman

Below are examples of the types of questions I asked. Although the interviews were open-ended, this list covers the entire breadth of my interviews.

1. How did you come to be involved in this project?

2. Are you involved for personal or professional reasons?

3. (If involved professionally) Can you tell me about your professional position and duties?

4. (If involved personally) Can you tell me why you first decided to join this collaborative?

5. What role do you play in the collaborative? What duties/responsibilities do you have? Do you represent a larger group or organization?

6. Can you explain the goals of the collaborative to me? In general, do you believe the collaborative is achieving them?

7. What has the collaborative accomplished? What do they expect will be accomplished? What about goals or tasks that won't be accomplished?

8. What are your goals for participating? Are you achieving them? Do you think you will? Why (not)?

9. In general, how has participating in the collaborative gone for you?

10. How would you describe the overall culture of the collaborative? Would you say it's a culture of cooperation? Of competition? In your opinion, what has created that culture?

11. Can you explain the leadership structure of this collaborative to me? Who participates in decision-making? How has it been working out? If you could change it, would you? How would you change it?

12. (If leadership body makes decisions) Would you say that you've agreed with most of the leaders' decisions in this project? Why or why not?

13. Can you think of any examples when you disagreed with the leaders' decisions? Why or why not?

14. So I'm sure people make recommendations or put forth their own ideas within the group. How does this typically happen? Can you think of a time you agreed with one of these ideas? How about a time you disagreed?

15. Are there people who are considered "experts" within the group? Would you say that most "experts" make good, solid recommendations? Can you provide a few examples?

16. Can you tell me whom you've worked most closely with on this project?

17. Did you know any of those people before the collaborative began? Can you tell me a bit about those relationships (i.e. how did you first get to know those people; what is your relationship with them like)?

18. How has it been working with those individuals on this collaborative? Have relationships changed at all?

19. How about organizations – which ones have you had the most interactions with? Can you tell me a bit about how you've interacted with those organizations? Would you say you are working towards the same goals or do you have different goals?

20. If you weren't involved with this collaborative, do you think the positions you stand for would still be represented? Why or why not? Who would represent them? Who might represent different or opposing positions?

21. Does this collaborative have any established rules or procedures (e.g. MOA/MOU, formal decision-making process?)

22. How well do those rules/procedures work? Would you say that they are fair? Would you say that they have been clearly communicated to everyone in the collaborative?

23. What purpose do you think these rules/procedures serve? Which, if any, are helpful? Which, if any, are hindrances? Why?

24. Can you think of any examples of a time when a rule or procedures protected you in some way (e.g. required someone to follow through on a commitment or kept someone from doing a specific action that you felt would negatively affect)?

25. Can you think about a time when procedures have been broken?

26. Are there any rules/procedures you would like to see the collaborative adopt? Why?

27. Has the collaborative used any maps or models to help with decision-making? What is your opinion about them and their utility? Have they been useful for the collaborative?

28. Are there any groups or individuals that you've known or worked with for a long time? Can you tell me a little about those relationships?

29. Can you think any instances when someone or some organization did not follow through on a commitment? How did that affect your opinion of them?

30. Can you think of any examples of relationships that have changed significantly over the course of this collaborative (e.g. you used to have opposing views and now you've found some common ground or vice versa)? How have they changed? Why do you think that change came about?

31. Can you tell a story about a time when you disagreed with either an individual or an organization involved in the collaborative? How was your position different from that individual or organization's position? Why did you disagree with them? Did you let your opinion be known? What was the outcome of this situation?

32. Can you think of an instance when you agreed with a position or recommendation made by an individual who represented a group or organization that you were generally at odds with? How about the reverse situation (Kim will provide more clarification if needed)? How did you handle this situation?

33. (If the individual represents a larger group or organization) Can you think of a time when you agreed with a member of the collaborative but you didn't feel that your constituents would also agree? How did you handle that?

34. Overall, how has it been working with the forest service? Have you experienced any issues related to NEPA compliance? How about FACA compliance? How has that impacted the way collaborative members work together?

35. This is a really big project with lots of people and lots of moving parts. How is that working? Do you think that the size of the project has made it more or less difficult to comply with NEPA and FACA? Do you have any ideas about make compliance easier or smoother?

36. Are there certain individuals that you really trust? Why do you trust them? What do you trust them to do?

37. Are there certain individuals that you really distrust? Why do you distrust them?

38. How about organizations? Any that you really trust? Any that you really distrust? Why?

39. Can you think of examples of individuals or organizations that you would trust for some purposes but not others?

40. Are there individuals or organizations that have lost or gained your trust throughout this collaborative? What happened?

41. Overall, do you feel that your work with the collaborative is fulfilling?

42. Do you feel that the collaborative is making a positive social and/or ecological impact?

43. What would you suggest (if anything) to improve the collaborative? How could it function better?

44. Is there anything you want to tell me about your involvement with this collaborative?