Investigating the Mechanisms and Drivers of Change in the Governance of National Forests: Agents and Action in the US Forest Service

A Dissertation

Presented in Partial Fulfillment of the Requirements for the

Degree of Doctor of Philosophy

with a

Major in Natural Resources

in the

College of Graduate Studies

University of Idaho

by

Chelsea S. Pennick

Approved by:

Major Professor: Dennis R. Becker, PhD

Committee Members: Jo Ellen Force, Ph.D.; Michael Overton, Ph.D.; Mindy Crandall, Ph.D.

Department Administrator: Jaap Vos, PhD

May 2023

Abstract

Collaborative governance has increased in popularity and relevance in recent decades and the term has been used to refer to a wide variety of arrangements involving state and non-state actors. As governments recognize the need to work across administrative, sectoral and jurisdictional boundaries and communities continue to demand greater involvement and influence over public actions, there is a need to understand how collaborative forms of governance are shaping the performance and practice of public administration. These questions are particularly relevant given that collaborative governance has been shown to take place within a legacy of laws and policies that hinder or are in tension with collaborative principles. There is a need to ask: How do public managers and staff shape how decisions are made and public actions are carried out? How do these changes in governance arrangements influence management outcomes? Furthermore, there is a need to elaborate on the opportunity for change in such governance models to develop a more comprehensive theory of the drivers and mechanisms of institutional change within formal organizations.

This dissertation addresses these questions by focusing on the USDA Forest Service, a federal land management agency responsible for managing 193 million acres of public land. The Forest Service provides a unique lens for understanding institutional change in part because it was founded on Progressive Era reform principles of apolitical administration of policies carried out by a cadre of professional foresters. By many accounts, the Forest Service has struggled to adapt as the goods and services desired by society from public lands have evolved to include a broader suite of values. In this way, the challenges faced by the Forest Service and the mechanisms and drivers of change provide a window into the tensions between traditional bureaucratic principles and those principles espoused by collaborative governance which derive from participatory and deliberative democracy.

Using a mixed methods approach, this dissertation examines the impact of collaborative public participation processes on national forest administration, governance and management outcomes in Idaho, a state located in the northern Rockies region of the United States and outside the political subsystem of the Northwest Forest Plan. In doing so, I elaborate state-centered collaborative governance as a distinct model in which bureaucratic actors play an outsized role. In Chapter 2, my co-author Dennis Becker and I investigate the relationship between mode of governance and performance outcomes using project-level administrative data from national forests in Idaho. This chapter considers how collaborative planning efforts in Idaho are contributing to the ability of the Forest Service to meet the challenges of our time: to increase the pace and scale of management in the face of interacting environmental and social threats such as climate change and wildfire risk. The

results suggest that collaboratively planned projects are not only larger, but more complex, than their non-collaborative counterparts, and that these outcomes may be achieved with a greater degree of efficiency. However, the data also revealed that collaborative projects were more likely to be appealed or litigated, which can cause expensive delays.

In chapter 3, I explore how bureaucratic actors mediate the performance outcomes documented in chapter 2. Through in-depth interviews with Forest Service employees engaged in collaborative planning efforts, I explore the practical day-to-day actions of managers and staff that operate to define the opportunities for meaningful input and influence by creating and promoting new practices and norms. Of note, the interviews highlight the critical work of staff who operate as bridging agents, providing continuity during supervisor turnover and moderating the impact of differences in commitment to collaborative principles. In sum, the interviews elaborate on the many ways that Forest Service employees perform institutional work in the absence of incentives or rewards, thus enabling change in management outcomes. These results highlight the important roles of discretion and institutional work as mechanisms of governance change within the Forest Service and have implications for understanding governance change, more broadly.

Chapter 4 builds on the previous chapter by exploring the motivational foundations of Forest Service employees' work to build and maintain new collaborative institutions. Drawing on the narratives analyzed in Chapter 3, this chapter explores the values that motivate front-line worker's practical actions and how these values act as an important driver of institutional change, particularly in the absence of organizational incentives or rewards. The results also reveal the presence of value conflicts between personal values and organizational values and between collaborative policy goals and traditional bureaucratic values and indicate that organizational commitment to collaboration as an alternative mode of governance may be contingent on its ability to meet organizational instrumental values tied to performance measures and outputs.

Taken together, these chapters explore the mechanisms and drivers of change in the governance of national forests in a region with distinct institutional and resource legacies and community characteristics. The studies reveal the variety of ways in which front line workers pursue change through their discretionary decision making and practical actions and the values that motivate this work. They also reveal the values that motivate implementation of policies and authorities that are optional, rather than mandatory. In doing so, this work underlines the important role that value orientations play in motivating and shaping the discretionary decisions of front-line workers.

Acknowledgments

First, I want to acknowledge the members of my committee. Dennis, for his unwavering moral support, even when life threw him a curve ball and turned him into an administrator; Mindy for being a friend and advisor as I navigated the often-unfamiliar path; Michael, whose seminar in local government completely changed the trajectory of my dissertation and possibly my career; and Jo Ellen for being a model and trailblazer for women in the field of natural resources.

I also want to acknowledge the ways in which I have benefited from the network of smart and generous colleagues that I have had the pleasure to meet and work with during my career leading up to this point. I am indebted to all of them for the variety of ways in which they supported me indirectly, informally and unknowingly: these include the community that is the Rural Voices for Conservation Coalition which has provided a deep well of inspiration as well as some dear friendships; the other PhD students in the Department of Natural Resources and Society with whom I had the pleasure to get to know during my very brief residency in Moscow: Katie Wollstein, Cat Edgeley and Amanda Stasiewicz, who filled the invaluable role of informal lab-mates even after they moved on to full-time jobs; my colleague Erik Berg who continues to assure me that life will be different when I have a PhD; and my supervisor at the University of Montana's Bureau of Business and Economic Research for always being willing to accommodate my need for flexibility while balancing parenthood, work and school and for offering my job back when my funding ran out.

Dedication

I want to first acknowledge my gratitude for my co-parent, Lucas, and his wife Caitlyn, for taking on the majority of parenting responsibilities during my 9-month residency in Moscow. Without their willingness, this would not have been possible. I also want to thank my sister and brother-in-law for letting my daughter and I stay with them in their small house so we would have a welcoming and familiar place to land when I made the every-other-weekend trek back to Missoula. Last, but certainly not least, I want to thank my partner, Mark, who has encouraged me through the last 2.5 years—likely the hardest years--of my program. He has made sure that I remember to laugh and enjoy life when I can.

This dissertation represents a labor of love and determination. It is dedicated to honor the pursuit of my own dreams and my daughter's future in the face of many odds, not least of which are being a single parent and a first-generation college student. It is my hope that this dissertation will not only provide a pathway to economic mobility for myself and my daughter, but also provide an example of the value of persistence and finding solutions when it appears there are none. And most importantly, the importance of not being afraid to do hard things.

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Statement of Contribution

Chapter 1: Introduction

Environmental governance scholarship has long recognized the importance of institutions like the state and capitalist markets for understanding environmental problems. Their importance derives in large part from their relative stability over time, and the often-invisible ways in which they shape individual and organizational behavior. Organizations and the institutions that shape them are most often characterized by their enduring qualities and resistance to change. And yet, institutions and organizations do change, in response to both exogenous shocks and endogenous forces (Scott 2014). The increasing complexity of social and environmental problems facing societies at all scales represent salient exogenous forces (Emerson and Nabatchi 2015a; Rittel and Webber 1973; Kettl 2015) which have led to a transition fromtop-down governing to shared governance to meet the demands of such problems (Kettl 2015). But organizational change can also come from internal sources as organizational actors interact within and operate to shape institutions in the process of implementing policies (Meier and O'Toole 2006).

The move to new modes of shared governance does not, however, remove government as a critical actor (Ansell, Sorenson and Torfing 2021).Rather, it requires an expansion and reconceptualization of the roles of and relationship between civil society and government. Civil society actors play an increasingly important role in program design and implementation through collaborative and network governance arrangements, while government actors are increasingly expected to demonstrate not only efficiency and effectiveness, but also representativeness, responsiveness and accountability to the public and public values (Bryson et al. 2014; Tipple and Wellman 1991). It is not clear how these new expectations are being translated into practice.

This dissertation attempts to bring public administration and management theories of bureaucratic behavior back into the field of natural resources management and governance. In doing so, this research sheds new light on the governance transition in national forest administration by situating and connecting it to a set of emerging frameworks for understanding and tracking the paradigm shift occurring within the administrative state more broadly. What is being called New Public Governance represents a shift in the field's understanding of the complex challenges facing public administration theory and practice.

Perhaps more importantly, this research moves the focus of analysis from institutions to the dynamic *interaction* of individuals and institutional structures. I draw on trends in organizational studies, namely new institutionalism, that has served to breathe life back into the maligned bureaucrat by asserting the agency of individuals to shape and transform the institutions within which they operate.

To accomplish this objective, I employed a mixed methods approach. In 2018, I embarked on a novel study to determine whether the impact of collaborative planning processes could be evidenced in Forest Service management outcomes. Using project-level administrative data from the Forest Service's Project, Appeals and Litigation System (PALS) and Forest Activities Tracking System (FACTS), I sought to establish whether normative claims about collaborative planning's positive impacts on outcomes could be substantiated using data from collaborative projects implemented on national forests in Idaho as compared to traditional planning efforts.

Finding preliminary evidence from Idaho that collaborative planning efforts did, indeed, correlate with increases in the pace, scale and complexity of projects, I next sought to investigate the mechanisms and drivers of change that could account for these observed changes. My approach to the second phase of research was informed by a repeated refrain from collaborative representatives across the state who, when presented with the above findings, replied that much of their success derived from the presence of Forest Service decision-makers that were willing to innovate and try new things and who were not afraid to be the subject of "column inches" in the local paper. The frequency with which I heard these comments made me wonder, what in fact is going on inside the "black box" of the Forest Service that may be contributing to these outcomes? In what ways are Forest Service employees changing the way they do business? And finally, what motivates Forest Service employees to engage in new practices or processes in the face of potential reputational or professional risks?

To answer these questions, I embarked on a qualitative study to investigate the "institutional work" of Forest Service employees through semi-structured interviews of employees involved in collaborative planning efforts. This phase sought to draw out the ways in which these front-line employees were subtly or drastically modifying their work routines and norms in order to align with a new collaborative planning paradigm, and the sources of their motivation to engage in this work.

This study draws heavily on theories of street-level bureaucracy and the modern state. It uses the archetype of the street-level bureaucrat because it continues to have relevance in the fields of public administration and management. I use these terms with the awareness that most government workers, including my research subjects, would not use that term to describe themselves. I also use the terms front-line or field-level workers as synonymous with street-level bureaucrats. Finally, I distinguish line officers (e.g., District Rangers, Forest Supervisors, etc.) from staff (e.g. Specialists, Staff Officers, Program Managers, etc.) by using the term front-line managers and front-line staff. This distinction is important in the context of the Forest Service because of its unique hierarchical structure as a "line and staff" organization characterized by a direct chain of command from the Chief of the Forest Service to field level District Rangers, which sought to insulate decision-makers from the

influence of political elites or local interests. Under this structure, staff, regardless of level, do not have authority over line officers. Distinguishing between the two provides a useful mechanism for differentiating authority from influence in the context of organizational change.

Dissertation Context and Rationale

This dissertation is the product of over a decade spent as a funder, observer and practitioner of collaborative natural resources management. It is also the result of over four decades spent as a friend, employee, admirer and critic of the Forest Service, which shaped my childhood in enumerable ways, not least of which through my father who spent his career as a technician-level forester. I am not, therefore, a neutral observer of either the Forest Service nor its policies and practices. Just like my research subjects are not neutral, apolitical technocrats, but people operating within a structured environment who hold a range of beliefs and values.

This dissertation, then, was borne out of a general unease and dissatisfaction with existing academic work on public lands governance, feeling that it did not reflect or sufficiently abstract my lived experiences engaging with Forest Service staff in collaborative settings. My personal experiences and academic work on procurement contracting for local benefit, for example, belied a system where formal rules defined much of the decision space, but also where discretion existed to utilize new authorities and engage in new practices. Yet, my experiences revealed that the existence of new policies and authorities was not sufficient to ensure their use, belying the presence of countervailing organizational and institutional pressures. Even still, I recognized the humanity and agency of Forest Service employees and their desire to do what they felt was "right" and "good" in a constrained environment.

Second, the success of the Northwest Forest Plan, including the Forest Ecosystem Management Assessment Team, Northwest Economic Adjustment Initiative and efforts to better coordinate natural resource and economic development agencies at all levels created a political subsystem that has led to a rich body of social science research on community dynamics in the Northwest Forest Plan area. However, the corollary, the Interior Columbia Basin Ecosystem Management Project and its perceived failure (Moseley and Winkel 2014) have created an equally large void in our understandings of communities and community-forest-economy dynamics in the dry forested regions of the northern Rockies. It is my hope that the studies included here begin to fill this void.

Finally, this dissertation seeks to challenge the hegemonic narrative of an agency unable or unwilling to change or adapt in the face of new societal demands and expectations. Studies of collaborative policy implementation within the Forest Service seemed to all circle around the formal and informal

institutional barriers to change, reducing Forest Service employees to a rule-following archetypal monolith. This dissertation, then, is an attempt to give credit where credit is due; to make individuals the subject of my academic curiosity and research and acknowledge and document the often invisible, but no less transformational effect of individual Forest Service employee actions and efforts to bend the arc of a large organization.

The genesis of this dissertation topic began as a set of conversations between the Policy Analysis Group at the University of Idaho and the Idaho Forest Restoration Partnership about the need to better understand and quantify the value of collaborative planning on national forests in terms of achieving the goals of increasing the pace and scale of restoration. I was immediately interested in this question based on my own experiences with collaborative groups and my analytical background. And, much to my surprise, this led to a fascination with bureaucratic organizations and bureaucratic behavior as seen through institutional theory.

Key Terms and Concepts

One of the most complex elements of this study was the need to build a theoretical framework for distinguishing between government as actor, institution and organization, and how the concepts interact as factors that contribute to change in the context of national forest governance. Thinking about government at each of these levels also enables observers to see how changes at one level connect to change at other levels (see Table 1.1 for definitions of key terms and concepts).

Key Terms

The Forest Service is a federal agency in the executive branch of the United States' three-branch system of government. Executive branch agencies are responsible for the execution and administration of government programs, as defined by Congress and the President. Within the natural resources field, the Forest Service is generally referred to using the shorthand "agency", as in "a department or body providing a specific service for a government or similar organization" (Oxford Languages, 2023). The use of this shorthand term, while convenient and desirable from a reader's standpoint, creates challenges when also attempting to address the concept of agency as a sociological term referring to "an actor's capacity to act in a given environment". Therefore, the term 'agency' will not be used to refer to the Forest Service.

Within the public administration and organizational studies literatures, organizations such as the Forest Service have been called administrative organizations, bureaucratic organizations, hierarchical bureaucracies, public organizations, government organizations or more generally 'the state' or 'administrative state'. In an era when government is no longer the sole purveyor of public goods and

services, the choice of terminology is not just semantics. The proliferation of terms reveals that administrative organizations can be bureaucratic or not, bureaucratic organizations may or may not be hierarchical, and any organization may be public or not. Suffice it to say, the Forest Service is all of these, it represents the administrative arm of the state, thus also making it a bureaucratic and public organization, which is structured as a hierarchy. For the purposes of clarity, I will use the terms organization and bureaucracy interchangeably.

Table 1-1 Definitions of key terms in this dissertation.

Term/Concept	Definition
Actors	An individual or organization
Agency	The capacity of an actor to act in a given environment to produce an effect.
Agent	An individual engaging with the social structure.
Decision premise	The collection of facts (or suppositions of fact), values, side conditions, and constraints that are inputs into the making of a decision.
Front-line workers	Those public administrators and managers that implement policy "on the ground"
Institution	Norms and expectations that arise from patterned interactions among social actors; they form the environment in which organizations operate (Bouma 1998)
Institutional work	"The practical actions of individuals and organizations through which institutions are created, maintained and disrupted" (Lawrence, Suddaby and Leca 2009, 1)
Organization	Patterned communications and relations among a group of actors arranged in positions and roles (Simon 1946; Bouma 1998)
Street-level bureacracy	Administrative organizations in which workers 1) have considerable discretion in the execution of their jobs, and 2) interact with the public on a regular basis (Lipsky 1980)
Value orientation	A pattern of basic beliefs (Stern 2018)

Background

National Forest Administration and Governance

The USDA Forest Service (Forest Service) is responsible for managing 193 million acres of public land. Because these lands are distributed across the United States and among 154 national forest units and more than 600 ranger districts (USDA Forest Service n.d.), by necessity the Forest Service is a highly decentralized administrative organization. In order to ensure compliance and uniformity among its early delegates, or Forest Rangers, the agency was designed as a "line and staff" organization with a clear chain of command delegating decision-making authority from the Chief of the Forest Service in Washington, DC to "line officers" at each of three hierarchical levels below:

Regional Foresters who oversee each of 9 regions; Forest Supervisors who oversee each of the National Forests within each Region, and District Rangers who oversee each of the Ranger Districts within each National Forest. At each level, these line officers oversee a range of professional, technical and clerical staff.

This progressive-era design encouraged public service, decentralization, multiple-use and nonpolitical management (Bullis and Tompkins 1989; Sabatier et al. 1995). A key mechanism used to curb the destructive influence of political interests within regions was the selection and indoctrination of a cadre of professionally trained foresters and the frequent reassignment of duty stations (Kaufman 2006). In the 1960s, a half-century after the Forest Service was created, its line officers were the subject of a seminal study in administrative behavior that described an organization still able to achieve a high degree of compliance with formal direction and rules, most prominently through the existence of what Kaufman called "pre-formed decisions" that were reinforced through professional norms (Kaufman 2006). Perhaps through premonition, or mere coincidence, Kaufman's cautionary conclusion that the Forest Service's strength might become its greatest weakness proved true as the agency's narrow mission to maximize timber production began to clash with the demand for preservation and recreation (Kaufman 1996).

Efforts to legislate change during the 'environmental decade' (Coglianese 2001) through such seminal policies as the National Environmental Policy Act of 1969 and National Forest Management Act of 1976 forced the agency to broaden the diversity of disciplines represented in land management and project-level planning, and institute a process for notifying and gathering input from the public (Tipple and Wellman 1991). Subsequent efforts within the Forest Service focused on increasing the representation of women and racial minorities as a means for enacting institutional change from the inside, ensuring that the actions and decisions of the agency reflected the values of a broader public. However, Kaufman's cautionary message continued to cast its shadow over the agency as conflict over management of national forests reached a fever pitch across the West during the 1980s and 90s (McCarthy 2005).

The post-1990s era documented an agency grappling with changes in the gender and racial diversity and representation of employees within the agency as well as changes in the organization's mission and management paradigm resulting from the multiple use mandate in NFMA and the transition to ecosystem management (Brown and Harris 2000), raising questions about whether the organization could overcome the dominance of professional expertise and pursue outcomes that better reflected public preferences.

The plethora of organizational studies of the Forest Service during this period expressed a common theoretical framework based on economic rationality and theories of revealed preference. Following the tradition of McFadden and others, organizations, like individuals, were assumed to be rational actors that follow a set of decision rules, which were revealed through the underlying trade-offs in the allocations of public resources (McFadden 1975, 1976). In the case of the Forest Service, scholars looked for observed changes in outcomes related to timber production versus non-commodity resources (Farnham et al. 1995; Farnham and Mohai 1995; Sabatier et al. 1995) and budget requests (Farnham 1995). The dominant view among scholars of this era was that administrative discretion was to blame for policy implementation failures as line officers "shirked" or "sabotaged" the intentions of their superiors and elected representatives.

A second group of scholars took a different approach, attempting to identify the underlying drivers and mechanisms of change. These studies centered around two concepts: values and beliefs and structural change within the organization. Scholars, namely natural resources sociologists like Brown, Harris and Kennedy, took interest in the role of values, attitudes and beliefs as antecedents to changing the dominant resource management paradigm (Brown and Harris 1991, 1992; Cramer et al. 1993). The mechanism through which such change was accomplished focused on the diversification of the workforce through affirmative action and other policies that increased the representation of a wider range of professions as well as women and minorities (Brown and Harris 1991; Kennedy 1991). A related stream of research concerned the impact and effectiveness of legal challenges precipitated by activist organizations in changing Forest Service management priorities (Jones and Taylor 1995). While providing some optimism, the authors leave us with the question of whether these influences would be sufficient to overcome the agency's legacy of voluntary compliance and disaggregated control among different levels of the organization, and enable institutional and organizational-level change (Bullis and Tompkins 1989; Chojnacky 2012).

The Rise of Collaborative Governance

The paradigm shift from ecosystem management to "social forestry" (Winkel 2014) raises many of the same questions about the drivers and mechanisms of change. The traditional "notice and comment" public involvement methods required by the National Environmental Policy Act and National Forest Management Act are based on a normative theory of change in which the public, in particular those most effected by a federal action, can help define the trade-offs that are socially acceptable (Ulibarri et al. 2019). However, these traditional public involvement processes have been criticized for their one-directional flow of information and lack of accountability regarding whether and how public comments influence line officer decisions. Indeed, the lack of substantive and binding

rules or policies regarding when, whether and how public input should be used to influence decisions helps to explain the considerable variation in outcomes documented in the literature (Kweit and Kweit 1980; Davenport et al. 2007).

The lack of clear direction regarding public input (Hoover and Stern 2014a; Auer et al. 2011) has also contributed to the increased influence of veto players who use the judicial system and administrative appeals as a formal sanctioning tool to enforce compliance with interest group demands, which can result in significant changes in management actions, as well as delays and in some cases administrative decisions to abandon projects altogether (Abrams 2019; Jones and Taylor 1995).

Increases in experimentation with collaborative forms of public involvement, in which citizens, community-based organizations, business owners, environmentalists and others come together in good faith to find areas of consensus or agreement on land management issues affecting their local area, are one outgrowth of the above challenges and have been theorized as one of the primary drivers of the current paradigm shift (Abrams 2019; Winkel 2014). Indeed, collaborative governance has taken hold in communities across the West. However, it has become clear that some of the same limitations to public influence found in statutory public participation requirements (Innes and Booher 2004; Kweit and Kweit 1980; Davenport et al. 2007) were true for collaborative governance efforts as well (Moote and McClaran 1997; Carr et al. 1998). One reason is that collaborative governance has remained a product of "culture and habit" (Moseley and Winkel 2014). Even as collaboration has been mandated in some recent policies, the legal and administrative context in which line officers make decisions has changed very little (Moseley and Winkel 2014; Innes and Booher 1999; Moote and McClaran 1997), providing scant guidance regarding when, whether and how input from collaborative processes should be used to influence decisions (Ansell and Gash 2007; Scott and Thomas 2017).

The lack of an "action forcing" component in collaborative policies has placed veto levers out of the reach of collaboration advocates who feel the Forest Service is not or will not act on their recommendations. Unlike federal statutes directing the actions and decision-making processes undertaken by land management agencies (e.g. National Environmental Policy Act or the Endangered Species Act), the practice and substance of collaboration remains undefined in federal policies and rules, resulting in a lack of substantive and procedural expectations for line officers (DuPraw et al. 2015). This has led to a gap in our understanding of the causal mechanisms and drivers that connect governance institutions to management outcomes and, ultimately, to institutional and organizational change, more broadly.

Given these challenges, the last decade has seen a growing interest in evaluating the Forest Service in order to understand the degree to which it is changing in response to a new set of social and environmental pressures driven by the emergence of the social forestry paradigm. As a result, there is a small, but growing body of literature investigating the impact of collaboration on management outcomes (Scott 2015; Ulibarri 2015; McIver and Becker 2021; Mattor et al. 2020; Wilkins et al. 2021). Yet mid-level theories are needed to further expand on the collection of drivers and mechanisms under study considering the variety of forms that collaborative governance of national forests have taken across the West.

Empirical Evidence of Collaborative Governance's Impact

Policy challenges notwithstanding, collaborative governance has persisted and even expanded across national forests in the United States spurred in part by the enactment of laws requiring collaborative public engagement in planning, implementation and monitoring (Schultz et al. 2012; Kooistra et al. 2021; Moseley and Winkel 2014). In 2009, Congress passed the Forest Landscape Restoration Act, which created the Collaborative Forest Landscape Restoration Program (CFLRP). Shortly thereafter, the chiefs of the two natural resource agencies housed in the Department of Agriculture – the U.S. Forest Service and the Natural Resource Conservation Service--established the Joint Chiefs Landscape Restoration Program ("Joint Chiefs"). Both the CFLRP and the Joint Chiefs programs mandated the use of collaborative processes to develop landscape level restoration and fuels reduction projects. These programs built on previous efforts to overcome barriers to management by providing multi-year funding commitments to selected projects (Schultz, Jedd, and Beam 2012; Cyphers and Schultz 2019). A common theme among the policies that initiated the second and third waves of collaboration was a recognition among policymakers, land managers, and communities that the rate of ecological change will require increases in the pace and scale of management on public and private lands (Urgenson et al. 2017).

As laws mandating collaboration have grown, so has attention to outputs, outcomes and impacts. Yet, significant challenges exist. First, divergent views exist regarding the purposes of both collaborative public involvement in government processes and, in turn, evaluation efforts themselves (Thomas and Allegretti 2020; Carr et al. 1998). While conflict resolution scholars may focus on settlements, agreements or process improvements as salient outcome indicators (Yaffee and Wondolleck 2003), government agencies and actors are also accountable to Congress and the public and are expected to demonstrate efficiency and effectiveness in meeting desired performance outcomes. Recent years have seen new expectations emerge that include procedural justice, fairness and responsiveness (Innes and Booher 1999).

Second, there are many causal links that connect mode of governance to environmental conditions, and mediating factors acting upon each link (Thomas and Koontz 2011; Newig et al. 2018). Trust, culture and attributes of individuals influence the degree to which citizens and public managers invest in collaborative processes (Butler and Koontz 2005; Scott and Thomas 2017; Burkardt and Thomas 2022), procedural laws such as the National Environmental Policy Act and substantive laws such as the Endangered Species Act, along with informal rules and norms dictate much of the decision space for land management agencies (De'Arman 2020; Emerson and Baldwin 2019), and administrative priorities, performance measures and allocation of budgetary resources influence organizational performance and outcomes (Moseley and Winkel 2014).

Much of the empirical literature on collaborative governance and its impacts has focused on deriving lessons from a limited number of cases documenting how collaborative efforts played out on the ground (Wondolleck and Yaffee 2000; Fellman 2009; Williams and Ellefson 1997; Paulson 1998; Duane 1997; Weissberg, Kusel and Rodgers 2018; Orth and Cheng 2018; Goldstein and Butler 2010; Coglianese 1997). Case studies are useful for understanding the variety of contexts in which collaboration takes place (Ritchie et al. 2014) and teasing out salient variables and causal processes (Thomas and Koontz 2011). But, as Thomas and Koontz (2011) and others have noted, reliance upon participant's subjective assessments of environmental improvement or other benefits of collaborative processes should be used cautiously due to cognitive failures such as the "halo" effect and the propensity to justify time commitments by "overestimating the desirability of the outcome" (Thomas and Koontz 2011; Davis et al. 2017; Conley and Moote 2003).

Among the cross-case analyses focused on forest collaboratives, the majority focus on participant perceptions of outcomes in the context of specific policy interventions. These studies compare the quality or efficiency of collaborative projects with assessments of the quality or level of collaboration. Often, both management outcomes and process outcomes are included in participant evaluations. Examples of management outcomes include local jobs (Mattor et al. 2020), efficiency (McIntyre and Schultz 2020), meeting a diversity of objectives (Mattor et al. 2020; Davis et al. 2017) and acres of at-risk forests treated to reduce wildfire threats (McIntyre and Schultz 2020; Abrams et al. 2020).

A central theme in the findings from this body of literature is collaborative governance's uneven and contingent implementation (Moseley and Charnley 2014), resulting in a high degree of variability in impacts and outcomes. For example, Mattor and Cheng (2015) and Mattor et al. (2020) study the use of the stewardship contracting authority, an implementation tool that requires that projects use a collaborative process, finding that the quality of collaborative processes were positively associated with perceived improvements in the quality of outputs. However, the relationship was mediated by

the degree of internal Forest Service commitment and direction to using this contracting mechanism, and collaboration as an alternative mode of doing business (Mattor and Cheng 2015; Mattor et al. 2020). Similar to Mattor and Cheng (2015), McIntyre and Schultz (2020) also find that the policy mandate to collaborate found in the Collaborative Forest Landscape Restoration Program (PL 11-111 sec. 4003(b)(2)) was insufficient on its own to enact significant institutional change, and that positive outcomes hinged on administrative units having sufficient resources and capacity, strong internal unit leadership and minimal unit staff turnover (McIntyre and Schultz 2020).

A second small set of studies attempt larger-N comparative analyses using "quasi-experiment" methods in which the outcomes of collaborative projects are compared with those of non-collaborative projects, that is, projects planned using "traditional" public involvement processes. The results of these studies are mixed, with some finding positive relationships between collaborative involvement and measures of project characteristics such pace of activity, scale of treatments and complexity of projects (McIver and Becker 2021), and thus reinforcing the survey results of collaborative participants discussed above. Others find evidence that collaboratively developed projects are more effective than non-collaborative projects in meeting a broader suite of social equity objectives, but are agnostic regarding whether they improve management outcomes (Shepherd et al. 2009).

The studies reviewed highlight a number of theoretical and methodological short-comings that may limit our ability to detect institutional change. First, efforts to measure the impacts of collaborative governance processes using performance measures such as at-risk acres treated or planning efficiency as measured by time to decision, are based upon a theory of rational action in which organizational outcomes reveal bureaucratic preferences in the form of discrete choice criterion (McFadden 1976). But evaluation of metrics at the level of administrative units may mask changes occurring at more micro scales, among smaller groups of people or at the individual level. Furthermore, outcome evaluations tell us little about the causal mechanisms that led to the observed outcomes, and have thus been called "black box" methods (Conley and Moote 2003). Finally, the logic that institutional and organizational changes can be measured by performance outcomes assumes that they only occur in relation to specific policies, and undervalue the "spillover effect" in which Forest Service planners and decision-makers internalize the consensus agreements resulting from collaborative public participation processes into all of their decisions (Kaiser 2006; Ulibarri et al. 2019).

Further, there is a common, if implicit, recognition that bureaucratic actors and institutions play an important role in mediating the outcomes of collaborative governance processes. And yet, we know little about what happens inside the "black box" in terms of the interplay between collaborative

governance institutions and individual actions that hinder or contribute to changes at the institutional and organizational level, and that in turn lead to changes in the outcomes produced. Thus, there is a compelling need to follow the lead of scholars such as Abrams and Schultz to look for evidence of institution-level change indicators within the agency, more broadly.

Theories of Change in Collaborative Governance

A number of governance scholars have argued for the value of logic models in evaluating the impact of alternative governance arrangements (Thomas and Koontz 2011; Innes and Booher 2004; Newig et al. 2018; Emerson and Nabatchi 2015b) and for specifying and making explicit underlying theories of change (Newig et al. 2018; Baker and Chapin III 2018; Wilkins et al. 2021). Theories of change, by definition, involve answering questions about the present situation or "status quo" and articulating what needs to change to achieve desired outcomes. In the case of collaborative governance of public lands, the "status quo" is heavily influenced by the organizational structure and formal policies governing public lands, as well as the informal rules and norms guiding front-line workers' day to day work. Much of the scholarly work in this area has sought to elaborate on the specific ways in which the laws and policies governing the US Forest Service, along with the informal rules, norms and tacit understandings constrain individual behavior.

Many of the studies that attempt to identify factors that lead to successful collaborative processes, as opposed to outcomes, largely focus on elements within the control of non-state actors—for example, the diversity and make-up of citizen groups (Wilkins et al. 2021), or the processes they use to make decisions. Yet, many collaborative efforts have not met these ideals and still produce successful outcomes (Carr et al. 1998). On the one hand, attention to the attributes of non-state actors and process variables could be seen as a pragmatic response to the difficulty of understanding, let alone influencing, government agency policies, procedures and institutions. On the other hand, it has led to a blind spot in the development of logic models and theories of change in which scholars and practitioners lack theoretical frameworks for making sense of what happens as collaborative process outputs are translated into management decisions and subsequent outcomes.

Scholars of collaborative governance have implicitly assumed that sufficient administrative discretion and authority combined with the organizational pursuit of legitimacy would result in changes in management outcomes (Ansell and Gash 2007; Steelman and Ascher 1997). And yet, studies of the Forest Service have painted a grim picture of an agency plagued by declining legitimacy (Abrams et al. 2017a), enduring demands for compliance with organizational norms and values (Chojnacky 2012; Steelman 2010), and weak incentive structures for supporting the adoption of new policies among highly decentralized employees (Moseley and Charnley 2014).

The logic supporting assumptions of citizen influence are rooted in theories in which federal agencies such as the Forest Service derive legitimacy by aligning the organization's rules and norms with the values and expectations of the public (Meier and O'Toole 2006), a proposition supported by the passage of federal policies mandating collaboration. In response, a slew of studies have been published applying a mix of top-down and bottom-up perspectives on policy implementation within the Forest Service (Cheng 2006; Moseley and Charnley 2014; Coleman et al. 2021; Monroe and Butler 2016; Butler 2013; McIntyre and Schultz 2020; Ricco and Schultz 2019; Cheng et al. 2015; Mattor and Cheng 2015; Mattor et al. 2020).

In these studies, scholars have focused on the interactions of formal and informal institutions and how attributes of the institutional environment influence decision-making, adoption of new authorities and implementation of collaborative policy mandates (Moseley and Charnley 2014; Cheng et al. 2015; Davenport et al. 2007). These include conflicts between normative collaborative expectations regarding shared decision-making (Butler 2013), procedural constraints deriving from the Federal Advisory Committee Act (Monroe and Butler 2016) and the agency's inability to delegate legal authority for making decisions (Moote and McClaran 1997). This finding highlights the role of administrative gatekeepers responsible for interpreting policies in mediating the range of acceptable practices enacted by front-line staff. Other studies have highlighted the Forest Service's quasi-formal policy of frequently moving front-line managers and its often negative influence on the performance of collaborative governance processes. In particular, they point to the lack of influence citizen groups have on human resource processes such as hiring, firing and staff turnover and that attempts to implement new procedures such as the use of handover memos lacked the institutional arrangements and structures necessary to ensure their use (Coleman et al. 2021).

There does appear to be some consensus among scholars that even amidst significant barriers to change at the national and state-level due to "meso-level rigidities and path dependencies", the local- or micro-level holds the most potential for innovation and change in governance practices (Schultz et al. 2021; Moseley and Charnley 2014; Abrams 2019). Shifting the focus of attention to micro-processes of institutionalization at the local level requires analytic frameworks for exploring what it means to view government as both institution and actor. Koontz et al. (2004) explore this question in their book, suggesting that governmental actors play influential roles in shaping issue definitions, the resources available to collaborative processes, and the structure of decision-making. And while collaboration has been mandated through a series of laws, front line workers retain influence in shaping the "opportunity structures" for citizen involvement (Newman et al. 2004).

Abrams (2019) and Abrams et al. (2020) have perhaps provided the greatest contribution to a theory of change for national forest governance, arguing that declines in organizational legitimacy and capacity, the creation of veto points and expansion of veto players, combined with tensions between old and new management paradigms has motivated governments and government actors to engage in new forms of governance realized through collaborative processes and organizational networks. Thus non-state actors and networks represent the drivers of change, and bureaucratic discretion combined with new policy tools act as the mechanisms.

This review reveals that increasing conflict between formal and informal institutions has potentially increased the importance of informal institutions and may provide the opening for change. Yet, in most existing models, government is treated as institution and not actor, and as a result implicitly considered an exogenous (fixed) variable. Those studies that do focus on the role of the state tend to focus attention at the level of institutions, failing to consider state agent's capacity to act and the effect of practical actions taken in support of new institutions.

Actors, Agency and Institutions

Institutions and Organizations

Institutions like governance structures inform the ways in which decisions are made and by whom and have a strong influence on the sustainability of natural resources (Ostrom 2015; Pahl-Wostl 2009). For this reason, institutional arrangements and social processes matter. They help make sense of how social choices are shaped, mediated, and channeled (Powell and DiMaggio 1991). The relationship of actors (individual or collective), agency and institutions lie at the core of institutionalism's approach to the study of organizations. Institutions are here defined as the norms and expectations that arise from patterned interactions among social actors; institutions form the environment in which organizations operate (Powell and DiMaggio 1991; Bouma 1998).

A distinguishing attribute of organizations is, rather than being a function of repeated and patterned interactions over time and space, they are purposively created and structured in specific institutional, and time and space, settings. Thus, an organization can be conceived of as the collection of attributes that make up its form and function, the arrangement of roles and positions, and other elements "deliberately constructed to achieve a specified goal" (Bouma 1998, p. 235).

New institutionalism represents a turn in institutional studies characterized by an increased focus on agency and action. As such, its focus is on the micro-processes of institutionalization and institutional change and theories of practical action (Powell and DiMaggio 1991). In taking this view, it sits in contrast to previous institutional theories by acknowledging culture, rules, and norms as important but

not deterministic influences on actors and their behavior. New institutionalism's interest in practical action also reflects an increased emphasis on the cognitive dimensions of action, which are elaborated in Giddens' theory of structuration (Giddens 1984).

Giddens' theory of structuration rests on an "agentic" view of individuals as actively involved in the reproduction of institutions through the 'reflexive' monitoring of events and actions as a means to relate their activity to those events (Giddens 1984). This reflexive monitoring is a key conceptual element in new institutionalism and contributed to the emergence of theories of institutional work (Lawrence et al. 2009). At its core, institutional work theory sees action as necessary for both institutional maintenance as well as change, which situates it in contrast to historical institutionalism and its focus on path dependence (Patterson and Beunen 2019), and from institutional studies of organizations and its focus on the influence of institutions on action.

Processes of Institutional Change

> *"It is not only the case that systemic changes may induce institutional change, which subsequently elicits changed patterns of action, but it is likewise possible that the aggregated autonomous actions of individual agents may change the meaning or scope of an institution and thereby also the systemic environment of which that institution forms a part" (Rice 2013)*

Both organizations and institutions tend to resist change in order to maintain predictability and reduce transaction costs (Powell and DiMaggio 1991). However, as Bouma (1998) observes, organizational changes have proven insufficient for influencing institutional change, but changes in the institutional environment, such as changes in the dominant social paradigm, can lead to legitimacy challenges if organizations fail to adapt and change (Brown and Harris 1992). Thus, institutions and organizations do change, in response to both exogenous shocks and endogenous forces (W. R. Scott 2014). The increasing complexity of social and environmental problems facing societies at all scales represent salient exogenous forces (Emerson and Nabatchi 2015; Rittel and Webber 1973; Kettl 2015) and many scholars argue that governments are undergoing a transition from a focus on top-down governing to shared governance to meet the demands of such problems.

But, as Rice (2013) suggests and as described in the previous section, institutional change can also occur through endogenous pressures as organizational actors, by virtue of being part of multiple social and occupational groups, exploit the contradictions between numerous 'logics' or institutional templates to inform their conception of the means and goals that are appropriate and legitimate (Scott 1991, 2014).

Institutional theorist such as Scott (2002) and Oliver (2002) argue that attention to the deinstitutionalization of processes and norms is equally important in understanding change processes that more often focus on the processes through which new beliefs and practices emerge (Scott 2002). Oliver (2002) suggests that deinstitutionalization of norms and practices are driven by three main sources: functional, political and social. Emerging theories presented by Abrams (2019) and Abrams et al. (2020) as well as Winkel (2014) and Moseley and Winkel (2014) highlight the functional, social and political drivers of deinstitutionalization beginning in the late 20th century and which continue to the present. Resource capacity constraints and performance-driven pressures that began in the 1980s and 90s represent functional sources of deinstitutionalization while declines in autonomy and legitimacy represent the political drivers of deinstitutionalization. Social drivers of deinstitutionalization processes are revealed through the increased use of veto points and prominence of veto players and increases in the diversity of public values for national forests. Thus, approaches to studying institutional change that look for evidence of institution-building as well as deinstitutionalization will provide a more comprehensive set of indicators for use in understanding processes of change.

Actors and Institutional Work

If organizations are the tangible, often taken-for-granted, manifestations of institutions, institutional work is the often invisible, behind the scenes practical actions of organizational members which, in turn, operate to reconstitute institutions. If new institutionalism is concerned with the recursive relationship between institutions and actions, as depicted in Figure 1 below, then institutional work, as a sub-discipline, can be understood as elaborating the bottom half of the diagram. That is, institutional work seeks to study and develop theory around how action and actors affect the institutional templates and regulative mechanisms that enforce those templates (Lawrence et al. 2009).
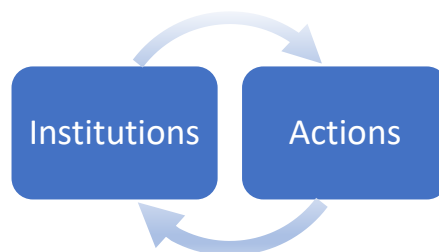
Figure 1-1 Recursive relationship between institutions and action (adapted from Lawrence, Suddaby and Leca 2009).

Actors, in this model, can be individuals or organizations. And, in contrast to institutional or bureaucratic entrepreneurship, institutional work focuses on the actions of a much broader spectrum of actors and activities, including those with limited power and very few resources (Marti and Mair 2009). What they have in common is the capacity to act, or agency. Agency implies a level of intentionality, although different schools of thought diverge on the degree to which actors are aware of, and therefore can consciously influence, their "tacit or taken-for-granted schemas of action" (Emirbayer and Mische 1998, p. 975). This quote by Emirbayer and Mische on agency reflects their argument that agency is relational-namely to time. That is, the authors suggest three modes of agency each with a distinct temporal orientation. One form conceptualizes past experiences and interactions as providing a menu of options for selecting and applying intentionality in action. Another form is present-oriented and occurs in deliberation with others as social experiences are contextualized in real-time, and the final form is future-oriented and involves what Emirbayer and Mische call 'hypothesization', a reflexive process by which actors develop a set of alternative responses to received schemas (Emirbayer and Mische 1998). This final form is conceptualized as both goal-directed and future oriented and suggests a key distinction between institutional work and institutional reproduction.

In considering actors intentions, I also draw on an important methodological distinction made by Lawrence, Suddaby and Leca (2009) between institution-centric and work-centric approaches to the study of institutional work. The institution-centric approach focuses on explaining institutional change using the intentional actions of institutional actors, whereas the work-centric approach explores the actions and practices of actors, why and how they occurred and their impact, or lack of impact, on institutions (Lawrence et al. 2009). This study engages the work-centric approach by investigating the actions and practices of government actors and what motivated these actions. It also connects these actions to theories of institutional change by elaborating a set of drivers and mechanisms that provide the context and the fertile ground for actors to engage in institutional work.

Reconnecting National Forest Governance Scholarship with Public Administration Theory

This dissertation builds on recent developments in scholarship on national forest governance while pointing to a need to develop more nuanced theories of change connecting state-centered collaborative governance to bureaucratic decision-making and management outcomes. The integration of public administration theories of street-level bureaucracy with its focus on the role of discretion, and institutional theories with their focus on the practical actions of individual actors in shaping institutions provide the beginning of an overarching, synthetic theory of change that

integrates discretion and agency as mechanisms and decision premises and value orientations as drivers of institutional change.

Many scholars have disputed the progressive agenda that land management agencies should make decisions purely based on professional expertise and scientific evidence. Rather, there is general consensus that decisions are based on science as well as values and political realities. including bureaucratic influences (organizational culture and norms) (Young and Tanner 2022), legal pressures (legislation and judicial rulings) (Jones and Taylor 1995), professional training and allegiances (professional norms) and political pressures (demands of constituents) (Sabatier et al. 1995; Twight et al. 1990) with ongoing debates regarding their relative influence (Fleischman 2017; Struthers et al. 2021b; Chojnacky 2018). Thus, the iconic image of the forest ranger with complete autonomy making technocratic decisions regarding the management of natural resources has been replaced with a system of public administrators that operate within a highly complex "layer cake" of laws, regulations and policies amid changing public demands for the goods and services that public lands provide and the ways in which decisions are made (Dana and Fairfax 1980).

According to theories of street-level bureaucracy, the workers most directly impacted by these competing demands and expectations are those working closest to the ground, the "street level bureaucrats" (SLBs). Within the Forest Service, this would include district rangers, forest supervisors and regional foresters, along with the professional and clerical staff that work under them. In the Forest Service's line and staff structure, the former are termed line officers, owing to their delegated authority from the Chief of the Forest Service to make decisions on projects within their administrative jurisdiction. Line officers have been the focus of many studies interested in how organizational controls, institutional demands and values and beliefs influence decision-making. Less attention has been paid to professional staff, such as wildlife biologists, silviculturists and other biologists, and program managers, particularly as it relates to understanding their operating environment, how institutional demands impact their work and the kinds of discretionary decision-making involved in their day-to-day work.

The necessity, practice and outcomes of discretionary decision-making have been the subject of much debate (Holzer and Yang 2005). Numerous scholars regard field-level staff as closest to the ground and therefore most equipped to adapt policies to local conditions (Meier and O'Toole 2006; Maynard-Moody and Musheno 2000). The basic premise for understanding policy implementation at the street-level rests on the argument that top-down policies should be viewed as 'indeterminate' particularly when they are vague or conflicting and when public administrators are able to exercise discretion in their implementation (Hill and Hupe 2014). In this way, the discretionary actions of public

administrators working at the street level are seen as constituting policy in practice. The extent to which these discretionary decisions are influenced by individual, organizational or institutional factors so as to become systematic, elevates their need to be studied (Brodkin 2012).

A number of scholars of alternative governance regimes have acknowledged that attention to the micro-processes of institutionalization by bureaucratic actors in their day-to-day work is under-studied and under-theorized (Beunen and Patterson 2019; Opara et al. 2021), rendering it "invisible" in efforts that involve state and non-state actors. The "black box" effect can be attributed to the invisibility of government actors and actions in the translation of collaborative inputs ("agreements") into management decisions and eventual outputs (Wilson 1989). Indeed, the role of government actor behaviors and practices has been acknowledged as a gap in understanding how administrative organizations incorporate new scientific information into decision-making (Struthers et al. 2021a; Timberlake and Schultz 2017). And while it is acknowledged that government actors can thwart or "sabotage" the efforts of higher-level superiors (Brehm and Gates 1997; Harrison 2016), there is also convincing evidence that government actors engage in entrepreneurial activities (Arnold 2021) as 'bureaucratic activists' promoting contentious issues and working to effect change through "transformative action" (Abers 2019).

Logic Model and Theory of Change

Efforts to understand why and how collaborative governance leads to changes in management outcomes requires a theory of change that identifies the key variables and describes the causal mechanisms that lead to change. Figure 1-1 represents the preliminary conceptual model that informed this dissertation.

In accordance with previous models, collaborative processes are conceptualized as being a function of Process Inputs (a) in the form of human, financial and other assets, and Process Attributes (b) that characterize how decisions are made (e.g., by consensus or majority vote). These "starting conditions" influence the content and quality of a collaborative's Intermediate Outputs (c), referring to the agreements or recommendations developed by the collaborative body which are developed to provide public input on potential or proposed actions taken by the Forest Service.

The opportunities for sharing collaborative agreements and recommendations and the extent to which they are considered as projects are designed inside the "black box" is theorized to depend upon the combination of Practice Work (e) and Boundary Work (d) of bureaucratic actors as they create and maintain new institutions around collaborative modes of governance and simultaneously disrupt old institutions. This work occurs within a complex and layered framework of formal policies and

regulations (f) as well as the informal culture and norms (g) that have developed at the local level to guide front-line workers day-to-day work. The interaction of existing formal and informal institutions with front-line worker's institutional work to shape governance practices operate to mediate the Intermediate and End Outcomes (h) resulting from collaborative planning efforts. These outcomes are characterized by the content of decision documents and the resulting management outcomes implemented on the ground.

A number of the variables in this model are theorized to be mutually dependent or recursive such that actor's practice work and boundary work often function to influence the other whereby the re-drawing or expansion of boundaries then require new practices that reinforce and legitimize the new boundary, and vice versa. Similarly, actor's institutional work is in constant relationship with the formal and informal institutional pressures whereby each acts upon the other, as indicated by the two-directional arrows inside the black box.

Figure 1-2 Proposed Logic Model and Theory of Change Connecting Collaborative Governance to Management Outcomes.
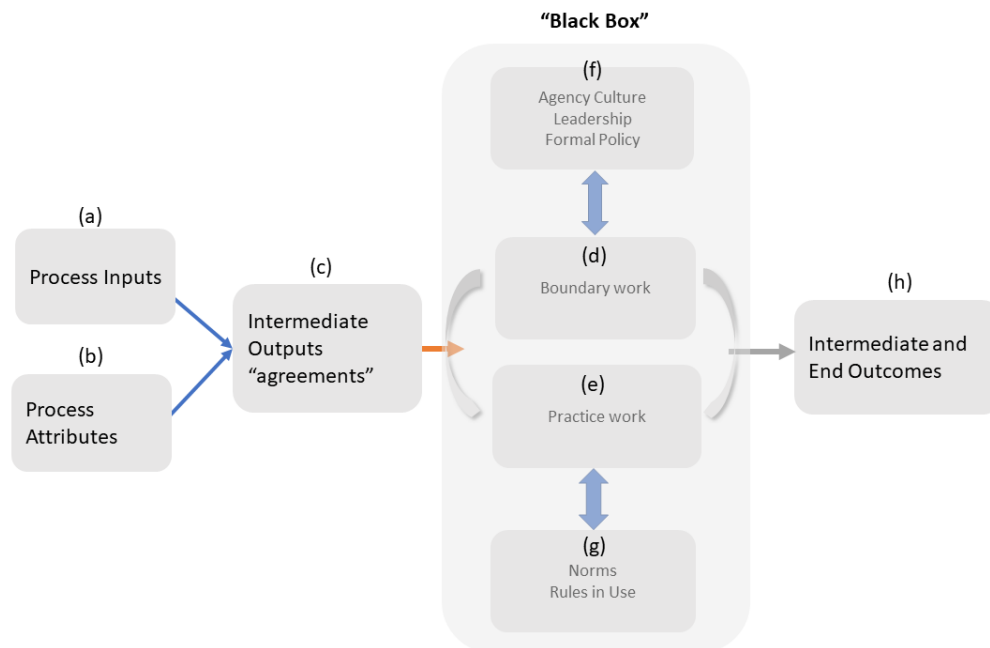
Summary of Dissertation Chapters

This dissertation represents a mixed methods approach to addressing broad questions about how collaborative forms of public participation enacted by the Forest Service fit within a larger governance shift occurring within the Forest Service and in the United States more broadly. The

research investigates how this paradigm shift is changing the way the Forest Service does business, both in terms of its outputs, but also its employee's day-to-day work substantiating the practices and norms of a new governance paradigm. It seeks to move beyond the hegemonic narrative of an agency unable or unwilling to change and refocus the lens on evidence that the Forest Service is changing and adapting, as measured by its outputs, and by the efforts of individuals within the organization to make, remake and refashion the "core technology" from the inside out.

The dissertation is organized primarily as a series of stand-alone empirical manuscripts that build upon each other (Table 1.2). I have included an additional chapter dedicated to establishing the research gap and theoretical framework that provides the lens and impetus for the questions I ask and the methods I use to answer them. I found that this was a necessary step in my own process for describing how the sometimes-disparate fields of organizational studies, public administration and environmental governance can be fit together in new ways to provide insights into enduring challenges surrounding national forest governance. Following is a summary of each of the four chapters. Author and journal information are included for chapters that have already been published.

Chapter 2: An Empirical Evaluation of the Impact of Collaboration on the Pace and Scale of National Forest Management in Idaho

This chapter, which began as a purely applied exercise in policy analysis, sought to address a question that had been skirted around for decades: does collaboration matter? That is, does collaboration lead to improvements in the management of national forests as so many proponents have espoused? We first situate collaboration in Idaho as more than just a collection of random acts, but as a movement contributing to what Abrams (2019) posits is a governance transition within the US Forest Service and national forest administration. When assessed with this level of influence and importance, it naturally raises normative and positive questions about the value and effectiveness of such efforts and how they compare with more traditional public involvement and planning processes.

We gathered and analyzed 14 years of project-level planning and implementation data from US Forest Service databases and compared collaborative and traditional projects on a suite of metrics related to pace, scale, complexity, and legal outcomes. We found that collaboratively developed projects were larger and more complex than traditional projects and were associated with greater planning efficiency. While these are not the only metrics that matter, we also argue that for public managers operating in a performance management framework where they are evaluated on their ability to treat acres and harvest timber, outputs and outcomes matter. Of course, this analysis was restricted to projects in Idaho. There is a clear need to ask similar questions and replicate this analysis in other regions and at broader scales in order to understand how the relationship between

collaboration and management outcomes varies across regions, administrative units, and other administrative and political scales.

Chapter 3: Inside the Black Box: Exploring the role of bureaucratic agency and institutional work in collaborative governance of public lands

The logic of this article starts from the premise that collaborative governance of public resources requires new norms and processes for engaging public citizens. It also requires new practices and norms to overcome the legal and administrative context in which government actors make decisions, which supplies scant guidance regarding whether and how input from the public should be used to influence decisions and their broader outcomes. As such, public administration scholars argue that this emerging governance paradigm requires an expansion of the roles of both civil society and bureaucratic actors.

By focusing on the US Forest Service, traditionally a poster-child of technocratic decision-making, this study explores the actions of street-level bureaucrats working in a complex policy environment and the range of strategies they enact to create, support and undermine (resist) new norms and processes to support collaborative decision-making in an organizational environment with inconsistent rules, incentives and sanctions. In doing so, this study uses an institutional work lens to shed light on the ways in which bureaucrats navigate conflicting logics and how individual agency, institutional structures and organizational culture interact inside the "black box" of a federal land management agency.

Chapter 4: The Role of Value Orientation and Discretion in Institutional Change: A qualitative study of collaborative governance in the US Forest Service

Collaborative public participation is more than just a policy mandate. It lies at the core of an emerging paradigm in public administration that seeks to re-envision the relationship between civil society and government actors. Yet, collaborative governance presents a challenge to traditional public administration values of efficiency and accountability. Given this, what explains front-line worker's institution-building efforts to support and legitimize collaborative governance as a new way of doing business? Answering this question requires a focus not on policy outcomes, but on concepts of discretion and motivation. In this article, I draw on traditional theories of administrative behavior and Simon's concept of decision premises, and marry it with more recent work on discretion, agency and value orientations with the goal of not only identifying connections between value orientations and decision premises but also the ways in which these values and beliefs operate to support and legitimate collaborative national forest governance, thus contributing to institutional change.

Table 1-2. Summary of dissertation chapters, questions addressed, theoretical areas engaged and manuscript details.

Ch.	Chapter title	Questions addressed	Theoretical areas	Manuscript
3	An empirical evaluation of the impact of collaboration on national forest management in Idaho	*Does collaboration lead to improvements in the management of national forests?*	collaborative governance, national forest administration, policy implementation	Pennick McIver and Becker, 2021 in *Forest Science* 67(1): 57-67.
4	Inside the Black Box: Exploring the role of bureaucratic agency and institutional work in collaborative goverance of public lands	*How do government actors contribute to institutional change at the street level? How do individual agency, institutional structures and organizational culture interact in the context of collaborative governance?*	Street-level bureaucracy, institutional work, individual agency	Pennick, C.; to be submitted to *Journal of Environmental Planning and Policy*
5	The Role of Discretion and Value Orientations in Institutional Change: A qualitative study of collaborative governance in the US Forest Service	*What explains governement actor's institution-building efforts to support and legitimize collaborative governance at the street level? What role do discretion and value orientations play in processes of institutional change?*	Discretion, public service motivation, decision premises, value orientations	Pennick, C.; to be submitted to *Perspectives in Public Management and Governance*

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Chapter 2: An Empirical Evaluation of the Impact of Collaboration on the Pace and Scale of National Forest Management in Idaho

Abstract

It has been posited that U.S. national forest administration is undergoing a governance transition characterized by an increase in the involvement and influence of non-state actors. One example of this new form of national forest governance is the use of multi-stakeholder collaborative efforts for planning and implementing projects. This has raised normative and positive questions about the value and effectiveness of such efforts and how they compare to more traditional public involvement and planning processes. This study attempts to address the latter questions by analyzing project-level planning and implementation data while comparing collaborative and traditional projects on a suite of metrics related to pace, scale, complexity and legal outcomes. We utilize administrative data from the US Forest Service to conduct a quantitative analysis of projects over a 14-year period. We find that collaboratively-developed projects were larger and more complex than traditional projects and were associated with greater planning efficiency. This analysis responds to the need to systematically assess the impact of collaborative governance and contributes to existing theories of governance, organizational learning and policy implementation.

Introduction

It has been posited that U.S. national forest administration is undergoing a governance transition characterized in part by an increase in the involvement and influence of non-state actors (Abrams 2019; Winkel 2014). Evidence of this transition can be found in forest policies such as the National Fire Plan of 2000 and more recently in the Collaborative Forest Landscape Restoration Program and 2012 Planning Rule. What these policies have in common is an emphasis on multi-stakeholder collaborative approaches to planning and implementing projects (Schultz, Jedd, and Beam 2012; Pinchot Institute 2002; Abrams et al. 2019).

Collaborative approaches for governing natural resource allocation go beyond traditional "notice and comment" forms of public participation by engaging stakeholders early in the process of identifying and designing potential projects (Germain, Floyd, and Stehman 2001). Such approaches have been heralded for their potential to reduce conflict and gridlock (Kemmis 2001; Wondolleck and Yaffee 2000), involve a wider diversity of voices (Wondolleck and Yaffee 2000), incorporate local knowledge (Koontz et al. 2019) and result in more durable solutions (Brick, Snow, and Van De Wetering 2001; Yaffee and Wondolleck 2003). Still others have expressed expectations that collaboration may lessen delays resulting from legal challenges leading to a reduction in planning costs and an acceleration of land management activities (Steelman and Burke 2007; Stern and Fineberg as cited in Coglianese 1996).

While some have debated these normative arguments (McClosky 1998; McCarthy 2005; Coggins 2001), the literature exploring the performance of collaborative governance and its outcomes is much more limited (Ansell and Gash 2008; Koontz and Thomas 2006; Kenney 2000; Conley and Moote 2003). Further, few have attempted to make systematic comparisons between collaborative and more traditional forms of governance (Ansell and Gash 2008). These questions are particularly relevant given the increasing emphasis on and investment in collaboration over the last ten years (Schultz, Jedd, and Beam 2012; Cyphers and Schultz 2019).

This paper presents the results of an empirical analysis of USDA Forest Service projects planned and implemented over a 14-year period in Idaho to test for differences between collaborative and traditional projects on a range of management outcomes. We find that collaborative projects tend to be larger and more complex while displaying similar planning timelines. Taken together, the results suggest that collaborative projects are able to achieve a greater degree of efficiency when compared to projects planned using traditional public involvement methods. These results provide valuable insights for policymakers and public managers, contribute to existing theories regarding collaborative

governance in the context of national forest administration, and highlighting numerous areas for future research.

Collaborative Governance of Public Lands in the U.S.

Collaborative forms of natural resource governance emerged in the United States as a recognition that existing regulatory frameworks and conflict resolution via the courts were providing unsatisfactory outcomes for both people and the environment (Moseley and Winkel 2014; Steelman 2010). The prevalence of such efforts have increased over time in response to ecological and budgetary challenges (Abrams 2019), an interest in re-localization of issues (Winkel 2014), and a rejection of technocratic decision-making (Moseley and Winkel 2014). Collaborative management of national forests is a specific form of bottom-up governance that involves federal land, land management agencies, and a diverse set of stakeholders to develop place-based projects and plans that seek to meet forest management and community social and economic objectives (Conley and Moote 2003; Mattor and Cheng 2015). These "forest collaboratives" exist throughout the United States, and are an increasingly important component of federal land management.

The first wave of collaborative governance on national forests in the US developed in response to nearly a decade of conflict over federal forest management in the Pacific Northwest. In contrast to top-down efforts by the Clinton administration and national environmental groups to develop science-based solutions using professional expertise, these early collaborative efforts were grassroots, place-based and inclusive of a greater diversity of stakeholders. Rather than looking to experts, these community-led efforts focused on civil dialogue to build trust and find common ground (Moseley and Winkel 2014).

In 2001, after one of the most costly and destructive wildfire seasons in history, Congress adopted a set of strategies known as the National Fire Plan, an effort to reduce fire hazard on public lands while providing economic benefits to communities and workers (Moseley and Toth 2004). The Plan was also one of the first efforts to encourage and support community-level engagement and collaborative planning to reduce wildfire risk across jurisdictional boundaries (Pinchot Institute 2002; Steelman and Burke 2007). Following on the heels of the National Fire Plan came the Healthy Forest Initiative and Healthy Forest Restoration Act of 2003 combining administrative reforms and legislative actions to overcome barriers to implementing wildfire risk reduction, forest restoration and community assistance. Among these reforms were expectations for building community-level buy-in and administrative relief in the form of new categorical exclusions and a new objections process (Steelman and Burke 2007). Collaboration was also institutionalized in new contracting authorities, broadly termed stewardship contracting, which required community involvement in project design

and best-value mechanisms for contractor selection in order to encourage local community benefit (Mattor and Cheng 2015). These legislative interventions prompted a second wave of community-based collaborative efforts across the country.

The last ten years have marked a third wave of collaborative governance efforts spurred by new policy initiatives and ongoing efforts to institutionalize collaboration as a viable alternative to government-led decision-making. In 2009, Congress passed the Forest Landscape Restoration Act, which created the Collaborative Forest Landscape Restoration Program (CFLRP). Shortly thereafter, the chiefs of the two natural resource agencies housed in the Department of Agriculture – the U.S. Forest Service and the Natural Resource Conservation Service--established the Joint Chiefs Landscape Restoration Program ("Joint Chiefs"). Both the CFLRP and the Joint Chiefs programs mandated the use of collaborative processes to develop landscape level restoration and fuels reduction projects. These programs built on previous efforts to overcome barriers to management by providing multi-year funding commitments to selected projects (Schultz, Jedd, and Beam 2012; Cyphers and Schultz 2019). A common theme among the policies that initiated the second and third waves of collaboration was a recognition among policymakers, land managers, and communities that the rate of ecological change will require increases in the pace and scale of management on public and private lands (Urgenson et al. 2017).

Given that collaborative forms of natural resource governance have existed in the U.S. for multiple decades, surprisingly little is known about its performance, which Scott and Thomas (2017) define as the ability to solve public problems. Others have defined performance more specifically in terms of ecological goals or democratic process ideals. There is a small, but growing, body of literature seeking to connect collaborative governance to environmental outputs and outcomes. Due to the long time frames and difficulties making causal claims regarding collaboration's effects on ecological processes, many studies have focused on measures of outputs and intermediate outcomes of collaborative processes (Thomas and Koontz 2011). Most research in this vein has utilized case study and participant survey approaches to assess perceived outcomes (Mattor and Cheng 2015; Mandarano 2008; Bothwell 2019; Mattor et al. 2019). Such studies have documented positive perceptions of both social and environmental goals among participants while highlighting the importance of inputs such as resources, leadership, and existing agency-community relationships (Mandarano 2008; Mattor et al. 2019).

But, as Thomas and Koontz (2011) and others have noted, reliance upon participant's subjective assessments of environmental improvement or other benefits of collaborative processes should be used cautiously due to cognitive failures such as the "halo" effect and the propensity to justify time

commitments by "overestimating the desirability of the outcome" (Thomas and Koontz 2011, 102; Davis et al. 2017; Conley and Moote 2003). Of the few large-N studies using administrative data, Scott (2015) found that watersheds with active collaborative groups were associated with improved water quality and in-stream habitat gains and that outcomes varied according to the role the group played in the collaborative process. Monitoring efforts associated with CFLRP projects on the Front Range of Colorado have also indicated that treatments have been effective in moving stands towards desired conditions (Cannon et al. 2018), although it is unclear how the treatments compare to projects implemented outside of the CFLRP project area.

Environmental Analysis, Decision-making and the US Forest Service

Even with recent legislative and regulatory policy mandates supporting collaboration, national forest management and administration remains characterized by a state-dominant model in which federal agencies retain ultimate decision-making authority (Monroe and Butler 2016; Davis et al. 2017). U.S. Forest Service land management planning and use decisions are largely determined by the procedural standards set by the National Environmental Policy Act (NEPA) and National Forest Management Act (Ackerman 1990). Both laws are significant for their public participation provisions, which include structured opportunities for public comment and pre-decisional objections and appeals. But many practitioners and scholars have observed that opportunities to provide meaningful input through formal public comment opportunities come too late, after agency decisions have already been made (Wondolleck and Yaffee 2000; Koontz et al. 2004). This perception has provided the impetus for informal methods of engagement utilizing collaborative processes as well as adversarial approaches such as administrative appeals or objections and litigation (Germain, Floyd, and Stehman 2001), which can cause delays or in some cases, halt projects altogether.

NEPA requires that federal agencies consider and disclose the environmental impacts of proposed activities in their decision-making process. The disclosure of proposed activities and their potential impacts can take the form of a Categorical Exclusion from analysis requirements (a.k.a. CE), and Environmental Assessment in cases where the analysis finds no significant impacts (a.k.a. EA), or an Environmental Impact Statement covering proposed activities for which significant impacts are expected and mitigation measures are incorporated (a.k.a. EIS). It has become clear that process risks--such as the threat of appeals or objections and litigation, defensibility in court, and pre-existing social contexts—are significant drivers of U.S. Forest Service decision-making and the resulting time spent on project planning and NEPA compliance (Mortimer et al. 2011; Stern et al. 2013; Kaiser 2006). Not surprisingly, studies on the time it takes for federal agencies to comply with NEPA have been the focus of multiple studies, congressional hearings and agency directives (U.S. Government

Accountability Office (GAO) 2007; Dewitt and Dewitt 2008; Interior 2017; Fleischman et al. 2020). The last two decades have also seen multiple attempts to streamline the procedural requirements associated with NEPA compliance. In some cases, efforts to streamline the process have been combined with attempts to increase the involvement of stakeholders earlier in the planning process, e.g. the administrative reforms enacted as part of the Healthy Forest Initiative, while others have focused on the identification of new categories of activities that are excluded from the requirements of NEPA (Steelman and Burke 2007; Germain, Floyd, and Stehman 2001).

While the aforementioned efforts to increase pre-decisional engagement are consistent with more collaborative forms of decision-making, collaborative governance is challenged by uncertain funding, conflicting agency directives and unilateral decision-making (Bothwell 2019; Moseley and Winkel 2014). The prevailing performance-based management paradigm governing the accountability and evaluation of federal agencies and its concomitant focus on outputs and targets can also create disincentives for public managers to the extent that collaboration is seen as potentially more time consuming and not contributing to performance targets (Kenney 2000; Schultz and Moseley 2019). As Kennedy et al. (2005) point out, collaborative governance is not an established output or target of performance for the U.S. Forest Service as a whole, nor is it an activity for which line officers are held accountable (Kennedy, Haynes, and Zhou 2005). Indeed, Kennedy et al.'s (2005) survey results indicate that engagement in collaborative resource management is moderately rewarded, at best.

Collaborative governance of national forests thus operates in a complex, hybrid system of policies, regulations and paradigms (Moseley and Winkel 2014; Abrams 2019) often requiring agencies to engage in organizational learning processes to translate these new concepts into practice (Schultz, Mattor, and Moseley 2016). The ability to communicate the logical connection between new policies or processes to their expected outcomes can aid in organizational change efforts (Sabatier 1986). This study addresses the need for more information on the expected outcomes of collaborative approaches to national forest planning while taking a performance-based management approach utilizing agency administrative data. Given that collaborative governance operates in parallel with other forms of decision-making (Butler, Monroe, and McCaffrey 2015), and represents one of many possible tools for achieving management goals (Scott and Thomas 2017), it is appropriate to evaluate its influence on metrics for which the agency and individual line officers are accountable. The study proposes a set of project-level metrics related to pace and scale of management and applies this framework to the population of projects planned and implemented on the seven national forests in Idaho between 2004 and 2017. A unique aspect of this study is its replicability – interest in comparing the results of our analysis with results in other areas can be accomplished by accessing the same datasets for different

geographic areas and administrative units. In addition, the data allow for the comparison of collaborative and traditional forms of planning and implementation at multiple scales and across multiple collaborative efforts.

Hypotheses

Based on the literature and our own experiences, we developed a set of testable hypotheses regarding the relationship between collaborative engagement in the planning process and project outcomes on the ground. Our first hypothesis addresses the relationship between collaborative group engagement and the time it takes the Forest Service to plan projects. Surveys of collaborative participants and public managers has revealed perceived increases in the pace of management as a result of collaboration (Davis et al. 2017; Bothwell 2019), while critics of collaborative governance have suggested that the time required to find solutions using deliberative processes represents a waste of public resources, or, at the very least fails to demonstrate improvements over traditional means (Kenney 2000). Similarly, some public managers perceive that greater public involvement in project planning may come at the cost of efficiency or resource objectives (MacGregor and Seesholtz 2008; Stern et al. 2014), but also the perception that such investments lead to greater trust and support for future actions (MacGregor and Seesholtz 2008).

Hypothesis 1: The time required to plan collaborative projects will be the same or greater than the time required to plan projects using traditional means.

Programs such as the Collaborative Forest Landscape Restoration Program have sought to engage stakeholders through collaborative processes in order to support landscape-scale restoration and overcome the challenges of declining budgets, regulatory frameworks and multiple-use conflicts (Urgenson et al. 2017). Additionally, support for the agency and its mission, which collaborative governance may provide in a place-specific and contingent fashion (Moseley and Winkel 2014), has been shown to promote the development of larger projects (MacGregor and Seesholtz 2008).

Hypothesis 2: Collaborative involvement in projects will be significantly and positively associated with project size.

Studies of agency performance in the context of environmental planning and regulation have focused on the time required to comply with NEPA (Dewitt and Dewitt 2008; Fleischman et al. 2020) and some have used similar criterion as a criticism of collaborative governance (Coglianese 1997). However, the focus on elapsed time measures overlook the significant variation in project characteristics (e.g. size) and procedural requirements (e.g. intensity of analysis) inherent in natural resource activities. Efficiency, defined as the ratio of output per unit of input, allows a decision-maker

to assess relative value among a set of alternatives. From a performance-based management perspective, if we accept time as a proxy for cost, planning timelines provide a common denominator for evaluating relative output and making resource allocation decisions. Thus, hypotheses one and two, when taken together, lead us to our third hypothesis:

Hypothesis 3: Collaborative group engagement in projects will be positively associated with efficiency measures such that the ratio of management outputs to planning timelines will be significantly higher for collaborative projects than for traditional projects.

Collaborative governance can also be a tool for increasing the comprehensiveness of actions and the issues being governed, as proposed by Scott and Thomas (2017). Few studies have addressed this component of management outcomes, but Mattor and Cheng's (2015) finding that higher levels of commitment to collaboration were associated with the achievement of a greater number of objectives suggests a relationship.

Hypothesis 4: Collaborative group engagement in projects will be positively associated with project complexity.

Finally, based upon preliminary analysis of the data, we tested two additional hypotheses to explore predictors of differences in scale and efficiency between collaborative and traditional projects. The first hypothesis builds upon the findings of Mortimer et al. (2011) indicating that process risks, such as the likelihood of litigation, defensibility in court and level of controversy associated with a project, rather than resource risks, tend to drive agency decisions to conduct an EIS . In the context of collaborative governance, we hypothesize that the engagement of diverse stakeholders in project planning should reduce perceived process risks and may allow managers to choose to conduct an EA where the lack of significant impacts allows the option.

Hypothesis 5: Differences in the scale and efficiency of collaborative and traditional projects are a function of perceived process risk, which will result in differences in the probability that collaborative projects will be EAs.

Further, previous studies on US Forest Service fuel reduction projects by Laband et al. (2006) have found evidence of a positive relationship between the number of proposed activities and the probability of appeals. This relationship was particularly strong in the administrative region that includes parts of Idaho (Laband, González-Cabán, and Hussain 2006). Little is known about the relationship between mode of governance and legal outcomes, although some have suggested that

early engagement by diverse stakeholders should lead to reductions in appeals and litigation later (Steelman and Burke 2007)

Hypothesis 6: Differences in the scale and complexity of collaborative and traditional projects will be associated with differences in the probability that a project will be appealed, objected or litigated.

Methods

To test our hypotheses, we analyzed USDA Forest Service administrative data that track project-level planning and accomplishments for work taking place in Idaho, encompassing portions of Forest Service administrative regions One and Four, for NEPA decisions initiated between fiscal years 2004 and 2017. The projects in the dataset represented a range of activities including information on forest restoration, timber harvest, fuels reduction, wildlife and fish habitat enhancement, transportation network management, recreation planning and related activities.

Administrative data were obtained through contacts in each of the two regional offices and through FOIA requests. The data were drawn from two internal databases covering planning and on-the-ground accomplishments. Planning data were accessed from the Planning, Appeals, and Litigation System (PALS) database and were organized by NEPA analysis for a specific planning area. PALS data included attributes on project initiation and decision dates, decision type, number of elapsed days between project initiation and decision, and whether the project was appealed (objected) or litigated. Accomplishments data were accessed from the Forest Activities Tracking System (FACTS) database and were also organized by NEPA analysis, which allowed for the matching of planning and accomplishments data at the project level. FACTS data includes information on specific project activities (e.g. acres of harvest by type, acres of prescribed burning, acres of invasive plant treatment by method), date activities were planned, accomplished and completed. Using the numerical coding system associated with each activity, the authors grouped the codes into programs, i.e. Fuels, Timber, Watershed, Wildlife, etc.

Not all planned activities in a NEPA document are tracked at the project level using the FACTS database, and not all projects had accomplishments, perhaps because they have not begun implementation yet. For these reasons, our database represents a subset of the projects planned in the study area during the study period to include only those projects for which the Forest Service had made an official decision and for which activities tracked in FACTS had been entered into the database. Because of the multi-year nature of many, if not most, projects, accomplishments recorded in the dataset are current as of the day the data were downloaded by the Forest Service. Many projects in the dataset continued to be implemented after the data were downloaded, so future analyses could

reveal somewhat different results. However, we believe that including more than 10 years of data should sufficiently account for these data limitations.

Information used to identify collaborative projects within the administrative dataset were obtained from two sources. The first source was the website for a state-wide network of collaborative groups that tracks collaborative projects (IFRP 2020). The second represented an additional field in the FACTS database indicating projects associated with the Collaborative Forest Landscape Restoration Program.

Variable Description and Model Specification

Our primary variable of interest, mode of governance, was operationalized as a binary variable such that projects for which our data indicated had collaborative involvement were marked as collaborative, and the remaining projects were assumed to be planned using traditional governance strategies. We model the decision to adopt a collaborative agreement as a binary choice because we did not have information allowing for the modelling of partial adoption of collaborative recommendations.

Based upon our stated hypotheses, we identified five dependent variables of interest (*Pace*, *Scale*, and *Efficiency)* and two measures of complexity (*Activities* and *Objectives)*. The variable *Pace* represents planning timelines and measures the number of elapsed days from project initiation to signed decision. The variable *Scale* is operationalized as the total number of acres of treatments accomplished (including multiple treatments on the same acre). *Efficiency* is a calculated variable measured as the ratio of acres treated within a project to the number of planning days. Finally, we operationalize two elements of complexity; the number of unique *Activities* (comprehensiveness) and the number of programmatic *Objectives* (issues being governed) accomplished at the project level. *Activities* were distinguished from *Objectives* in that the former are nested within the latter. Programmatic objectives are associated with multiple unique activities used to achieve those objectives. Only activities whose unit of analysis was acres were included in the dataset. All five dependent variables were transformed using the natural log to improve normality.

In addition to our binary predictor variable, *Governance*, we defined five control variables to account for factors exogenous to collaborative efforts that we expect to influence our dependent variables: *Decision Type*, *National Forest*, *Year*, *Legal Outcomes*, and *Accomplishments*. The variable *Decision Type* refers to the intensity of analysis and is a nominal variable with three levels: decision memo (DM), decision notice (DN) and record of decision (ROD). Decision memos represent the level of least analysis and are decisions made pursuant to a categorical exclusion. Decision notices are the

next higher level of analysis and result from an environmental assessment. The final category, record of decision, is the result of an environmental impact statement. *Decision Type* is predicted to have a significant effect on planning timelines because each type of decision is the culmination of different levels of analysis. Therefore, to measure the impact of collaboration on each of our pace and scale variables, we control for the intensity of analysis required.

Because the Forest Service is a highly decentralized agency, we predict that agency decision-making and its influence on project outcomes will vary across national forests resulting from variations in staffing, experience and local citizen interest and capacity. The variable *National Forest* is a nominal variable with seven categories representing each of the national forests in Idaho: Boise National Forest (BNF), Caribou-Targhee National Forest (CTNF), Idaho Panhandle National Forest (IPNF), Nez Perce-Clearwater National Forest (NPCNF), Payette National Forest (PNF), Sawtooth National Forest (SNF) and Salmon-Challis National Forest (SCNF).

External expectations of land management agencies and internal agency culture inevitably change over time, as do the policies and programs that govern how agencies conduct NEPA. Over the last decade, the Forest Service has been encouraged to move towards more landscape-level planning which is hypothesized to increase planning timelines, while they have also been granted new authorities to reduce planning through new categorical exclusions that we hypothesize should reduce planning timelines. To account for these changes, we control for the year in which each NEPA document was signed. The *Year* variable was specified as a continuous variable spanning from 2004 to 2017.

The final two control variables address the expected positive relationships between the occurrence of appeals or litigation and planning timelines and between the number of acres treated and the number of unique activities and objectives associated with a project. To account for the legal outcomes of NEPA projects, that is whether a project was appealed or received objections *(Appealed)*, and whether a project was litigated (*Litigated*), we included binary measures for each. The two accomplishments variables (activities and objectives) were continuous variables (as described above) and included only in the Scale model in their log form.

To estimate the relationship between collaborative governance and measures of pace, scale, efficiency and complexity, we modeled the relationships using both generalized least squares (GLS) and linear mixed effects (LME) models. Mixed effects (intercept only) models were estimated based upon the nested structure of the dataset in which multiple projects took place on each national forest. The inclusion of *National Forest* in the mixed models as a random effect reflects previous research

documenting the high degree of variation in project characteristics across forests related to level of analysis, legal outcomes and other factors that are hypothesized to influence the dependent variables (Fleischman et al. 2020).

The methods described by Zuur et al. (2009) for modeling ecological data were followed because they were deemed the best fit for count data. Data screening, linear and mixed effects regression models and model validation were conducted using the lm, gls and lme functions in R package *nlme* version 3.1-137 (R Development Core Team 2008). For each dependent variable, we specified two models: an LME model with *National Forest* as the random effect and a GLS model with the same specification minus the *National Forest* variable to allow for comparison. Standard model validation techniques were employed including visual inspection of residuals versus fitted values, QQ-plots of residuals and plotting of residuals against each explanatory variable.

For each model we compared the model residuals and Aikake's information criterion (AIC) from a generalized least squares estimation technique against a random intercept mixed effects estimation technique for goodness of fit, both estimated using restricted maximum likelihood procedures (Zuur et al. 2009). Table 1 displays the AIC values for the GLS and LME estimation techniques and log likelihood ratios comparing goodness of fit for each pair of models. The GLS method displayed a superior fit for two models while the LME method displayed a superior fit for the remaining models. Variable significance and direction were unchanged between the two models and correlation between observations within national forests in the LME models were very low (ranging from 0.04 to 0.06), leading us to choose the generalized least squares method for all models to maintain consistency and aid in interpretation.

The equations for our Pace, Efficiency and Complexity models are as follows:

Pace/Efficiency/Complexity = f(Governance, Decision Type, National Forest, Year, Appealed, and Litigated)

The equation for our Scale model also included two accomplishments variables and was specified as follows:

Scale = f(Governance, Decision Type, National Forest, Year, Appealed, Litigated, Activities, and Objectives)

To test hypotheses five and six, a direct logistic regression analysis was performed with *Decision Type* (hypothesis five) and *Appealed* and *Litigated* (hypothesis six) as the outcomes and three predictor variables: mode of governance, acres and activities. We include the last two variables to control for project size and complexity which have been found to be positively associated with level

of analysis (Stern et al. 2014) and appeals and litigation (Laband, González-Cabán, and Hussain 2006; Jones and Taylor 1995). To test the relationship between mode of governance and each level of analysis, a binary dummy variable was created for each level of *Decision Type.* Analysis was performed using the glm function in R package *stats* version 3.5.2 (R Development Core Team 2008).

Table 2-1. Aikake's information criterion (AIC) and log likelihood ratio comparing GLS and LME models.

	AIC			
Model	**GLS**	**LME**	**L-ratio**	**P-value**
Pace	992.52	997.60	1.08	0.581
Scale	1616.5	1601.03	17.44	<.0001
Efficiency	1804.27	1800.59	9.68	0.0019
Activities	1041.64	1037.34	6.30	0.0121
Objectives	661.72	663.71	0.01	0.919

Results

Administrative data from the USDA Forest Service identified 927 projects planned or accomplished between 2004 and 2017 across all national forests in Idaho. After removing records that did not have complete information on both planning and accomplishments, our dataset contained 410 records. The majority of projects removed from the data set lacked accomplishments data indicating that either they had not reached the implementation stage or accomplishments had not been entered into the system yet. Descriptive statistics are listed in Table 2.

Table 2-2. Select variable means for collaborative and traditional projects.

		Days		Acres/Day		Acres		Activities		Objectives	
Variables	N	Collab.	Trad.	Collab.	Trad.	Collab.	Trad.	Collab.	Trad.	Collab.	Trad.
N	410	67	343	67	343	67	343	67	343	67	343
All Projects		636.4	392.6	8.5	4.8	5,410.6	1,890.2	9.1	4.6	3.1	2.1
Decision Type											
Decision Memo	257	248.2	237.8	4.4	6.6	1,086.8	1,580.8	4.8	3.4	2.4	1.9
Decision Notice	121	704.1	565.5	7.8	4.0	5,497.5	2,282.5	10.4	6.8	3.3	2.7
Record of Decision	32	1,212.9	1,363.3	12.1	2.7	14,651.9	3,663.3	13.3	9.0	3.6	2.6
National Forest											
Boise NF	117	345.2	312.4	17.8	7.3	6,141.4	2,286.7	3.8	3.9	2.6	2.0
Caribou-Targhee NF	44	-	362.4	-	6.8	-	2,450.8	-	4.1	-	2.4
Idaho Panhandle NF	368	750.0	504.2	3.5	2.8	2,611.8	1,436.1	10.7	7.3	2.8	2.4
Nez Perce-Clearwater NF	252	528.3	585.2	2.4	5.8	1,243.9	3,387.4	6.6	8.8	2.3	2.8
Payette NF	52	628.6	269.0	14.3	3.5	8,986.8	936.2	9.7	3.7	3.7	1.7
Sawtooth NF	47	250.0	319.2	0.1	4.0	24.0	1,262.2	2.0	3.5	2.0	2.0
Salmon-Challis NF	47	942.0	532.2	17.7	2.4	16,677.6	1,265.3	12.0	3.0	4.0	1.9

Our first set of regression results testing the relationship between mode of governance and our dependent variables indicated our models significantly predicted project planning timelines, size, efficiency, and complexity (Table 3) and were able to explain between 5 and 39 percent of the variation in the dependent variable, depending upon the model. Our variable of interest, collaboration, was significant in four models indicating that collaborative governance was a significant predictor of efficiency, scale and both measures of complexity.

Table 2-3. Final parameter estimates for pace, scale, efficiency and complexity models.

Parameter	Pace Model	Efficiency Model	Scale Model	Complexity Models	
	Planning Days(log)	Acres/Planning Day(log)	Acres(log)	Activities(log)	Objectives(log)
Intercept	-24.39	17.835	-66.956	52.037*	27.260
Collaboration					
NO (reference)					
YES	0.138	0.894**	0.563*	0.390**	0.267**
CONTROL VARIABLES					
Decision Type					
Decision Memo (reference)					
Decision Notice	0.865***	0.286	0.428*	0.620***	0.336 ***
Record of Decision	1.777***	-0.345	0.773*	0.577***	0.263*
National Forest					
Boise NF (reference)					
Caribou-Targhee NF	0.083	-0.566	-0.474	-0.043	0.144
Idaho Panhandle NF	0.291*	-1.223***	-1.325***	0.355**	0.106
Nez Perce-Clearwater NF	0.006	-0.796	-0.948**	0.147	0.023
Payette NF	-0.052	-0.937*	-0.960**	-0.032	0.018
Sawtooth NF	0.083	-1.213***	-0.988***	-0.132	-0.024
Salmon-Challis NF	0.258	-0.880*	-0.350	-0.248	-0.068
Year Signed					
Year	0.015	-0.008	0.036	-0.025*	-0.013
Legal Outcome					
Appealed	0.114	0.183	0.024	0.224	0.170*
Litigated	-0.218	0.198	0.023	-0.318	-0.167
Accomplishments					
Activities(log)	--	--	1.030***	--	--
Objectives(log)	--	--	0.249	--	--
R-squared	**0.386**	**0.073**	**0.378**	**0.248**	**0.185**
Adj. r-square	**0.367**	**0.045**	**0.356**	**0.225**	**0.160**

* Significant at the 5% level
** Significant at the 1% level
*** Significant at the 0.1% level

Our first hypothesis stated that collaboration would be associated with comparable or greater planning timelines to traditional projects. Our results failed to reject our hypothesis at the 99 percent confidence limit, indicating that collaborative governance was not associated with significant differences in the time to complete a NEPA analysis ($\beta = 0.138$, $p = 0.269$)(Table 2). This model was able to account for 36.7 percent of the variation in planning timelines. In addition, the *Decision Type* variable was a significant predictor of planning timelines, while *National Forest*, *Year*, *Appealed* and *Litigated* were not significant in this model.

The second hypothesis tested the relationship between mode of governance and the scale of projects as measured by the number of acres of treatment accomplished. Our hypothesis that collaboration would be positively associated with scale was supported in the final model at the 99 percent confidence limit ($\beta = 0.563$, $\rho < 0.05$). The control variables *Decision Type*, *National Forest*, and *Activities* were all significant at the 95 percent confidence limit. Within the *National Forest* variable, four forests were significantly different compared to the reference category, which was the Boise National Forest. The scale model was able to account for 36 percent of the variation in acres accomplished by project.

The third hypothesis predicted that collaborative governance would be associated with greater planning efficiency as measured by the number of acres of treatment accomplished per planning day. Our model failed to reject the null hypothesis, indicating that there is a significant and strong relationship between collaboration and efficiency ($\beta = 0.894$, $\rho < 0.001$), and in the anticipated direction. However, the efficiency model was only able to account for 4.5 percent of the variation in planning timelines.

Our fourth hypotheses that collaborative governance would be positively associated with the complexity of projects was also supported in the final models. The Activities model failed to reject the null hypothesis, suggesting that there is a moderate and significant relationship between collaboration the number of unique activities accomplished ($\beta = 0.390$, $\rho < 0.01$). Likewise, we found a weak to moderate but significant relationship between collaboration and the number of objectives met ($\beta = 0.267$, $\rho < 0.01$).

As predicted, *Decision Type* was significant in all but the efficiency model, and in the direction anticipated. The model also showed significant variation among the *National Forest* categories in terms of the pace and scale as compared to the reference category, the Boise National Forest; the only model in which *National Forest* did not demonstrate within-group variation was the Complexity model measuring the number of unique objectives. Finally, the number of unique activities accomplished as part of a NEPA project was positively associated with the number of acres accomplished, which is consistent with our hypotheses. The year in which a project's NEPA decision was signed was only significant in the activities model with a weak, negative correlation coefficient of -0.225 at the 95% confidence limit, indicating that after controlling for other variables, the complexity of projects decreased slightly over the study period.

The logistic regression results for hypotheses five and six are displayed in Table 4 and include the odds ratios and 95% confidence intervals for the odds ratios for each of the three outcomes and each

of the three predictors. A log likelihood test of the full CE model with all three predictors against a constant-only model was statistically reliable χ^2(3, N = 410) = 92.76, p < .001, indicating that the set of predictors reliably distinguished whether a project was a CE or not. According to the Wald criterion, all three predictors reliably predicted level of analysis and the odds ratio of 0.30 indicates that the likelihood that a project is a CE is 70% lower for collaborative projects than for traditional projects. The full EA model was also statistically reliable compared to a constant-only model χ^2(3, N = 410) = 62.20, p < .001, indicating that the set of predictors reliably distinguished whether a project was an EA or not. Mode of governance and number of unique activities were reliable predictors of level of analysis according to the Wald criterion and the odds ratio of 1.46 suggests that the likelihood that a project is an EA is 46 percent greater for a collaborative project than for a traditional project (Table 4). Finally, the full EIS model was significant indicating that the full set of predictors reliably distinguished whether a project was an EIS or not compared to a constant-only model χ^2(3, N = 410) = 13.75, p < .01. However, only acres was a reliable predictor of level of analysis according to the Wald criterion.

Table 2-4. Logistic regression of level of analysis as a function of mode of governance.

	CE***			EA***			EIS**		
	Odds ratios	CI 2.5%	CI 97.5%	Odds ratios	CI 2.5%	CI 97.5%	Odds ratio	CI 2.5%	CI 97.5%
N	410			410			410		
Intercept	17.85***	7.62	44.68	0.07***	0.03	0.17	0.01***	0.00	0.04
Collaboration									
NO (reference)									
YES	0.30***	0.16	0.55	2.63**	1.46	4.75	1.33	0.52	3.14
Control variables									
Acres(log)	0.83*	0.72	0.96	1.11	0.96	1.28	1.30*	1.02	1.69
Activities(log)	0.49***	0.49	0.65	1.92***	1.42	2.63	1.30	0.82	2.11

* Significant at the 5% level
** Significant at the 1% level
*** Significant at the 0.1% level

Our last hypothesis explored the relationship between mode of governance and legal outcomes. Due to the size of the data set, the expected frequencies for all pairs did not meet the minimum requirements after parsing the database by level of analysis. For this reason, we tested the relationship between mode of governance and appeals on EAs and EISs as a combined outcome. Similarly, we test the relationship between mode of governance and litigation on all levels of analysis combined as the outcome. Only the full litigation model displayed an improvement over the constant-only model based on the log likelihood test χ^2(3, N = 410) = 10.58, p < .05 (Table 5). According to the Wald criterion, only mode of governance was a reliable predictor of whether a project was litigated or not

and the odds ratio of 3.66 suggests that the likelihood that a project is litigated is 266% higher for a collaborative project than for a traditional project.

Table 2-5. Logistic regression of appeals and litigation as a function of mode of governance.

| | Appeals | | | | | | | Litigation | | |
| | CE | | | | EA + EIS | | | All Levels of Analysis ** | | |
	Odds ratios	CI 2.5%	CI 97.5%		Odds ratios	CI 2.5%	CI 97.5%		Odds ratios	CI 2.5%	CI 97.5%
N	257				157				410		
Intercept	0.07**	0.01	0.32		0.20*	0.04	0.88		0.01***	<0.01	0.05
Collaboration											
NO (reference)											
YES	2.07	0.30	8.78		1.07	0.49	2.30		3.66*	1.26	10.26
Control variables											
Acres(log)	0.86	0.61	1.19		1.39	0.89	2.23		1.31	0.97	1.79
Activities(log)	1.69	0.73	4.05		0.98***	0.58	1.68		0.78	0.43	1.42

* Significant at the 5% level
** Significant at the 1% level
*** Significant at the 0.1% level

Discussion

Collaborative governance of natural resources operates in a complex space in which demands for more meaningful and democratic engagement in decision-making interact with statutory guidelines, procedural requirements and conflicting paradigms. For this reason, the results of our study have important implications for policymakers and scholars interested in collaborative governance and the choice of policy tools by public managers. Our findings also have implications for practitioners of collaborative governance by adding empirical evidence of measurable outcomes to normative arguments, thus meeting the simultaneous goal of addressing criticisms of such efforts (Conley and Moote 2003).

First, our finding that collaborative governance has little effect on the time to complete environmental planning requirements contradicts criticisms that collaborative governance is inefficient and thus wasteful of public resources. It also may alleviate concerns by public managers that efforts to increase public involvement and build social support must come at the expense of planning costs (i.e. time). Second, our finding that collaborative governance of forests is associated with larger and more complex projects is significant because it reinforces the perception of participants that investments in collaborative forms of natural resource governance have positive influences on various measures of performance (Mattor and Cheng 2015; Bothwell 2019; Davis et al. 2017). When taken together, these results suggest that collaborative governance may lead to greater efficiency in planning by increasing the ratio of outputs achieved per unit of input invested in planning.

Our results are also relevant to policymakers and scholars interested in policy design and implementation to support organizational change. If collaborative governance is viewed as one of many tools used by public managers as a strategic way to improve policy and management outcomes, then managers need accurate information linking the theoretical and actual outcomes of various tools (Koontz and Thomas 2006). The finding that collaborative governance is strongly related to increases in scale and efficiency supports propositions by Scott and Thomas (2017) that collaborative governance is a strategic tool for achieving economies of scale and expanding the comprehensiveness of actions (Scott and Thomas 2017). The ability to communicate a clear causal theory connecting new behaviors to expected results has also been identified as an important element for promoting policy adoption and organizational change (Sabatier 1986; Ricco and Schultz 2019; Schultz, Mattor, and Moseley 2016).

Our findings also suggest that collaboration is becoming institutionalized within the Forest Service, at least in the study area, as evidence by the fact that significant relationships were found between collaboration and scale and complexity variables even after controlling for variation among national forests. The implication of this finding is that collaboration has moved beyond a dependence upon individual decision-makers within the agency, and has become a commonly accepted practice (Cheng 2006), supporting evidence that the Forest Service is undergoing a governance transition (Abrams et al. 2020).

Finally, our investigation into possible explanations for differences in scale, complexity and efficiency among collaborative and traditional projects provide tentative support for our hypothesis regarding the influence of collaboration on level of analysis. While not a direct measure of process risk, our findings that EAs were far more likely to be collaborative combined with a lack of significant difference in the likelihood that an EIS will be collaborative or not suggest that collaboration may be reducing perceived process risk within the agency and contributing towards documented efficiency gains. That is, given the evidence that process risks can trigger the perceived need to conduct an EIS (Mortimer et al. 2011), all else being equal, our results suggest that collaborative groups may be helping to lessen this effect when significant environmental impacts are not anticipated.

We also wondered whether the association between collaborative governance and larger, more complex projects was associated with a similar increase in appeals and litigation, as established in previous literature (Laband, González-Cabán, and Hussain 2006; Broussard and Whitaker 2009). The lack of significant relationship between mode of governance and appeals outcomes suggests support for our hypothesis and indicates that collaborative groups are not effectively reducing the occurrence

of appeals as some have hoped (Steelman and Burke 2007; Davis et al. 2017; Moseley and Winkel 2014). In stark contrast, collaboration was found to be a strong predictor of litigation even after holding the size and complexity of projects constant suggesting that there are unique characteristics of collaborative projects that were not captured in our models. Future research utilizing a larger dataset may allow for refinement of this model to determine if the increased probability of litigation is associated with a specific level of analysis, such as EISs, or the use of controversial CEs, for example. Additionally, further investigation into the outcomes and legal bases for lawsuits could provide important context for comparing the characteristics of the subset of collaborative and traditional projects that have been litigated with previous studies (Miner, Malmsheimer, and Keele 2014).

A number of qualifications to the conclusions drawn from this study are necessary. First, while the inclusion of collaboration as an indicator in our analysis represents one of the first of its kind, we recognize that the treatment of governance as dichotomous and mutually exclusive is theoretically useful but practically problematic. As many scholars have documented, situational contexts including the level of resources available to local Forest Service units, support from higher levels of the agency and prior experience with collaboration influence the level at which managers engage in collaborative processes (Mattor and Cheng 2015; Mattor et al. 2019; Cyphers and Schultz 2019). Thus, the treatment of collaborative and agency characteristics and resource levels as fixed misses the opportunity to understand how variations in resources, process elements, and structural attributes relate to variations in management outcomes. We believe this is a ripe area for future research.

 Related to the previous point, the finding that collaborative groups are associated with larger more complex projects may also be a result of self-selection indicating that the findings may be better interpreted as applying to a class of projects rather than a governance strategy. That is, perhaps larger, more complex projects are the most efficient in terms of outputs per unit of input. In addition, because collaborative groups often seek consensus agreements, they may avoid projects with components over which there is a high degree of conflict, i.e. ESA issues, which could account for the increased likelihood that a collaborative project will necessitate an EA rather an EIS. Conversely, the finding that collaborative projects are significantly more likely to be litigated may suggest the opposite scenario. These interpretations have different, although still important, implications when viewed from a performance-based management lens.

Finally, the moderate explanatory power of our models suggests a number of latent variables exist for which data were not available and which are hypothesized to have a significant impact on pace and scale metrics. These include changes in staff capacity within the agency, leadership transitions and changing expectations to meet administrative targets in the form of timber outputs (Schultz and

Moseley 2019). Similarly, individual attributes, namely decision makers that are willing to try new things in policy arenas where explicit direction is lacking, have also been shown to be positively associated with the level of collaboration and its outcomes (Mattor and Cheng 2015). More information is needed on how risk-taking and innovation by agency decision-makers interact with collaborative governance to moderate or enhance collaborative outcomes. We believe these represent important areas for further research.

Conclusion

This study presents one of the first empirical studies of collaboration that employs comparisons of collaborative and traditional governance regimes and quantifiable on-the-ground project outcomes. The study responds to the call by Koontz and Thomas (2006) to provide better information on the instrumental benefits of collaborative governance in order for public managers to make informed decisions about the use of public resources. Our findings dispel conventional wisdom that land management agencies must sacrifice efficiency for public involvement and thus have important implications for public policies that encourage or mandate collaboration and for recent efforts to improve environmental analysis and decision-making within the USDA Forest Service. In addition, by utilizing administrative data, this study provides a framework that can be easily replicated across time and administrative units of the national forest system.

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Chapter 3: Inside the Black Box: Exploring the role of bureaucratic agency and institutional work in collaborative governance of public lands

Abstract

There is growing consensus that transformative changes in the management and governance of environmental resources are needed to face global to local climate change threats. Such changes will necessarily require a reconfiguration of the roles of government and civil society in the design and implementation of solutions to public problems and in the governance structures defining how decisions are made and who is involved. The emergence of collaborative and networked forms of governance in the administration of national forests represents an attempt to better align governance structures with changes in the social environment. And yet, the legal and administrative context in which government actors in the United States make decisions has changed very little, supplying scant guidance regarding whether and how input from the public should be used to influence decisions and their broader outcomes. As this new paradigm in national forest administration and governance takes root, there is an opportunity and need to investigate and build theory around the drivers and mechanisms of change in state-dominant governance systems. Focusing on the US Forest Service, this study explores the actions of street-level bureaucrats working in a complex policy environment and the range of strategies they enact to create, support and undermine (resist) new institutions for collaborative decision-making in an organizational environment with inconsistent rules, incentives and sanctions. In doing so, this study uses an institutional work lens to shed light on the ways in which public managers navigate conflicting logics and how individual agency, institutional structures and organizational culture interact inside the "black box" of a federal land management agency.

Introduction

Environmental governance scholarship has long recognized the importance of institutions like state and capitalist markets for addressing environmental problems. Their importance derives in part from their relative stability over time, and the often-invisible ways in which they shape individual and organizational behavior. Organizations and the institutions that shape them are most often characterized by their enduring qualities and resistance to change. And yet, institutions and organizations do change, in response to both exogenous shocks and endogenous forces (Scott 2014). There is growing consensus that transformative changes in the management and governance of environmental resources are needed to face global to local climate change threats. Such changes will necessarily require a reconfiguration of the roles of government and civil society in the design and implementation of solutions to public problems and in the governance structures defining how decisions are made and who is involved. The complexity of social and environmental problems facing societies represent salient exogenous forces (Emerson and Nabatchi 2015a; Rittel and Webber 1973; Kettl 2015) and many scholars argue that governments are undergoing a transition from a focus on top-down governing to shared governance to meet the demands of such problems (Kettl 2015).

The move to new modes of shared governance does not, however, remove government as a critical actor (Ansell, Sorenson and Torfing 2021), but rather requires a reconceptualization of the roles of both civil society and government. Civil society actors play an increasingly important role in shared governance systems—including processes of decision-making and program implementation--through collaborative and network governance arrangements, while government actors are increasingly expected to demonstrate not only efficiency and effectiveness, but also accountability and responsiveness to the public and public values (Bryson et al. 2014).

Both the environmental governance and public management literatures acknowledge that inclusive decision-making processes produce many democratic, procedural, and social benefits (Ansell et al. 2021; Ventriss et al. 2019). And while knowledge of and political support for meaningful and inclusive forms of public involvement have grown significantly, the legal and administrative context in which public managers make decisions has changed very little (Innes and Booher 2004; Schultz et al. 2021), providing scant guidance regarding when, whether and how input from the public should be used to influence decisions (Ansell and Gash 2007; Scott and Thomas 2017). Given these conflicting pressures, little is known about how front-line workers respond to expectations of public responsiveness and citizen influence within specific administrative contexts.

This study addresses this gap by investigating how USDA Forest Service employees working at the street-level navigate the conflicting imperatives of old and new paradigms in pursuit of the

transformation of the institutions within which they work. More specifically, we explore the practical actions of Forest Service employees and how those actions contribute to institutionalization of a new governance paradigm. Using the framework of institutional work (Lawrence et al. 2013; Lawrence and Suddaby 2006; Lawrence et al. 2009), which focuses on the ways in which actors and actions influence institutions, we shed light on bureaucratic actors' capacity to act and how it is mobilized under various structural settings inside the "black box" of a federal land management agency.

Background

Evolution in Public Lands Administration and Governance

The USDA Forest Service (Forest Service) is responsible for managing 193 million acres of public land, or roughly 31 percent of all lands in federal ownership (Cubbage et al. 2017). Because these lands are distributed across large geographic areas and among 154 national forest units and more than 600 ranger districts (USDA Forest Service n.d.), by necessity the Forest Service is a highly decentralized organization. In order to ensure compliance and uniformity among its early delegates, or Forest Rangers, the agency was designed as a "line and staff" organization with a clear chain of command that delegated decision-making authority from the Chief of the Forest Service in Washington, DC to "line officers" at each of three hierarchical levels: Regional Foresters who oversee each of 9 regions; Forest Supervisors who oversee each of the National Forests within each Region, and District Rangers who oversee the Ranger Districts within each National Forest. At each level, these line officers supervise a range of professional, technical and administrative staff.

This progressive-era design encouraged line officers to manage natural resources for "the greatest good of the greatest number in the long run" (Pinchot, as quoted in Klyza 1996) with a focus on multiple-use and nonpolitical management (Bullis and Tompkins 1989). A key mechanism used to curb the perceived destructive influence of political interests among decentralized staff was the selection and indoctrination of a cadre of professionally trained foresters and the frequent reassignment of duty stations (Kaufman 2006). In the 1960s, a half-century after the Forest Service was established, its line officers were the subject of a seminal study in administrative behavior that described an organization still able to achieve a high degree of compliance with formal direction and rules, most prominently through the existence of what Kaufman called "pre-formed decisions" that were reinforced through the common professional training of its employees (Kaufman 2006). Perhaps through premonition, or mere coincidence, Kaufman's cautionary conclusion that the Forest Service's strength might become its greatest weakness proved true as the agency's narrow mission to maximize timber production began to clash with the demand for other values such as preservation and recreation (Kaufman 1996).

The passage of the National Environmental Policy Act in 1969 and other landmark environmental policies of the 1970s represented, among other things, efforts to make government decision-making more open and transparent (Achterman and Fairfax 1979). But dissatisfaction with the unidirectional nature of 'notice and comment' procedures and lack of accountability regarding whether and how public comments influence line officer decisions grew (Yaffee and Wondolleck 2003). As a result, citizens began to question the paternalistic role played by the Forest Service and call for more meaningful opportunities for public involvement in land management planning. What emerged was a new model of planning and decision-making in which citizens, community-based organizations, business owners, environmentalists and others came together in good faith to find areas of consensus or agreement on land management issues affecting their local area. Yet, as collaborative governance began to take hold,, it became clear that some of the same limitations to public influence found in public participation legal requirements (Innes and Booher 2004; Kweit and Kweit 1980; Davenport et al. 2007) were true for collaborative governance efforts as well. In particular, community-based collaborative groups found that the principles of deliberative democracy and shared decision-making were in direct conflict with legal-administrative systems that preclude the delegation of decision authority as well as the founding principles of expert decision making by apolitical bureaucrats.

A few early scholars of collaborative governance on public lands analyzed the political and administrative context for what Steelman and Ascher (1997) termed "non-binding direct input" forms of public participation (Moote and McClaran 1997; Steelman and Ascher 1997). Using the common public administration concepts of efficacy, representation and authority, these authors evaluated the opportunities and constraints to implementing "participatory democratic models of governance", concluding that while these efforts build on opportunities created in legislation, they must also overcome legal, institutional and philosophical barriers (Moote and McClaran 1997). Studies of collaborative governance have reinforced many of these early findings. Among the oft-cited barriers,frequent turnover among front-line managers (Schultz et al. 2021; McIntyre and Schultz 2020; Coleman et al. 2021), agency performance targets and timelines (Schultz et al. 2021; Schultz et al. 2019), fear of non-compliance with the Federal Advisory Committee Act (FACA) (Butler 2013; Monroe and Butler 2016) and the lack of legal authority for shared decision-making (Moote and McClaran 1997; Coleman et al. 2021; Monroe and Butler 2016; Davenport et al. 2007) have received the most attention.

In the last two decades, a series of federal policies have been enacted mandating collaboration. The theory of change enacted through this top-down strategy suggests that the failure of collaborative governance to take hold within the Forest Service can be explained by a lack of constitutive rules. In

response, a series of studies have been published applying a mix of top-down and bottom-up perspectives on policy implementation and slippage within the Forest Service (Cheng 2006; Moseley and Charnley 2014; Coleman et al. 2021; Monroe and Butler 2016; Butler 2013; McIntyre and Schultz 2020; Ricco and Schultz 2019; Cheng et al. 2015; Mattor and Cheng 2015; Mattor et al. 2020). In these studies, scholars have focused on policy designs, outcomes, the interactions of new and old policies with informal rules and norms. While most studies take an institutional approach, they have tended to focus on the ways in which institutions, such as laws and policies, influence the actions and decisions of organizational actors (Moseley and Charnley 2014; Cheng et al. 2015; Davenport et al. 2007). For example, Butler (2013) in their study of collaboration in the context of a specific policy mandate (the Collaborative Forest Landscape Restoration Program), highlights the conflicts between normative collaborative expectations regarding shared decision-making, procedural constraints deriving from the Federal Advisory Committee Act and the agency's inability to delegate legal authority for making decisions (Butler 2013).

Coleman et al. (2021) and Butler and Schultz (2019) attend to the Forest Service's quasi-formal policy of frequently moving front-line managers and the often-negative influence it can have on the performance of collaborative governance processes. This highlights a tension between organizational norms and culture that tie relocation to promotion opportunities, and new collaborative policies that aim to build better relationships and trust with place-based communities. The lack of influence citizen groups have on human resource processes such as hiring, firing and staff turnover mean that they have little control over who comes into their community. Furthermore, attempts to implement new procedures such as the use of handover memos lacked the institutional arrangements and structures necessary to ensure their use. Together, these studies highlight the formal and informal institutional structures that operate to constrain collaborative governance in practice and point to the role and influence of administrative gatekeepers responsible for interpreting policies in mediating the range of acceptable practices enacted by front-line staff.

There does appear to be some consensus among scholars that even amidst the significant barriers to change discussed above, the local- or micro-level holds the most potential for innovation and change in governance practices (Schultz et al. 2021; Moseley and Charnley 2014; Abrams 2019). Shifting the focus of attention to micro-processes of institutionalization at the local level requires analytic frameworks for attending to the experiences and interests of individuals as separate from, but still influenced by, the interests of the organization.

Koontz et al. (2004) explore this question in their book, suggesting that studies of collaborative environmental governance attend to government as both institution and actor. Their framework

suggests that governmental actors play influential roles in shaping issue definitions, the resources available to collaborative processes, and the structure of decision-making, in part through their willingness to moderate the impact of institutional pressures. They go on to suggest that the transition to collaborative governance hinges on "the way in which decision-making is enacted and the degree to which power and influence are distributed" (Koontz et al. 2004, p. 156). While attending to these changes ideally takes place at the constitutive level, in the absence of formal institutions, there is some indication that government actors are active agents with the capability to shape or challenge their organization's rules and norms.

Collaboration in a Natural Resources Policy Context

Collaborative governance of national forests occurs within a "layer cake" of overlapping and sometimes conflicting formal policies (Dana and Fairfax 1980). Beginning in the late 1960s, the US Congress passed a series of landmark environmental laws intended to safeguard environmental resources while creating greater government transparency in decision-making and increasing opportunities for public comment on the proposed activities of governmental agencies. Of these, the National Environmental Policy Act of 1969 has had perhaps the most significant influence on federal agencies and their work due to its procedural requirements for planning, analysis of impacts, public disclosure and participation in all federal activities. Indeed, NEPA has also provided the legal basis for the majority of lawsuits filed against federal land management agencies (Broussard and Whitaker 2009; Miner et al. 2014) and has led federal agencies, and the Forest Service in particular, to assume a "defensive crouch" in which the risk of litigation has come to have an oversized influence on administrative decision-making (Mortimer et al. 2011).

The role of collaborative governance in meeting the procedural and substantive objectives of NEPA are twofold: first, many have acknowledged the public dissatisfaction related to the enactment of public involvement provisions in NEPA and its failure to engage citizens in meaningful ways (Steelman and Ascher 1997). Second, the impact of litigation on the ability of federal agencies to implement resource management actions is what led many communities to turn to collaborative decision-making as a way to overcome the stalemate created by veto actors and find "middle ground solutions". Thus, collaboration was seen as a way to improve the process and content of decisions in order to meet the public's preference for good action over no action.

However, policies such as the Federal Advisory Committee Act, passed in 1972 to ensure that federal agency engagement with communities and stakeholders is open and transparent and avoids capture by special interests, has acted as a countervailing force for collaborative governance of public lands, particularly as congress began to pass legislation mandating collaboration, drawing increased

attention to efforts that had to-date been largely informal and ad hoc. As Monroe and Butler (2016) document in their study of the effects of mandated collaboration on the Forest Service and collaborative groups, fear of FACA violations influenced the structure and function of some collaborative groups as well as the level of engagement by Forest Service employees.

Thus, the passage of policies requiring collaboration have been "layered" on top of existing procedural statues such as the National Environmental Policy Act, National Forest Management Act and Administrative Procedures Act, without addressing the inherent conflicts and tensions amongst them. It is this context of conflicting logics that sets the stage for pursuing questions about the actions and decisions of individual bureaucrats operating in the "gray zones" created by the layer cake of formal policies guiding their work (Landsbergen and Orosz 1996; Wollstein et al. 2021).

Theoretical Framework

Street-Level Bureaucracy and the Modern State

Traditional theories of individual behavior within formal social organizations such as bureaucracies has painted individuals and their behavior as highly regulated through hierarchical controls such as decision premises and organizational rules and norms (Simon 1997). These rational choice theories assume the existence of clear goals and associated rules by organizations and compliance by bureaucrats. Indeed, the seminal work by Kaufmann (2006), originally published in 1960, on compliance within the US Forest Service, painted a picture in great detail of how each of these elements functioned in order to provide uniformity of action within a highly decentralized organization (Kaufman 2006).

Subsequent versions of rational choice theory considered the cognitive limits to decision-making as well as the limits to control and compliance in principle-agent relationships that result in "leakage of authority" (Brehm and Gates 1997). The former refers to the limits to both knowledge and computational capacity faced by individuals (Simon 1990) while the latter refers to the limits of supervision and resulting gap between supervisory direction and the performance of subordinates (Brehm and Gates 1997). Thus, Brehm and Gates (1997) turn the focus to individual actors and their decision to work, shirk or sabotage the interests and orders of the principle, while Lipsky argued that the decisions of street-level workers were primarily a coping response to work environments characterized by high workloads and insufficient resources.

The concept of street-level bureaucracies emerged in the 1980s and contributed a new perspective on policy implementation and the role of street-level bureaucrats – those front-line workers who engage directly with clients in their day-to-day work, are responsible for implementing new policy directives

and who, more often than not, must do so with insufficient resources (Lipsky 1980). The propositions in the book followed a "bottom-up" view of policy implementation, which sees policy implementation as a dynamic process in which discretion is inevitable and where front-line workers are connected to the centers of political and administrative control through a long "chain of command" (Maynard-Moody and Musheno 2012). A key element of Lipsky's argument was the proposition that the context in which street-level bureaucrats work is a key factor in determining the form in which policies are implemented (Lipsky 1980).

These "bottom-up" implementation theories view discretion as inevitable, if not desirable, because of the challenges associated with anticipating an endless number of contingencies, the limits to control in principle-agent relationships (Brehm and Gates 1997), and because many believe that those government employees working closest to the ground have better knowledge of what is best given local conditions and needs (Hill and Hupe 2002). Meier and O'Toole (2006) go further in suggesting that being closer to the ground may result in bureaucratic actions and decisions that are more in line with public preferences, and less reliant on signaling from politicians (Meier and O'Toole 2006).

Of course, this view is not universally shared, and both have important implications for democratic accountability. Top-down policy scholars believe that policies should be written in a more prescriptive fashion and implemented to reduce discretion and autonomy. This view, which underpins representative democracy, rests on a belief that elected officials are the most accountable to constituents. But given the "hollowing out" of government agencies through the relinquishment of government programs and functions to non-state actors over the last half-century (Milward and Provan 1994), the horse might be out of the barn when it comes to traditional notions of accountability.

What has emerged in many western democracies is a growing demand among the public for greater involvement in and influence over government decisions, a notion built on philosophies of participatory democracy, which shifts the focus of accountability and responsiveness to citizens. This reconceptualizing of the role of government as institution and actor, and reframing of its dominant values is reflected in the emerging paradigm of New Public Governance (Osborne 2010; Bryson et al. 2014). This new framework for understanding the complex challenges facing public administration thinking and practice sits in contrast with previous paradigms (such as New Public Management) in its view of government as the guarantor of public values, government's role in service to and for the public, and its interest in the role of citizens in democratic and collaborative governance (Bryson et al. 2014).

What does this mean for public administrators working at the street-level, particularly when the practice and substance of collaborative forms of public involvement remain undefined in federal laws and policies? Rivera and Knox (2022) suggest that public administrators can be caught in a 'legitimacy dilemma' in which discretionary decision that reflect public values and demonstrate public responsiveness can also challenge traditional notions of accountability and be in tension with organizational norms and values (Rivera and Knox 2022).

Organizations, Institutions, and Actors

Organizations and individuals (both of which can be conceptualized as actors) are embedded in and influenced by their social environment (DiMaggio and Powell 1983) through what scholars call institutional demands (Pache and Santos 2010). These demands can take three main forms: 1) regulatory demands from rational-legal sources like formal rules and laws, 2) institutional logics (e.g. capitalist markets, the state, democracy) that represent a set of "cultural templates" in which individual and organizational interests, identities and values are embedded (Thornton et al. 2012), and 3) the dominant social paradigm in the form of informal rules, norms, values and beliefs about how to balance the tensions between, for example, democratic values and the values of the state or capitalist markets (Friedland and Alford 1991).

According to Friedland and Alford (1991), institutional orders like democracy or the state have a "central logic" made up of material practices and symbolic constructions that act as organizing principles upon which organizations and individuals can elaborate. The bureaucratic state's central logic is thought to revolve around autonomy, discretion, and hierarchical controls, as well as symbolic constructions of the public, publicness, and the utility of public preferences, interests, opinions and knowledge. These logics are legitimized through routines and rituals that reify the logic of the state, including defining public administrators position in society as separate from other citizens.

Both organizations and institutions tend to resist change in order to maintain predictability and reduce transaction costs (Powell and DiMaggio 1991). Organizational changes have proven insufficient for influencing institutions (Bouma 1998), but changes in the institutional environment, such as changes in the dominant social paradigm, can lead to legitimacy challenges if organizations fail to adapt and change (Brown and Harris 1992). Organizational change, in this view, comes from institutional pressures manifest through internal and external actors exerting compliance pressures on organizations in order to maintain legitimacy and access to resources, both material and symbolic. External actors can be regulatory bodies, professional organizations or influential external stakeholders that provide necessary "license to operate" (Pache and Santos 2010).

Institutional pressures also come from internal sources. These include practices of hiring and filtering that operate to populate the organization with members who "adhere to and promote practices, norms and values" (DiMaggio and Powell 1983) deemed legitimate by the organization or the dominant social paradigm and were used to great effect in the early years of the Forest Service (Kaufman 2006). But as many scholars have argued, organizational members, by virtue of being part of multiple social and occupational groups, have numerous bases upon which to inform their conception of the means and goals that are appropriate and legitimate (Scott 1991, 2014). Thus, as the values associated with the dominant social paradigm change, so may the values of internal actors, which can lead to new patterns of action or response in particular situations, giving rise to new or modified institutions (Rice 2013). As Rice (2013) describes street-level bureaucrats and the welfare state, "it is not only the case that systemic changes may induce institutional change, which subsequently elicits changed patterns of action, but it is likewise possible that the aggregated autonomous actions of individual agents may change the meaning or scope of an institution and thereby also the systemic environment of which that institution forms a part" (Rice 2013).

New Public Governance represents a new paradigm for public administration that reimagines the role of government as both institution and actor and the public as both citizen and client. It also constitutes an institutional transformation to the extent that it is associated with the "creation of new social relationships and new symbolic orders" (Friedland and Alford 1991) that elevate both government and citizen from "cultural dope" to actors with agency.

Actors and Agency in Institutional Change

New institutionalism represents a "cognitive" or "agentic" turn in institutional theory that can be traced, in part, to Giddens' (1984) theories of structuration which views individuals as actively involved in the reproduction of institutions through the "reflexive monitoring of conduct in the day-to-day continuity of social life" (Giddens 1984, p. 44). This reflexive monitoring is a key conceptual element in new institutionalism, and was taken up in more detail and depth by organizational scholars who developed the theory of institutional work (Lawrence et al. 2009). In this way, it flips the traditional script by asking how individual actors influence institutions by viewing action as necessary for institutional maintenance. As a result, it situates institutional work theory in contrast to historical institutionalism and its focus on path dependence (Patterson and Beunen 2019).

Institutional work, then, seeks to study and develop theory around how action and actors affect the institutional templates and regulative mechanisms that enforce those templates (Lawrence et al. 2009). In the case of collaborative governance of public lands, these "institutional templates" are heavily influenced by the organizational structure and formal policies governing public lands, as well

as the informal rules and norms guiding public managers' and front-line workers' day to day work. Much of the scholarly work in this area has sought to elaborate on the specific ways in which the laws and policies governing the Forest Service, along with the informal rules, norms and tacit understandings that constrain individual behavior.

Institutional work theory makes two important contributions of relevance to understanding state-centered collaborative governance. First, new institutionalism marks a shift in attention from forces of institutional stability to drivers and processes of institutional change (Powell and DiMaggio 1991). Second, it re-orients the level of analysis from institutions to individuals with a focus on agency and theories of practical action. Taken together, it provides a useful framework for understanding the dynamic relationship between structure and agency, most notably by viewing individuals and organizations as actors who exploit the inherent contradictions among institutional logics—for example, democratic and bureaucratic logics—and in doing so, "transform the institutional relations of society" (Friedland and Alford 1991).

Bureaucratic Activists and Grey Zones

A number of scholars of alternative governance regimes have acknowledged that attention to the micro-processes of institutionalization by bureaucratic actors in their day-to-day work is under-studied and under-theorized (Beunen and Patterson 2019; Opara et al. 2021), rendering it "invisible" in efforts that involve state and non-state actors. The "black box" effect (Osborne 2010) can be attributed to the invisibility of government actors and actions in the translation of collaborative inputs ("agreements") into management decisions and eventual outputs (Wilson 1989). Indeed, the role of government actor behaviors and practices has been acknowledged as a gap in understanding how bureaucratic actors incorporate new scientific information into decision-making (Struthers et al. 2021a; Timberlake and Schultz 2017). And while it is acknowledged that government actors can thwart or "sabotage" the efforts of higher-level superiors (Brehm and Gates 1997; Harrison 2016), there is also convincing evidence that government actors engage in entrepreneurial activities (Arnold 2021) as 'bureaucratic activists' promoting social movement principles, for example, and working to effect change through "transformative action" (Abers 2019).

Indeed, scholars of collaborative environmental management acknowledge that government actors that participate in collaborative processes find themselves operating in "grey zones" (Landsbergen and Orosz 1996) in which they exploit areas of tension and purposefully vague policies, and in doing so, push the limits of their institutional culture and norms (Koontz et al. 2004). Of note, Wollstein et al. (2021)in their study of implementation of new administrative authorities within the Bureau of Land Management highlight the role of informal institutions in helping to make grey zones visible to

administrators, thereby promoting adaptive management. What has yet to be explored is what institutional work looks like in practice as public managers navigate formal and informal institutional constraints and opportunities.

Dimensions of agency and forms of institutional work

As the scholarly view of organizations and actors has shifted to recognize the agency of individuals working within institutional constraints, there is increasing awareness of the influence individual actors have in disrupting old or ineffective institutions, promoting and building new institutions and maintaining and reinforcing existing institutions as legitimate and valuable. This new analytical framework, termed institutional work, changes the focus of analysis from formal and informal institutions and structures to a focus on individual capacity to act amidst or despite these structures.

Actors, in this model, can be individuals or organizations. And, in contrast to institutional or bureaucratic entrepreneurship, institutional work focuses on the actions of a much broader spectrum of actors and activities, including those with limited power and very few resources (Marti and Mair 2009). What they have in common is the capacity to act, or agency. Agency implies a level of intentionality, although different schools of thought diverge on the degree to which actors are aware of, and therefore can consciously influence, their "tacit or taken-for-granted schemas of action" (Emirbayer and Mische 1998, p. 975). Emirbayer and Mische (1998) go on to theorize that agency is relational-namely to time. That is, the authors suggest three modes of agency each with a distinct temporal orientation. One form conceptualizes past experiences and interactions as providing a menu of options for selecting and applying intentionality in action. Another form is present-oriented and occurs in deliberation with others as social experiences are contextualized in real-time, and the final form is future-oriented and involves what Emirbayer and Mische call 'hypothesization', a reflexive process by which actors develop a set of alternative responses to received schemas (Emirbayer and Mische 1998). This final form is conceptualized as both goal-directed and future oriented and suggests a key distinction between institutional work and institutional reproduction.

In considering actors intentions, I also draw on an important methodological distinction made by Lawrence, Suddaby and Leca (2009) between institution-centric and work-centric approaches to the study of institutional work. The institution-centric approach focuses on explaining institutional change using the intentional actions of institutional actors, whereas the work-centric approach explores the actions and practices of actors, why and how they occurred and their impact, or lack of impact, on institutions (Lawrence et al. 2009). This study engages the work-centric approach by investigating the actions and practices of government actors and what motivated these actions. It also

connects these actions to theories of institutional change by elaborating a set of drivers and mechanisms that provide the context and the fertile ground for actors to engage in institutional work.

Boundary work

Studies of individuals and organizations using an institutional work lens have tended to focus on two categories of work: boundary work and practice work (Zietsma and Lawrence 2010; Lawrence and Suddaby 2006; Davis et al. 2021; Abers and Keck 2013; Abers 2019). Boundaries are recognized to exist among organizations and people and are useful mechanisms for defining a community of shared interests or meaning as in organizational fields (Zietsma and Lawrence 2010).

Boundary work is therefore concerned with efforts to uphold or reify existing boundaries in the form of gate-keeping or break down boundaries through boundary spanning. In the context of organizations, gatekeeping behaviors include explicit actions such as interpreting policies, rules and regulations; developing guidance for the field; and otherwise limiting the autonomy and discretion of lower-level employees. The second type of boundary work, boundary-spanning, serves to bridge or even break down boundaries between people, fields or organizations. Boundary-spanning has been shown to be a critical element in building trust (Coleman and Stern 2018), minimizing power imbalances and scale mismatches (Delozier and Burbach 2021) and in efforts to institutionalize new ideas (Davis et al. 2021). In the context of the US Forest Service, this might involve boundaries related to the traditional technocratic barriers between land managers and the public as well as among managers and street-level bureaucrats. Boundary-spanning behaviors include creating and maintaining new communication channels with new people.

Institution-building work

The second form of institutional work is concerned with the shared routines, or practices, viewed as valid within an organization. These practices or routines operate to guide behavior in particular situations and are similar to Simon's (1997) concept of decision premises, as a way to enable conformity among disparate actors. For the purposes of this study, I focus on practices and routines in the context of institution-building, which shifts the focus of attention to actor's efforts to modify existing templates or routines. I distinguish institution-building work from boundary spanning as internally focused work to create and support new norms, practices and processes that seek to reflect and uphold commitments developed through participatory processes with the public. In this way, the concept is consistent with Abers and Keck's (2013) conception of institution-building practices by focusing on the ways in which actors influence the resources and relationships in ways that not only legitimize new practices but recognize new organizational boundaries (Abers and Keck 2013). By conceptualizing institution-building as both practice and boundary work, I also seek to highlight the

recursive relationship between the two phenomena whereby boundaries "delimit sets of legitimate practices, and practices support particular group boundaries" (Zietsma and Lawrence 2010, p. 193).
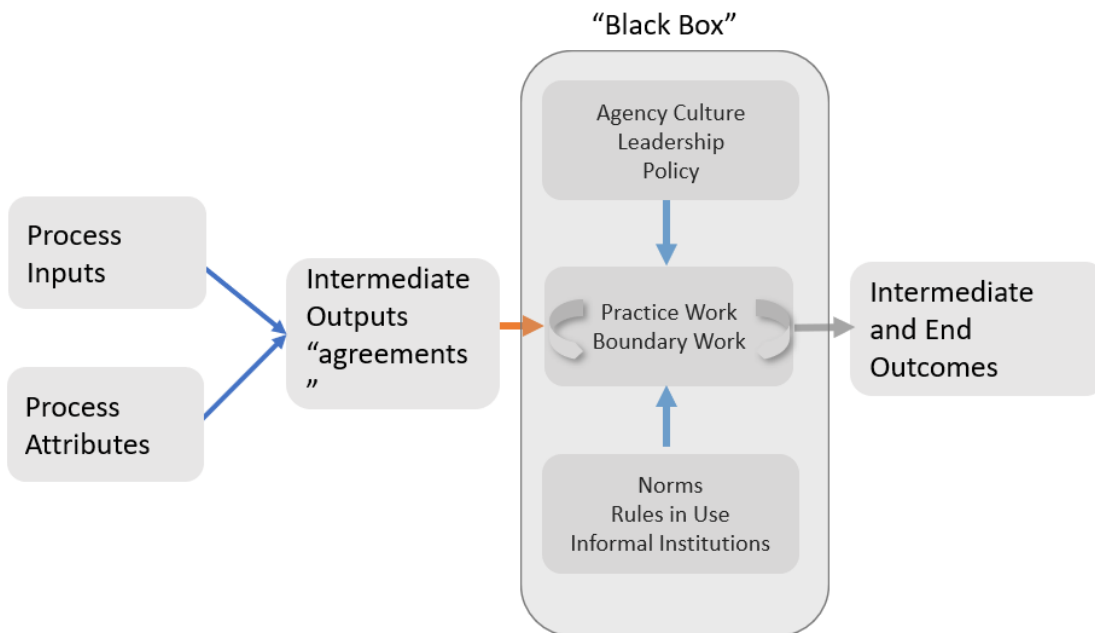
Figure 3-1. Proposed logic model explaining the role of government actors and institutional work as mediating variables in the achievement of collaborative governance outcomes.

In summary, what is missing from the extant literature on collaborative governance of national forests are the public administrators operating at the street-level and a recognition of their ability to influence institutions and organizations even while being constrained by them. This study takes a step back from the previous literature on governance transitions occurring within the US Forest Service and places it within the broader theoretical traditions of public administration and the emerging paradigm of New Public Governance. In doing so, this study also makes a case for the need to reframe the questions and level of analysis from a focus on institutions to a focus on individual action.

Methods

Study Context

Collaborative models of national forest governance take many forms depending on local context, capacity and social and political legacies. Much of the extant literature reviewed in this article on national forest governance models has elaborated the role and function of networks of state and non-state actors in decision-making and implementation. This scholarship has highlighting the work of community-based organizations to fill institutional voids, creating what Abers and Keck (2013) call

"practical authority" by leveraging networks at multiple scales in 'pursuit of community and environmental benefits' (Abrams et al. 2015; Abrams et al. 2017a).

But collaborative governance arrangements can also resemble community advisory boards in the form of collaborative groups that involve a diversity of interests and develop recommendations with local Forest Service units or in response to specific proposals or plans, but that have no decision-making authority, are largely informal, and lack the agency to act on their own. This form of collaborative governance is likely to be more common in lower-resourced regions and communities typified by fewer community-based organizations that can act at multiple social and political scales. A recent report by the Justice, Equity, Diversity and Sustainability Initiative at the Yale School of the Environment on environmental grantmaking found that, in addition to significant disparities in the gender and racial composition of those receiving grants, there was also a marked disparity in regional access to philanthropic investments, with the South Central and Interior West regions receiving the smallest shares of foundation grants by number, total value and mean grant size. When grants were analyzed by receiving state, Idaho ranked 40th in overall value of grants and last on measures of mean grant size (Taylor and Blondell 2023). A recent survey of forest collaboratives in Idaho and Montana also indicated that these groups faced significant challenges related to lack of funding, lack of facilitation, and the absence of implementing partners (Zamesnik and Seccombe 2021). For this reason, I distinguish this form of collaborative governance as state-centered collaboration because the locus of decision-making and capacity to act reside primarily or entirely with the administrative state.

Because much of the literature to-date has focused on the operation of networks, highlighting the role of community-based organizations in processes of change in national forest governance, less is known about the process and outcomes of state-centered collaborative governance. In this way, this study also fills a gap by elaborating a specific type of collaboration that is more common outside the political subsystem created through the Northwest Forest Plan, which affected regions in Northern California, and Western Oregon and Washington (Moseley and Winkel 2014; Winkel 2014). Thus, theories of change specifying the mechanisms and drivers of governance influences on management outcomes for state-centered collaborative efforts will be different than those mechanisms and drivers found in systems where communities have formalized institutions in the form of implementing partners and access to funding that enable greater capacities to act (Koontz et al. 2004).

Considering the unique institutional context in which collaboration takes place in Idaho, I elaborate the ways in which individuals accomplish institutional work and institutional change by focusing on an understudied and important actor in state-centered collaborative governance: public administrators. I begin by reviewing scholarship on theories of administrative behavior and decision-making within

street-level bureaucracies. I then consider the influence of institutional pressures on individual and organizational actors and conclude by describing how new institutional theories provide an alternative lens for exploring the influence of actors on institutions and in processes of institutional change.

Data Collection

This study was motivated by questions that could not be answered by the quantitative methods used in Chapter 2. In seeking to understand how front-line staff contributed to the observed changes in management outcomes documented in Chapter 2, I looked to qualitative methods which are better suited to answering questions about how and why actors engage in particular processes or practices, in what contexts and for what purposes. Qualitative data collection methods that seek to understand individuals' experiences in their own words, such as semi-structured interviews, can serve to explore broad questions about individual behaviors and actions in specific contexts and, while they are not generalizable to a larger population, they allow for identification of important variables and causal relationships (Yin 2003; Ritchie et al. 2014). For this study, in-depth interviews were conducted with US Forest Service employees identified as being involved with collaborative planning processes in Idaho and Montana to investigate the ways in which they navigated the tensions between institutional rules and norms and individual capacity to act.

Direct experience with collaborative planning processes was a key criterion for recruitment. Drawing on a database of collaborative projects maintained by the Idaho Forest Restoration Partnership, a total of 36 projects were identified across the 7 national forests in Idaho (Idaho Forest Restoration Partnership n.d.). Projects included in this list were initiated between 2009 and 2019. Project planning documents produced to fulfill the requirements of the National Environmental Policy Act were downloaded from national forest webpages for each of the 36 collaborative projects. Official public communications and decision documents were downloaded for each project. Within each project, the name and contact information for any Forest Service personnel listed as a deciding official or project contact was recorded in an excel database. The complete list of contacts derived from project documents comprised the initial population of potential participants. Additional participants were identified via snowball sampling (Ritchie et al. 2014), leading to a final population of 47 individuals in Idaho and Montana, of which 7 were removed because they no longer worked for the agency.

Participants were recruited via email and asked to schedule interviews via Zoom, Microsoft Teams or telephone due to restrictions related to the COVID-19 pandemic. Each contact in the database received at least one recruitment email and no more than 3 total recruitment emails. Interviews were conducted on the participant's preferred platform and were recorded with the participants permission using Recordator (for telephone interviews) or the built-in recording option in Zoom and Teams. In

all cases, automated transcripts were generated using the native platform with the exception of 3 of the early transcripts which were generated using NVivo Transcription. In total, 26 employees agreed to participate, resulting in 27 in-depth interviews that lasted from 45 to 75 minutes.

Both audio and transcription files were downloaded for each participant and saved on a password-protected computer. Participant names were removed from file names and from transcriptions once downloaded and replated with participant IDs. Each transcription was reviewed and edited for accuracy. Due to the sensitive nature of the interviews and their content, participants were granted complete anonymity. That is, participants are not identified with the Forest or District in which they work, nor are they identified by their titles. The various positions held by participants have been grouped into general role categories that describe their position within the agency and the level and types of authority they held while maintaining their anonymity. Participants included both line officers (decision-makers) and staff working at multiple levels of the organization (Table 1). Staff roles included collaboration staff (multiple levels), regional-level staff, forest-level staff including staff officers, specialists and NEPA staff, and District or multi-district (zoned) staff including specialists and NEPA staff.

Table 3-1. Number of participants by level and role.

Level	Collaboration and Other Staff	Line Officers	Total
District	5	5	**10**
Forest	9	5	**14**
Regional and National	3	-	**3**
Total	**17**	**10**	**27**

Data Analysis

The reviewed and edited transcripts were uploaded to NVivo along with any associated memos or files. For example, participant profiles created at the conclusion of interviews or directly after transcript editing was completed were uploaded to NVivo and associated with the appropriate case.

The coding process involved multiple stages and utilized a pragmatic approach that integrates both deductive and inductive coding (Ormston et al. 2014). The first stage in the analysis process took place during transcription editing. Reflection memos were generated during and/or at the conclusion of the editing process for each transcription and included reflections on the interview process, observations about the participants, emergent themes, areas of confusion or contradiction and topics

or themes that seem to represent a pattern with other interviews. When appropriate, analytic memos were created to document the author's evolving understanding of categories and themes and how they related to each other. In some cases, the coding process began in Word and then continued in the qualitative data analysis software NVivo and in others, coding proceeded entirely in NVivo.

Initial coding in both NVivo and in Word followed a deductive approach that ensured that data were organized in alignment with the research questions and the chosen theoretical frame (institutional work) (Bingham and Witkowsky 2022). The first pass involved deductive "macro-coding" to organize data into broad topical categories drawn from the literature on institutional work. Attribute coding was also conducted in order to organize the data using structural categories relevant to the subject of the research; that is, the role and administrative level represented by each participant.

The second round of coding applied exploratory coding processes with the goal of generating subcodes to represent emergent themes. The exploratory analysis stage applied in vivo and process coding procedures to track the theme or context of each narrative segment. The intent of in vivo and process coding was to focus on statements and words expressing actions related to processes or procedures as well as structural enabling/disabling conditions. Next, the in vivo and process codes within each category were analyzed as a group to further refine each category and explore its dimensions. As part of this process, the codebook was refined to describe each category and its dimensions. In this way, the analysis endeavored to stay close to the data and build theory using a modified grounded theory process within each of the broad categorical "bins".

The final stage of analysis involved reviewing and making sense of patterns and themes in order to examine findings and explain them in relation to the theoretical framework.

Results

Through in-depth analysis of interviews with street-level managers (line officers) and staff, I identify a range of critical behaviors in which actors build, modify and disrupt institutions through boundary work and institution-building (practice) work. My analysis revealed bureaucratic actors' utilizing their discretion and agency to engage in "practical actions" aimed at 1) filling institutional voids, 2) creating opportunities and advocating for collaborative influence, 3) demonstrating responsiveness to collaborative input and 4) otherwise developing strategies to overcome organizational constraints.

Boundary work emerged in two forms: gatekeeping and boundary renegotiation. Gatekeeping behaviors were identified as those actions that sought to defend existing boundaries, as defined. They included explicit actions such as interpreting policies, rules and regulations; developing guidance for the field; and otherwise limiting the autonomy and discretion of lower-level employees. Boundary

renegotiation behaviors serve to redefine or even break down the traditional technocratic barriers between land managers and the public. These behaviors included creating and maintaining new communication channels with the public—in this case, collaborative groups—sharing information in new ways through meetings, field trips, and adaptations of old forms of communication such as those associated with NEPA.

A second form of institutional work, institution-building behaviors, emerged as internally-focused work to create and legitimize new norms, practices and processes that defined opportunities for influence and demonstrated responsiveness and accountability to non-state actors. Each of these forms of institutional work took place within and were mediated by formal institutions and informal rules and norms. The interactions of individual agency and structure revealed in interviews with street-level bureaucrats are discussed in the following sections.

Formal Policy and Creative Adaptation: Defining Opportunities for Influence

The National Environmental Policy Act (NEPA) is one of the most influential policies guiding procedures for decision-making. The policy was referenced 175 times and came up in every interview, indicating that street-level bureaucrats see this policy and the procedures it mandates as a structure that collaborative governance must creatively work within. Participants characterized NEPA as the "rules of the game" in terms of the procedures they must use to get to a decision, and acknowledged that collaborative engagement represented a tension between organizational pursuit of efficiency on the one hand and collaborative governance's focus on meaningful, deliberative processes on the other:

> *"Our new NEPA policy has changed, when it comes to efficiencies and, let's just say for example, we're now required, start to finish, to get an EA done in one year, under our new NEPA efficiency policy. That does not--gosh this is an 'aha'--that does not facilitate collaboration."-Line officer [DR4]*

Yet it was also clear in nearly all of the interviews that this tension did not deter actors from collaboration. In fact, Forest Service managers and staff actively pursued strategies to create opportunities for collaborative influence in decision-making through creative adaptations to the processes and procedures required by the statute. This enabled actors to jointly create new boundaries that redefined non-state actors' opportunities for influence that, in turn, led to the enactment of new practices. For example, this district ranger describes the process of engaging in collaborative public participation prior to official initiation, or "starting the clock", on NEPA:

"[pre-scoping] is where you have a lot more latitude to collaborate. Because
after you scope…you're tied a lot more because there's timelines, there's money,
there's a lot of other issues going on. That upfront, pre-scoping collaboration is
where you need to be….you can't collaborate in a NEPA document effectively
because of the burdens and process that you're involved in." – Line officer [DR1]

In addition, interviews revealed staff engaging in what Abers (2019) terms "bureaucratic activism", by promoting new values such as procedural legitimacy that redrew the boundaries around where legitimacy is derived (the public) and the set of processes needed to support that boundary (taking more time).

"Many times, I'll be the voice of like, 'man,…this is going to burn some of our--do
we want to burn some of our [social] capital, and our relationship with our
collaborative group, to meet this timeline? Or do we have the opportunity…to
take more time and actually collaborate in more of a true, in my view,
collaborative sense?" –Collaboration Staff [CS4]

Another collaboration staff person took advantage of the fact that their position was new and had not become formalized yet and shaped their role to explicitly include working to bring collaborative recommendations and values into the projects that they planned, "*My involvement was--as a liaison--was to make sure that I accurately captured the group's input, wishes or whatever else. I try to influence our agency actions as a result of that*" [CS1]. The next section explores the variety of contexts and strategies participants used to overcome organizational constraints.

Ambiguity and Grey Zones

A number of other policies came up in the context of formal institutions that shape or structure the work of street-level bureaucrats. These included federal policies that require collaboration with stakeholders that served to provide some level of legitimacy to street-level bureaucrat's institutional work. A prime example are the Collaborative Forest Landscape Restoration Program and the Healthy Forest Restoration Act. Notably, and in contrast to the National Environmental Policy Act, policies that create conditions for enabling collaboration often lack clear definitions, rules, procedures or guidance.

These "gray zones" provided opportunities for staff to interpret the meaning and practice of collaboration and do the boundary work of defining what practices will be deemed legitimate (or not) and therefore allow public managers to utilize new authorities or access new sources of funding and resources. In the case of new authorities included in the Healthy Forest Restoration Act (HFRA), staff

used the formal institution to engage in boundary work that *expanded* the collection of activities that fell within the bounds of the HFRA:

> *"I've done a lot of work with the HFRA insect and disease [authority]...that requires a collaborative process. And we had to do a lot of kind of myth-busting, if you will, because that was like some of the initial response was 'we're not going to use this, we have to do collaboration. It's going to take too long'. And then there were some Forests who are interpreting it as 'we don't have a formal collaborative, so we can't meet the collaborative requirements, we can't use this'. And so I was doing a lot of one on one meetings with Forest leadership teams to help them understand, you know, what were the requirements for meeting collaboration, what were the other requirements for using that tool?" –Regional Staff 1 [RS1]*

In other cases, efforts to "institutionalize" collaboration led to boundary work in the form of gate-keeping that operated to *restrict* the range of practices and people or groups that were accepted. The following quote describes how the changes that were enacted by the new forest supervisor led to a marked reduction in the kinds and amount of information that could be shared with the collaborative group:

> *"Our previous Forest Supervisor was very much risk-averse and….before that we were, you know, I guess, a little bit more relaxed. So, when I was the liaison with our collaborative group, it was a very casual relationship in the sense that the members trusted us, they knew who we were at the meetings…And [then] it became a very formal relationship where we had to wear uniforms to every meeting, any field trip we had, it was very limited who could attend from the Agency….and we didn't provide a lot more than we did" (emphasis added) - Forest Staff [F2]*

In many cases, the legitimation of collaboration in federal policies was not a sufficient precondition for changing culture and norms at the street level. However, staff used the federal policies to advocate for and defend practices associated with new collaborative institutions. Specifically, these policies enabled staff to use new policies like the Collaborative Forest Landscape Restoration Program to legitimize the creation or maintenance of new norms and practices around the "opportunity structures" for engagement:

"some [staff] feel like…we are not to ask the collaborative what decisions should
be made. We are there to tell them what decision we are making and if they
support it or not… I have to remind the staff that we do, we do have to engage the
collaborative at these levels so that we are abiding by CFLR regulations." -
Collaboration Staff 2 [CS2]

Actors as Advocates and Bridging Agents

Throughout the interviews there was a strong consensus that collaboration was the way to do business. However, phrases such as "going through the motions" and "checking the box" were commonly used by participants to distinguish between collaboration as a public participation task, and collaboration as a principle that involves the willingness to accept influence and demonstrate responsiveness. The lack of a shared value around collaboration reflects the difficulty of enacting institutional change via policy alone.

Many participants described Forest Supervisors as having the greatest influence over their day-to-day work priorities and work culture. Each Forest Supervisor works under a Regional Forester and has forest-level staff that they oversee. Forest Supervisors also direct the work of District Rangers, who are dispersed among multiple ranger districts within each national forest and have their own staff. While legislative intent for collaboration provides a "gray zone" for discretionary decision-making, this can lead to inconsistent commitment to collaborative principles and institutions. Forest Supervisors, as middle-level public managers, can act as enabling or constraining forces for lower-level staff and front-line managers.

Multiple line officers expressed strong support for collaboration and described engaging in boundary work and practice work as a means to demonstrate responsiveness to external actors *and* legitimize collaboration internally, as this forest supervisor related:

"I think [there are] a couple of different ways you can [demonstrate
commitment]. I mean, one is that, you know, show some active participation.
Especially as a decision maker or line officer, you just don't have your staffs, you
know, go to collaborative meetings and/or engage with collaboratives, you need
to do that yourself to be able to show that 'yeah, I'm invested in this process and
invested in hearing what you've got to say and your participation'. And then, you
know, I think especially in our environmental documents, you need to be able to
show that 1) you listened, and 2) how you've used that feedback or input or how
you haven't used that feedback or input. If you don't reflect it, in some fashion that

people can hang on to see, read, touch they're going to think, 'ah, he just went

through the motions.' -Forest Supervisor [FS1]

However, given the high rate of leadership turnover within the Forest Service, staff described the challenges of maintaining collaboration amidst leadership changes, particularly when the orientation to collaboration was significantly different between one supervisor and the next:

"It really comes down to the Forest Supervisor. We had a Forest Supervisor that

left a couple of years ago and now we have a new forest supervisor that's very

different and has different views [on] how much the collaborative is engaged in

what the Forest Service does… And there's been, from what I understand, a little

bit of conflict going on there." Collaboration Staff [CS2]

Street-level bureaucrats working at the District or Forest level described having to navigate the sometimes-conflicting logics of collaborative institutions and norms with those of new supervisors that may not share the same values. In these instances, staff can become the common thread that maintain new practices and uphold boundaries even when they go against the priorities of their superiors, such as in this example where a collaboration staff person has the responsibility of integrating new District Rangers into the culture and norms of the Forest. While this staff person did not have influence over their supervisor's commitment to collaboration, they were able to find space to maintain some of the informal norms that had been developed around communication and the 'courtesy of the why'.

"We've been having a ton of transition with line officers and like, different

perspectives on what the level of engagement from a collaborative should be. And

it varies wildly based on the line officer. And when we don't apply those zones of

agreement to a project…what I've been encouraging those line officers to do is to

disclose, like, what is it that's not consistent with the [collaborative]

recommendations, to give them the courtesy of the why" -Collaboration Staff

[CS4]

Another dimension of institutional work involved making sure that collaborative projects were prioritized and given the resources that they needed to proceed. A number of participants reflected on the challenges they faced during the transition from the Obama to the Trump administrations. Many felt that their work was de-prioritized and, in some instances, resulted in their job titles and duties also changing to be less focused on collaboration. A district ranger described the challenge of

demonstrating responsiveness to the collaborative group when their project kept being bumped by other higher-priority projects that included more timber harvesting:

> *"I felt like throughout the Trump administration, with that change that we, that,*
> *that occurred in that timeframe, and the emphasis that occurred in that time*
> *frame, like we had, I probably burned, a lot of bridges. Like, some of our staff, not*
> *not the staff that works for me on like the planning ID team, but some of our*
> *forest-level staff. Because I kept demanding this project be on the priority list."*
> *[DR5]*

Clearly, engaging in such advocacy internally involved some personal and reputational risks that not all line officers are willing to take. However, those staff that had longer tenures and established relationships could leverage these resources into opportunities to demonstrate responsiveness in the form of finding and advocating for projects that would meet the interests of the collaborative groups:

> *"I've been interdisciplinary team lead for a lot of projects for the [national*
> *forest]. So in that role, working with multiple resource specialist I have to have a*
> *broad understanding of projects and opportunities for collaboration and so I was*
> *in a position where I knew where we could get the most bang for our buck, so to*
> *speak, working with collaborative groups, working with their varied interests,*
> *helping find projects that really spoke to their interests." [F2]*

Filling Institutional Voids

Many respondents acknowledged that one of the biggest challenges facing collaboration in Idaho and Montana was access to financial and human resources in the form of facilitation and coordination of collaborative groups. Without this basic capacity support, many Forest Service employees were concerned that the people volunteering their time to participate in collaboration will burn out, as indicated in this quote from a forest staff who also played the role of liaison to the collaborative group:

> *"Right now, we're strappin' and, and now budgets are going to be fatter for a*
> *little while, with some of these bills that are getting passed. But just making sure*
> *that we have the ability, because without that professional facilitation, it's really*
> *hard…I think we're going to burn out our, our players and I don't feel like rural*
> *Idaho.. has the monies that maybe are around bigger cities.*

I don't think our partners have a lot of funds to bring to the table with that kind of
stuff... It's harder for us to get partner funds and maybe it's because we're not
reaching out in the right way but, we've been looking into it and haven't found
anything super creative." -Forest Staff [F3]

In response, multiple participants described actions aimed at filling voids left vacant by the absence of community organizations. A few participants described efforts to secure funding for and set up agreements with third-parties to "sponsor" the collaborative effort in order to avoid FACA concerns. In one case the collaborative efforts were sponsored by a national NGO and in another case, the local unit relied upon local governments to fill that role. A second example involved securing funding or increasing internal expertise in facilitation. On one forest, a collaboration staff person described bringing in facilitation support from the Washington Office of the Forest Service, while a line officer on another forest looked to a university on the other side of the state for facilitation services. A third respondent described sending an employee to facilitation trainings to fill the need internally.

Multiple respondents described acting as the "de facto coordinator". This entailed preparing agendas for meetings—sometimes with a facilitator if the group had one. Sometimes they fulfilled this role on their own in order to keep the collaborative group operating. Forest Service employees also filled institutional voids that in other states like Oregon are filled by grant programs. This involved initiated efforts to secure additional implementation funding through internal competitive programs like the Joint Chiefs Landscape Restoration Program [DR5].

Finally, front-line workers engaged in institutional work by advocating on behalf of communities and their best interests:

"After the fires of 2017, I just, I continued to have this emotional response, you
know, to projects and so I just felt like I needed, that that should be my next job, is
to really look at a much larger landscape. And that I deserve--that our community
deserved to do that, for me to do that." District Ranger [DR5]

These examples highlight the ways in which government actors perceived capacity-related voids in their communities and attempted to fill them. However, the narratives also revealed that collaborative groups in Idaho may limit their roles, either as a pragmatic response to the lack of resources, or due to a lack of interest in filling larger roles:

"I had a member turn to me and say, 'we're not that type of group' like, 'our
collaborative is not that type of group.' And I said, 'well, what do you mean by

that?' And he said, 'well, we we work on NEPA. We do NEPA and we make

decisions and we help make decisions. And that's what our group is all about.'"

[CC2]

Discussion

Through in-depth interviews of Forest Service employees working at the street-level, this study investigated the daily practice work and boundary work exhibited through actor's engagement in collaborative approaches to national forest planning and decision-making. Within these narratives, we found numerous examples of actors engaging in "transformative" actions that operated to create and legitimize new ways of "getting work done" even in the face of conflicting logics and constraining forces. We also documented numerous ways in which the lack of institutionalization, and, conversely, efforts to over-formalize collaboration, created challenges for organizational learning and change.

Congruent with previous work, our study finds that the creation and maintenance of collaborative institutions within the US Forest Service is reliant upon the support and involvement of individual actors within bureaucratic agencies, and less on formal rules and norms (Cheng 2006; Moseley and Charnley 2014). We find that both supervisors and staff engage in institutional work in different ways and in different settings with different effects. Supervisors who supported collaborative institutions and demonstrated this support through various types of practice work and boundary work operated to make these behaviors visible and legitimate to both internal and external actors. Supervisors also supported new informal roles for their staff that included attending collaborative meetings, creating new communication practices for when and what is shared with citizen groups, organizing or attending field trips, engaging the public earlier in planning, and otherwise creating new opportunity structures for involvement.

Staff also described engaging in less "visible" work focused on building and maintaining informal rules and norms at the local level. These activities and actions sought to build internal legitimacy for more participatory forms of decision-making and required working both inside and outside the bounds of formal institutions like NEPA. Staff engagement in practice work and boundary work effectively expanded (and sometimes restricted) the range of practices deemed appropriate and valuable in relation to the agency's "core technology". For example, we found evidence that new rules had developed around the adoption of collaborative recommendations (expected versus optional) and new norms governing the ways in which the Forest Service would communicate with the collaborative, and what the collaborative could expect in terms of explanations if their recommendations were not incorporated into a decision. But these new norms and rules around collaborative institution-building were difficult to maintain due to administrative changes regarding

the devolution of decision-making down to District Rangers, which included decisions about whether and how to include collaborative recommendations, combined with high turnover in these positions such that they were no longer aware of the new informal rules and norms.

The "contingent" nature of institutional work is exposed by the constant rotation of supervisors and the "operational style" and "principled behaviors" they bring with them (Cheng 2006). Indeed, because many of the new roles were not formalized in job descriptions, but instead considered "duties as assigned", this meant that support for those roles could be taken away at any time. We documented multiple instances where staff roles, job descriptions and titles had changed over time because of changes in the priorities and level of support for collaboration among supervisors and higher-level managers. These contingencies may also help to explain how embedded incentives that exist within the agency that has been plagued by shrinking budgets and staff have led public managers to opportunistically go after new programs or authorities that can increase their efficacy.

One consequence of the high rate of turnover among supervisors and the invisible nature of much of the institutional work engaged in by staff is that it can create challenges for organizational learning. While most line officers had experience working with collaborative groups in multiple locations over their careers, fewer staff indicated they had knowledge of or experience with collaborative efforts in other regions, suggesting that moving line officers has some benefits for the organization. Yet, a few participants described a high degree of internal resistance to "blindly" adopting what others were doing, which could create conditions for staff resistance to new supervisors who bring a strong support for more participatory modes of engaging the public.

The findings related to line officer turnover also suggest that the core challenge to institutionalization of collaborative governance may lie in the inconsistent commitment among line officers rather than in turnover itself. Viewed in this light, the challenge for the organization and collaborative groups is The development of "capacity building" and "skill-building" programs for staff evidenced an organizational response that used skill deficits as the dominant frame for effecting organizational change. Indeed, some staff were appreciative of these resources while others felt that the agency had developed too many rules and too much structure leading to too much rigidity. This dynamic tension between formality and informality speaks to the limits of rules and regulations as a way to institutionalize collaboration and could be seen as the agency applying old tools to new problems. This theme highlights the need to think about new tools and mechanisms such as hiring practices, performance reviews, and stronger organizational commitment to vulnerability and risk of making a mistake.

One of the most significant contributions of this study is the case for rethinking assumptions about the agency and influence of staff within the US Forest Service. While scholarly attention to the discretion and agency of front-line staff in other fields has a considerable legacy, organizational studies of the US Forest Service have not paid as much attention to the distinctions between front line managers (line officers) and staff, often lumping them together and failing to explicitly theorize on their relationship to archetypes of the public manager or street-level bureaucrat.

The new governance paradigm requires the kind of leadership from public managers that shirks reliance on "the power of authoritative expertise" and "forsakes the simplicity of control for the complexity of influence" (Shergold 2008, 21 as quoted in Crosby, Hart and Torfing 2017). Theories of public innovation in governance also highlight the distributive nature of leadership, which could be applied to internal leadership as well, reinforcing the importance of staff exerting influence without authority in its traditional sense. This study revealed the variety of ways in which Forest Service employees working at the street-level shape collaborative processes and their outcomes. These little "d" decisions required a different kind of discretion, not based on hierarchical authority. This type of authority may be more analogous to what Abers and Keck (2013) call 'practical authority', a type of provisional authority arising from relational rather than formal mechanisms and which represents a conception of power reliant upon other actors perceiving the actions as legitimate.

One of the emergent findings from this study was the revelation that front-line workers within the Forest Service were filling roles that traditionally reside with non-state actors, such as nonprofit organizations. For example, Abrams, Davis and Moseley (2015) talk about the important role of community-based organizations in filling institutional voids left by economic restructuring in the forest sector, Forest Service capacity reductions, and other macro-level factors. The authors describe these actors as providing critical functions including undertaking institutional work previously provided by the state or private actors and operating across scales. Extant literature on institutional voids has overwhelmingly focused on voids related to enduring institutional structures that provide stability and reduce transaction costs, primarily in the context of private markets and investments. But the concept also has relevance to voids resulting from lack of community-level institutions to support their capacity to act. The interviews provided considerable evidence that in areas like Idaho where the loss of federal workforce capacity may have been smaller but where access to private or other philanthropic dollars is more challenging, front-line workers fill institutional voids through activities that are traditionally accomplished by civic organizations. This finding has implications for thinking about measures of institutional change within the Forest Service. For example, Abrams et al. (2020)

propose a set of metrics and indicators for tracking changes in governance across national forest units using data readily available or that can be attained through relatively low levels of investment.

Our findings suggest that indicators such as the use of stewardship agreement authorities, the number and value of formal agreements with partners and the receipt of competitive funds through programs such as the Collaborative Forest Landscape Restoration Program and others are actually measures of community capacity and the presence of implementing partners rather than innovation within the Forest Service. Our findings reveal that collaborative groups in Idaho operate on an ad hoc basis and do not have formal status as an NGO and are therefore not able to receive federal funding from the Forest Service. Further, lack of access to private philanthropic dollars means that these collaborative groups are also not able to bring additional cash and in-kind resources as match, making proposals for competitive federal funds less likely to be selected.

Conclusion

This study provides an important contribution towards understanding the role of actors' institutional work in support of institutional change. It also elaborates on the role of public participation in defining public values and improving policy outcomes. Building on evidence that collaborative governance is improving management outcomes, the findings suggest that collaborative governance within the US Forest Service is dependent upon actor's institutional work in support of a collection of informal rules and norms that are contingent upon the ability and willingness of both "visible" (line officers) and "invisible" (staff) actors (Opara et al. 2021) to operate within the "grey zone" (Landsbergen and Orosz 1996). In addition, the invisibility of the work and lack of sanctioned mechanisms for connecting and sharing experiences and strategies led to limited opportunities for organizational learning across administrative units and exposes a dark side to relying on individual actions to build and maintain institutions without the support of formal structures and strong organizational commitments.

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Chapter 4: The Role of Discretion and Value Orientations in Institutional Change: A qualitative study of collaborative governance in the US Forest Service

Abstract

Collaborative public participation is more than just a policy mandate. It lies at the core of an emerging paradigm in public administration that seeks to re-envision the relationship between civil society and government actors. Yet, collaborative governance presents a challenge to traditional public administration values of efficiency and accountability, creating the potential for legitimacy dilemmas. And yet, there is a growing body of empirical evidence that public administrators and managers are actively engaged in adapting to this new governance paradigm, even in the face of conflicting logics and constraining forces. Given this, what explains public administrator's efforts to support and legitimize collaborative governance and incorporate collaborative preferences into public decisions? Answering this question requires a focus not on policy outputs, but on the behavior and values of individual administrators. In this study, I analyze qualitative data on Forest Service employee experiences with collaborative public participation efforts. I draw on traditional theories of administrative behavior as well as more recent work on discretion, agency narratives and value orientations in order to elaborate the role of value orientations in discretionary decision-making. The results indicate that values and agency narratives operate to support and legitimate the institutional work of government actors operating in a weak policy environment. The study also provides an important theoretical contribution by arguing that discretion is a necessary precondition for front line workers that enables them to act on their values and create meaningful opportunities for public input, thereby creating an environment conducive to collaborative governance.

Introduction

Collaborative public participation is more than just a policy mandate. It lies at the core of an emerging paradigm in public administration that seeks to re-envision the relationship between civil society and government actors (Osborne 2010; Torfing and Triantafillou 2013; Bryson et al. 2014; Ansell et al. 2021). Collaborative forms of public participation have become a well-accepted best-practice in the academic literature on governance within the public sector. According to Innes and Booher (2004), these new models of public participation differ from traditional public participation practices in two primary ways: they are inclusive processes that seek to represent the full diversity of stakeholders on an issue, and the core mechanism for problem solving is dialogue (Innes and Booher 2007). Among the justifications for collaborative forms of public participation are improved methods for revealing public preferences, identification and incorporation of local knowledge, procedural justice and fairness and increased legitimacy for public agency decisions (Innes and Booher 1999).

However, as many scholars and practitioners have observed, the minimum legal requirements for public participation continue to fall short of collaborative ideals (Innes and Booher 2004; De'Arman 2020). Multiple existing laws require federal agencies like the Forest Service to notify the public of proposed actions and to collect public input, through what are called 'notice and comment' processes (e.g. National Environmental Policy Act, National Forest Management Act). And yet, none of these laws direct agencies to utilize the input that is collected (Hoover and Stern 2014a, 2014b; Moote and McClaran 1997).

And yet, there is accumulating evidence that collaborative forms of public participation are not only meeting many of the normative principles, but are having a positive influence on management outcomes (Scott 2015; Ulibarri 2015; Mattor and Cheng 2015; Mattor et al. 2020; Mandarano 2008; McIver and Becker 2021). This begs the question, what motivates public managers to utilize public input—particularly input resulting from a collaborative process—to influence the content of decisions? More specifically, how do structural factors and individual characteristics interact to mediate the willingness of decision-makers to incorporate collaborative recommendations? To answer this question, I draw on two well-established bodies of work on public management, policy implementation and institutional studies of organizations. These include bottom-up theories of discretion and policy implementation in street-level bureaucracies and the role of discretion and decision-premises in public organizations.

In this article, I use these theoretical frames to situate and make sense of qualitative data collected through in-depth interviews of Forest Service employees engaged in collaborative planning processes in Idaho. In doing so, I simultaneously elaborate the policy environment for collaborative governance

and discuss how it interacts with and shapes the motivational resources employees draw upon in their work to instantiate collaborative governance as a legitimate and even preferred way of doing business.

Background

Discretion and Street-level Bureaucracy

There is increasing evidence that collaborative forms of public participation in the management of public resources leads to improved performance outcomes. Traditional theories of policy implementation and bureaucratic behavior would suggest that these observed changes in performance outcomes are the result of top-down policies and rules, clear decision premises directing street-level bureaucrats to accept influence from such processes in their decisions, and cultural norms that reinforce such actions (Sabatier and Mazmanian 1979; Sabatier 1986). And yet, the decision-making environment within the US Forest Service has been shown to be much more complex, characterized by conflict over goals and appropriate solutions within the Forest Service's multiple-use mandate (Tipple and Wellman 1991), scientific uncertainty (Schultz 2008), and unclear or vague policies relating to collaborative public participation. Further, and most relevant to the outcomes of collaborative governance, the procedural policies governing many, if not most, public agencies in the US provide little in the way of clear prescriptive policies or rules regarding whether and how input from deliberative forums should be used in agency decisions (Innes and Booher 2004; Hoover and Stern 2014a).

Many scholars have disputed the progressive agenda that land management agencies should make decisions purely based on professional expertise and scientific evidence. Rather, there is general consensus that decisions are based on science as well as values and political realities, including bureaucratic influences (organizational culture and norms) (Young and Tanner 2022), legal pressures (legislation and judicial rulings) (Jones and Taylor 1995), professional training and allegiances (professional norms) and political pressures (demands of constituents) (Sabatier et al. 1995; Twight et al. 1990) with ongoing debates regarding their relative influence (Fleischman 2017; Struthers et al. 2021b; Chojnacky 2018). Thus, the iconic image of the forest ranger with autonomy to make technocratic decisions regarding the management of natural resources has been replaced with a system of public administrators that operate within a highly complex "layer cake" of laws, regulations and policies amid changing public demands for the goods and services that public lands provide and the ways in which decisions are made (Dana and Fairfax 1980).

Scholarship on collaborative governance suggests that while collaboration produces "non-binding recommendations", sufficient administrative discretion and authority combined with the organizational pursuit of legitimacy will motivate government actors to participate, resulting in changes in a management outcomes (Ansell and Gash 2007; Steelman and Ascher 1997). The logic connecting citizen influence to improved outcomes is rooted in theories in which one way administrative organizations such as the Forest Service derive legitimacy is by aligning the organization's rules and norms with the values and expectations of the public (Meier and O'Toole 2006). And yet, studies of the Forest Service have painted a grim picture of an agency plagued by declining morale (Brown et al. 2010), enduring demands for compliance with old norms and values (Chojnacky 2012; Steelman 2010), and weak incentive structures for supporting the adoption of new policies among highly decentralized employees (Moseley and Charnley 2014). What, then, motivates employees to engage in practical actions towards institutional change documented in Chapter 3?

To answer this question, I begin with bottom-up theories of policy implementation that focus on the discretionary capacity and actions of street-level bureaucrats (SLBs). First, bottom-up policy implementation theory recognizes that public administrators working at the street level are an important subject of analysis given the inevitable discretion they retain (Lipsky 1980). Michael Lipsky, a scholar on street-level bureaucrats, distinguishes SLBs from other actors according to two qualities: 1) direct interactions with citizens in the course of their jobs making them most visible to the public, and 2) their "substantial discretion in the execution of their work" (Lipsky 1980). Street-level bureaucracy theory has developed considerably since the publication of Lipsky's groundbreaking work in 1980, and this line of scholarly inquiry has much to offer for understanding the role and use of discretion in field-level decision-making and, in turn, the variable nature of policy implementation within a large and decentralized organization.

Discretion represents a core concept in theories of street-level work and policy implementation. The necessity, practice and outcomes of discretionary decision-making have been the subject of much debate (Holzer and Yang 2005). Numerous scholars regard field-level staff as closest to the ground and therefore most equipped to adapt policies to local conditions (Meier and O'Toole 2006; Maynard-Moody and Musheno 2000). The basic premise for understanding policy implementation at the street-level rests on the argument that top-down policies should be viewed as 'indeterminate' particularly when they are vague or conflicting and when public administrators are able to exercise discretion in their implementation (Hill and Hupe 2014). In this way, the discretionary actions of public administrators working at the street level are seen as constituting policy in practice. The extent to

which these discretionary decisions are influenced by individual, organizational or institutional factors so as to become systematic, elevates their need to be studied (Brodkin 2012).

Within the Forest Service, the public officials most directly impacted by these competing demands and expectations are the district rangers, forest supervisors and regional foresters, along with the professional and clerical staff that work under them. In the Forest Service's line and staff structure, the former are termed line officers, owing to their delegated authority from the Chief of the Forest Service to make decisions on projects within their administrative jurisdiction. All other employees are considered staff. Line officers have been the focus of many studies interested in how organizational controls, institutional demands and values and beliefs influence decision-making. Less attention has been paid to professional staff, such as wildlife biologists, silviculturists and other biologists, and program managers, particularly as it relates to understanding their operating environment, how institutional demands impact their work and the kinds of discretionary decision-making involved in their day-to-day work.

One notable exception are interdisciplinary (ID) team leaders, responsible for leading a planning team made up of specialists in a variety of resource areas. ID teams develop most of the content for environmental planning documents required under the National Environmental Policy Act and have been the focus of studies on the perceptions and sources of risk in environmental decision-making within the US Forest Service (Stern et al. 2010b; Predmore et al. 2011b; Stern et al. 2010a; Predmore et al. 2011a; Stern et al. 2013). Two themes from this literature are relevant for understanding discretion and how it is used to enable or constrain public influence. The first considers how organizational values and rules have served to legitimize scientific, technical and otherwise 'substantive' input from the public and de-legitimize comments that reflect public values (Predmore et al. 2011b). The second reveals that the values and beliefs of front-line workers are important motivators for enabling public influence, as well as their workload and the values of their direct supervisor (Predmore et al. 2011a; Hoover and Stern 2014b).

Facts and Values as Decision Premises

It has become clear that government actors shape the "opportunity structures" (Newman et al. 2004) for citizen involvement by influencing how issues are defined, the resources available for public participation and the structure through which participation occurs (Koontz et al. 2004; Koontz 2006). In this way, actors define which issues are "local" versus "strategic" (Newman et al. 2004), which programs to prioritize or promote (Trusty and Cerveny 2012), and the degree to which public input is used to shape management decisions and outcomes (Hoover and Stern 2014a). Thus, information gained from public participation, collaborative or traditional, does not necessarily lead to changes in

management decisions. We know very little about the circumstances or motivations under which public administrators working at the street-level decide to create opportunities for influence, be responsive to public input, and modify management decisions.

To begin to unpack this question, it is useful to return to the foundational work of Herbert Simon on administrative behavior from which we can glean conceptual definitions for decisions and decision premises. Decisions, according to Simon, are "a conclusion drawn from a set of premises—value premises, and factual premises" (Simon 1997, p. 177). Of course, Simon saw both value and factual premises as primarily deriving from organizational sources as actors engage in "role taking" through internalization of organizational objectives and values. It is from this view of individuals as rational actors that we get the archetype of bureaucrats as agents of the state.

However, more recent scholarship on front-line worker narratives have revealed a broader set of value and factual premises. Maynard-Moody and Musheno (2000) suggest that in addition to the state agency narrative, there is also a citizen agency narrative. The authors make this distinction in part to recognize that many front-line workers do not identify as bureaucrats or government workers, and do not feel that their work is significantly guided by or legitimized by legislators or organizational leaders. Rather, their work reveals that many front-line workers are guided by organizational "facts", but also social "facts" such as normative beliefs and values, derived from the dominant social paradigm, from their peers and from their experience (Maynard-Moody and Musheno 2000). A third narrative typifies the technocratic model of decision-making within bureaucratic organizations where experience and education are highly regarded as legitimate premises for discretionary decision-making (Cecchini and Harrits 2022). This "problem-solving logic" is particularly relevant to the Forest Service because it speaks to the organization's historical narrative as a "can do" organization (Kaufman 2006).

An emerging body of literature in public management has added public values as another frame in the suite of options that may be selected in a given decision environment or situation (Bozeman 2007; Nabatchi 2018). Bozeman defines public values as those that provide "normative consensus about (a) the rights, benefits, and prerogatives to which citizens should (and should not) be entitled; (b) the obligation of citizens to society, the state, and one another; and (c) the principles on which governments and policies should be based" (Bozeman 2007, p. 13). As such, these values are akin to the values that underlie what Brown and Harris (1992) refer to as the dominant social paradigm. For those concerned with issues of public administration, the public values frame raises questions about the how public values are promoted and maintained by organizational and front-line workers and through what mechanisms. This emerging narrative about public value governance reflects the

paradigm shift occurring among many western societies as they grapple with new models of governance that reconceptualize the roles of government and civil society actors in addressing wicked social and environmental problems (Bryson et al. 2014).

What is useful in recognizing that public administrators draw on multiple decision premises to inform their discretionary decisions is to underline that not all discretion is problematic and that the appropriateness of any premise may depend on the type of decisions being made. That is, while not explicitly addressed in the previous literature, decisions can be understood as formal or informal, substantive or procedural. I think of these as big "D" decisions and little "d" decisions. Big "D" decisions refer to those decisions for which formal authority is required. In the context of policies like the National Environmental Policy Act (NEPA), these formal decisions are made by line officers and bind the agency to a specific land management action in a specific place and are often associated with some degree of risk, legal or environmental. Other formal decisions might include the obligation of appropriated dollars via contracts with private firms to accomplish a land management activity. In all of these examples, discretionary decisions are tied to clearly delineated hierarchical authority structures.

In contrast, the day-to-day work of public administrators involves a series of discretionary decisions that may seem unremarkable in isolation but may have significant impacts in aggregate. For example, the results in Chapter 3 reveal the variety of ways in which Forest Service employees working at the street-level shape collaborative processes and their outcomes. These little "d" decisions required a different kind of discretion, not based on hierarchical authority. This type of authority may be more analogous to what Abers and Keck (2013) call 'practical authority', a type of provisional authority arising from relational rather than formal mechanisms and which represents a conception of power reliant upon other actors perceiving the actions as legitimate.

Value Orientations and Motivations in Public Organizations

The Forest Service was founded on a set of common values that have endured through time: "conservation leadership, public service, responsiveness, integrity, a strong land ethic, and professionalism characterized by people who know their jobs and do them well" (Pinchot 1905, as quoted in Kennedy et al. 2005). Values, particularly organizational values, can define legitimate means-ends relationships relating to organizational goals as well as operational values defining the legitimate methods or processes to be used. The Forest Service's operational values, informed by progressive-era reformers, focused on "elite professionalism" in order to curb the threats of wildfires and resource exploitation (Kaufman 2006). These values were deemed legitimate in part because they reflected the dominant social paradigm of the time (Brown and Harris 1992). But as the values,

beliefs and attitudes of the public began to change regarding public lands and the goods and services they provide, scholars began to study how the values of line officers were (or were not) adapting in response (Brown and Harris 1992, 2001; Brown et al. 2010; Cramer et al. 1993; Kennedy and Quigley 1998; Kennedy et al. 2005).

What many of these studies lacked was a clear connection to the action component of values and decision premises that derives from the presence of discretion. That is, values were treated as a proxy for organizational change, but were not linked theoretically or empirically to the more nuanced and complex act of "discretionary decision-making" (Maynard-Moody and Musheno 2012). Many scholars have pointed to the importance and influence of values in administrator decision-making within the US Forest Service (Trusty and Cerveny 2012; Cramer et al. 1993; Baker and Chapin III 2018; Farnham et al. 1995; Predmore et al. 2011a), but few have elaborated what those values are, their range, and how they relate to motivating specific actions. In this section, I outline the framework used to analyze front-line worker's narratives about the values and decision premises that guided their discretionary decisions related to collaborative public participation processes.

Rational choice theory tells us that bureaucrats are rational actors pursuing self-interest and responding to rewards and sanctions. But given that public servants have few of the "high-powered" incentives such as financial residuals that can be found in the private sector, what then motivates public servants working in arenas with "low-powered" incentives (Frant 1996)? Many scholars emphasize the important role of values in explaining behavior. Values can be understood as "important qualities and standards that are relatively stable, guide behavior, and give weight to choices about actions" (Nabatchi 2018, p. 60). Value orientations represent patterns of basic beliefs. Scholarship on values suggests that they can range from altruistic, which suggests interest in human welfare beyond oneself, to egoistic, which focuses primarily on self-interest such as costs and benefits associated with particular actions (Stern 2018). In this way, they can also be thought of as intrinsic or instrumental, the former referring to valuing something as an end in themselves and the latter valuing something as a means to some other purpose.

Few studies have explored the role or influence of values in discretionary decision-making. However, there is a rich body of public management literature on the topic of motivation in public organizations. This literature helps to connect value orientations to particular types or levels of motivation. The most basic categorization of motivation distinguishes extrinsic from intrinsic motivations for action. Extrinsic motivation derives from outside the individual in the sense that they act to achieve some "separable outcome" (Stern 2018) and has clear congruence with instrumental values. In contrast, intrinsic motivation indicates some degree of internalization between the work

being performed and one's own interests and values. Drawing on self-determination theory, these individuals, rather than acting in order to receive a reward, seek opportunities to feel competent, autonomous and secure in their personal relationships (Stern 2018). Andersen et al. (2018) suggest a third category, prosocial motivation, which derives from an individual's desire to expend effort to benefit other people, particularly individuals and groups. Some scholars have differentiated between motivation to benefit those with which the public administrator has direct contact versus motivation that derives from 'an individual's orientation to delivering services to people with a purpose to do good for others in society' (Perry and Hondeghem 2008). However, for our purposes here, I consider both examples to be dimensions of prosocial motivation.

It is clear that the values and decision premises of public administrators play a key role in determining the outcomes of collaborative public participation processes (Baker and Chapin III 2018; Meier and O'Toole 2006; Bozeman 2007). Yet, more work is needed to understand how values and decision premises of government actors motivate actions in specific contexts and how they relate to or balance the plurality of public values. Further, important questions remain about the differences and similarities between line officer and staff values and decision premises, and their influence in processes of institutional change.

Methods

Data Collection

For this study, in-depth interviews were conducted with US Forest Service employees identified as being involved with collaborative planning processes in Idaho and Montana to investigate the beliefs and values that motivated their work as institution-builders in the context of collaborative national forest planning. At a broader level, focusing on the values and beliefs of this subset of Forest Service employees operating at the "vanguard" of organizational change efforts can provide insights into their role in adaptive governance processes.

Direct experience with collaborative planning processes was a key criterion for recruitment. Drawing on a database of collaborative projects maintained by the Idaho Forest Restoration Partnership, a total of 35 projects were identified, spread across the 7 national forests in Idaho. Websites for each national forest were used to search for project planning documents produced as required by the National Environmental Policy Act. Official public communications and decision documents were downloaded for each project. Within each project, the name and contact information for any Forest Service personnel listed as a deciding official or project contact was recorded in an excel database. The complete list of contacts derived from project documents comprised the initial population of

potential participants. Additional participants were identified via snowball sampling, leading to a final population of 47 individuals, of which 7 were removed because they no longer worked for the agency.

Participants were recruited via email and asked to schedule interviews via Zoom, Microsoft Teams or telephone due to restrictions related to the COVID-19 pandemic. Each contact in the database received at least one recruitment email and no more than 3 total recruitment emails. Interviews were conducted on the participant's preferred platform and were recorded with the participants permission using Recordator (for telephone interviews) or the built-in recording option in Zoom and Teams. In all cases, automated transcripts were generated using the native platform except for 3 of the early transcripts which were generated using NVivo Transcription. In total, 26 employees agreed to participate, resulting in 27 in-depth interviews that lasted from 45 to 75 minutes.

Both audio and transcription files were downloaded for each participant and saved on a password-protected computer. Participant names were removed from file names and from transcriptions once downloaded and replaced with participant IDs. Each transcription was reviewed and edited for accuracy. Due to the sensitive nature of the interviews and their content, participants were granted complete anonymity. That is, participants are not identified with the Forest or District in which they work, nor are they identified by their titles. The various positions held by participants have been grouped into general role categories that describe their position within the agency and the level and types of authority they held while maintaining their anonymity. Participants included both line officers (decision-makers) and staff working at multiple levels of the organization (Table 4-1). Staff roles included collaboration staff (multiple levels), regional-level staff, forest-level staff including staff officers, specialists and NEPA planners, and District or multi-district (zoned) staff including specialists and interdisciplinary (ID) team leaders.

Table 4-1. Number of participants by level and role.

Level	Collaboration and Other Staff	Line Officers	Total
District	5	5	10
Forest	9	5	14
Regional and National	3	-	3
Total	**17**	**10**	**27**

Analytic Process

The reviewed and edited transcripts were uploaded to NVivo along with any associated memos or files. For example, participant profiles created at the conclusion of interviews or directly after transcript editing were uploaded to NVivo and associated with the appropriate case.

The coding process involved multiple stages and utilized a pragmatic approach that integrates both deductive and inductive coding (Ormston et al. 2014). The first stage in the analysis process took place during transcription editing. Reflection memos were generated during and/or at the conclusion of the editing process for each transcription and included reflections on the interview process, observations about the participants, emergent themes, areas of confusion or contradiction and topics or themes that seem to represent a pattern with other interviews. When appropriate, analytic memos were created to document the author's evolving understanding of categories and themes and how they related to each other. In some cases, the coding process began in Word and then continued in the qualitative data analysis software NVivo. In others, the coding proceeded entirely in NVivo.

Initial coding in both NVivo and in Word followed a deductive approach which ensured that data were organized in alignment with the research questions and the theoretical frame (Bingham and Witkowsky 2022). The first pass involved deductive "macro-coding" to organize data into broad topical categories drawn from the literature on value orientations and agency narratives. Values coding was conducted in order to identify the range of values expressed by participants.

The second round of coding applied exploratory coding processes with the goal of generating subcodes to represent similar themes. The exploratory analysis stage applied in vivo and attribute coding procedures to track the theme or context of each narrative segment. The intent of in vivo and values coding was to focus on statements and words expressing values or attitudes related to processes, procedures or other actions they engaged in. Next, the in vivo codes within each category were analyzed as a group to further refine each category and explore its dimensions. As part of this process, the codebook was refined to describe each category and its dimensions. In this way, the analysis endeavored to stay close to the data and build theory using a modified grounded theory process within each of the broad categorical "bins".

The final stage of analysis involved reviewing and making sense of patterns and themes in order to examine findings and explain them in relation to the theoretical framework. These themes are presented in the next section along with participant quotes to support the findings.

Building on the typology of agency narratives and motivations in public organizations, I sought to develop a more comprehensive understanding of the values that influence decisions related to public

involvement and collaboration. I identified three categories of values and motivations: self-determination values, prosocial values and organizational-instrument values (Table 4-2). Self-determination values are defined by a desire for autonomy and to feel effective in one's job. While self-determination values are not purely rational, in that they are not dependent upon rewards or external incentives, I relate these values to the professional agency narrative where employees expressed a sense of efficacy in one's job through their ability to utilize their professional training and experience. A second set of values focused on the extrinsic form of motivation for job security and job benefits as well as organizational legitimacy. I label this value orientation as Organizational-Instrumental in that actions are seen as a means to an end that will either ensure job security by following the rules or by increasing the legitimacy and "license to operate" which reinforces personal job security. This decision premise is a state-centered interest. The final category addresses prosocial value orientations in which actors seek to create value or benefits for others in society, even when they are costly to the individual. This motivation aligns with Bozeman's (2007) conception of public values as a decision premise.

Table 4-2. Value orientations, decision premises and example in vivo codes.

Decision Premises	Professional agency narrative	Public values narrative	State agency narrative
Value Orientations	Self-determination values (autonomy, self-efficacy, relatedness)	Prosocial values (benefit to others and society, even when costly to individual)	Organizational Instrumental Values (legitimacy, motivated regulation)
In Vivo Codes	*"opportunity to practice my skills"*	*"help [a community member] out and look him in the face on Friday night, after a beer and say, 'oh yeah, we got that done."*	*"taking that extra step and effort to work with the public could help future projects"*
	"actually do something"	*"I needed to be in service"*	*"requirement of using the new Healthy Forest Restoration Act authority"*
	"play in my backyard"	*"we work for the public"*	*"one of those things we 'have to do'"*
	"personal satisfaction"		*"[collaboration] is in my current position"*
	"I want to be challenged in my job"	*"[collaboration leads to] outcomes that better reflect what our communities and our public really are looking for"*	*"I go to [collaborative] meetings when I am requested"*
	"if I failed to collaborate….it would affect my performance"		

Results

Participants expressed a range of self-determination, prosocial and organizational instrumental values, which are summarized in Table 4-2. Nearly all participants expressed more than one value orientation. Prosocial value orientations were most evident when participants talked about the extra work required to engage the public in collaborative processes—in terms of both time and effort. While these costs were readily acknowledged, these actors expressed strong identification with the value of collaboration to their communities or society. For example, a forest-level staff related:

> *"we started meeting with the collaborative, we took in all their interests and we kind of adapted the proposed action to, you know, to address all of their different interests or concerns or whatever……And so it, so it took a little bit longer to get through the process, whereas we could have just gone out with scoping right away. But I felt like we improve the project and we, and we started, we started to build trust and relationship with our public and advocates for the project." -*
> *Forest staff [F2]*

A second set of participants expressed value orientations that aligned more with self-determination theory in that they were tied to values of autonomy and self-efficacy. For example, participants talked about the motivation to collaborate as providing greater job satisfaction:

> *"for me personally, there was no incentive, I just got more work out of the deal and I got to kind of play in my backyard here and actually exercise my brain and my interest in getting more done." -Collaboration Staff [CS1]*

This same participant went on to describe how "getting more done" also reflected the way in which their work is related to the well-being of others in the community and the generation of community benefits:

> *"some people are looking at it as like, hey, you know, my neighbor who's the outfitter that's on the collaborative group, can't get into his hunting camp because the trails all blew shut. Here we're sitting on millions of dollars that we could potentially use to help these people that really hate us because we don't do anything. And now I can actually help him out and look at him in the face on a Friday night, after a beer and say, 'Oh yeah, we got that done'." -Collaboration Staff [CS1]*

Two final types of regulated motivation were expressed in the narratives but were less common. The first was associated more with NEPA staff where involvement in collaboration was directly tied to extrinsic motivation and state narratives in the form of policies, rules and regulations. These narratives were less likely to involve expressions of values and more likely to talk about collaboration as something that is expected or mandated, another procedure for which they must "check the box". The last example of regulated motivation was expressed by participants when talking about the motivations *of others*. These narratives described managers and staff they had worked with who were "superficially" motivated by personal self-interest, who would exploit programs or "fads" that are deemed "sexy" as a means to secure promotions or other personal gains.

Organizational and Personal Values

Throughout the interviews it became evident that a significant gap existed between organizational culture and the value orientations of participants regarding collaborative or participatory public involvement. For most participants, collaboration was more than just a set of policy mandates; rather, it was expressed as "the right" or "preferred" way to do business. While recent collaborative policies had elevated collaborative public participation to at least an optional component of the organization's "core technology", leadership commitment was characterized as uneven or fleeting, at best. As a result, managers and staff working at the street level pursued strategies to maintain the legitimacy of collaborative institutions based on their value orientations.

First, there was a strong and consistent theme regarding the influence of Forest Supervisors and higher-level managers on the culture of collaboration, what the expectations are, and ultimately, to what extent collaboration is supported. One important way in which this influence is exerted is through the extent to which Forest Supervisors grant discretion to District Rangers to shape the opportunities for collaborative public participation. In some cases, Forest Supervisors were described as providing a blanket expectation that lower-level District Rangers engage in collaboration. In other cases, Forest Supervisors even expected decision-makers to adopt collaborative recommendations to the greatest extent possible. These expectations created some tension by reducing flexibility on the ground, but lack of consistent expectations provided an "out" for lower-level line officers that didn't want to engage in collaboration.

Front line workers with intrinsic motivations for participatory decision-making or identified regulatory motivation to engage in collaboration because the agency or superiors/peers expect it *can* lead to institution-building practices. For example, line officers with the appropriate motivation engage in a variety of forms of practice work (see Pennick, in prep) including attending meetings, listening and engaging in public deliberation, creating opportunities for staff to reinforce collaborative

values, creative adaptations of formal processes to engage the public before initiating formal NEPA procedures, etc. Staff also go to meetings, share information, sometimes plan meetings and facilitate conversations. Staff can be motivated through intrinsic and as well as regulatory motivations, as in the example from Pennick (in prep) in which staff worked to uphold new norms supporting collaborative institutions in the face of turnover among their direct supervisors and among their peer line officers (District Rangers).

NEPA staff may express external regulation or introjected motivation in which they go along with the incorporation of collaborative values into project documents because they know that line officers expect it and may even attempt to internalize it for the sake of the job, but not accept it as part of their own value system.

Conflict Between Professional Agency and Public Value Orientations

The general tone of the interviews reflected a recognition among staff that the agency's core technology was changing and many were willing to make the change but were unsure how to proceed given the strong legacy of technocratic decision-making and the complex layer cake of policies that have not caught up. Many felt that engaging the public in more meaningful ways was the right thing to do, but neither statute nor administrative rules provided guidance regarding how to balance what is best for the resource with what collaborative public participation processes revealed as of value to society. Some responded to this ambiguity and tension by relegating collaborative influence to issues of "how" the agency should go about meeting its objectives, rather than influencing "what" those objectives should be.

> *"..that's the difference, I mean…...[w]e've got to bridge that gap between the professionals who know what is needed, for the resource--it's the best thing for the resources--and the public, which has an opinion, that in some cases can help guide us to more politically acceptable solution, but not necessarily benefit the resource need that was initially identified. We have to bridge the gap between the public's opinion and the professional need." -Forest staff [F4]*

At a broader level, these dilemmas reveal the tensions between the Forest Service's cultural investment in rational planning that espouses a belief that science, and professionals trained in scientific management, can identify optimal solutions for meeting land management objectives. Yet, as Rittel and Webber and many others have acknowledged, land management is a social endeavor in that it is "wicked" and defies "definitive and objective answers" (Rittel and Webber 1973).

Missing Organizational Incentives and Rewards

Perspectives varied on the role of incentives as a motivational tool, although most respondents agreed that incentives to collaborate were absent in their current working environment. Some respondents felt that across the board incentives to collaborate were not appropriate because not every situation calls for collaboration and not every community is able to collaborate in the same way. Funding made available through competitive programs such as the Collaborative Forest Landscape Restoration Program (CFLRP) or Joint Chiefs Landscape Restoration Partnership that require or prefer collaborative development of projects was viewed as an effective incentive. However, with the flood of funds going to the agency as a result of the Infrastructure Investment and Jobs Act signed into law in 2021 (Charnley et al. 2023), money may not play the same role anymore.

> *"I felt like [programs] like CFLRP, Joint Chiefs…those things have been the carrot to work with at least formal collaborative groups….As we move towards the infrastructure bill funding, I don't know that [funding] will continue to be the carrot." -Collaboration Staff [CS5]*

A second form of incentive was the role of job descriptions and performance evaluations. When asked about how collaboration fit into participant's formal job descriptions and performance evaluations, nearly all respondents, with the exception of collaboration staff, indicated that collaboration fell into the informal category "duties as assigned". For many staff, this meant that collaboration activities were performed in addition to their primary job duties.

In the case of line officers, many remarked that collaboration was "the way we do business now" but followed this up by saying that "there aren't a whole lot of incentives out there other than self-satisfaction" [FS1]. Further, the degree to which it was reinforced or incentivized tied more to their ability to "get work done" and meet their targets than to the methods they used to be successful:

> *"It's not, like, a line item in my performance evaluation. It usually shows up, it's a, it's a discussion. We're always continually talking about it, since I can remember, in my performance. So I think it, it's there, as an expectation. But I think if I failed to, like, I think if I failed to collaborate that there wouldn't be, like, 'you failed to be a good ranger'. But I think I would probably, because of the community I work in, I think I would fail to be successful in my position. And so, I think it wouldn't maybe be in the performance [evaluation], I just think I'd become an ineffective community member and unable to get my projects through.*

So I think it would eventually affect my performance, because I wouldn't be
performing" -District Ranger [DR1]

These descriptions by managers did not always conform with the way staff described the culture of collaboration. Staff agreed that there was no real personal incentive or reward associated with engaging in collaborative planning processes. Perhaps as a result, some staff described support from direct supervisors, while others were unsure whether they were allowed to engage with collaborative groups.

The informal nature of collaborative institutions meant that it could be hard for new staff or staff in certain roles to understand the unknown or unspoken rules regarding how and whether they could engage in these new institutions.

"I've had one other experience [working with a collaborative]…and I guess I
could say it's a lot different than how it is handled here…. I actually participated
more in the full group meetings rather than the committee meetings… and I
always went on [field trips] for those projects I was assigned to…. I just don't
have the same role [here] as I did there. I don't feel like I know who is supposed
to have that type of engagement with the [collaborative]." – Forest Staff [F1]

Even for those staff that had support or engaged in a more subversive way in building and supporting collaborative institutions, the fact that much of that work was rendered invisible by virtue of being informal and undertaken by staff who do not move as often, limited opportunities for institutionalization through organic processes of organizational learning. There was also a recognition expressed by participants that organizations "treasure what they measure" and if the Forest Service really wanted employees to engage in collaborative public participation processes, they should integrate evaluation of these activities or efforts into formal performance evaluations:

"I'm a big fan of using performance plans to affect change. And I think if you
really care about something, that's where you put it, because that makes everyone
care about it." -Forest Staff [F5]

Organizational Instrumental Values

A number of respondents described collaboration primarily or exclusively in terms of the value it provided to the organization, reflecting a form of regulated motivation, and reinforcing the theme that the ends matter more than the means. These included: reduced litigation, a public that better understood their processes and rationale for projects, generally more support and less conflict, and

how collaboration translated into increased support from elected officials as well, through better access.

Respondents were able to connect the desire of collaborative groups to engage in projects that reflected the mix of interests represented in the group, leading to an increase in complexity, to an increase in risk of litigation as well. In this way, multiple respondents saw collaborative groups as instrumental in improving the projects, but also providing support in legal proceedings (acting as intervenors) in the event that a project was litigated:

> *"Typically we get the most bang for our buck with our larger integrated restoration projects that's where most of the members have some kind of stake and interest in it. And it's also going to be a project that's the most controversial that we'll, we'll let, we'll probably need support for. So they can advocate for us, or write letters as intervenors, or they can provide feedback that will improve our proposed action" -Forest Staff [F2]*

In some cases, the feeling that the collaborative isn't changing the trajectory or content of decisions may be linked to the inability—due to geography or other reasons—to keep the environmental/conservation community engaged. Multiple respondents talked about the challenges of involving these interests when located far from population centers and areas with higher profile and higher stakes collaborative efforts going on. On these forests and districts, respondents were more likely to reflect regulated motivations for engaging in collaboration motivated by funding that tied collaboration to funding opportunities, rather than direct benefits to their work or engagement resulting from a more public value orientation.

For other respondents, the motivation to engage in collaboration was largely a result of the expectations of their superiors, that is, it was expected of them by the organization, rather than being self-motivated either by instrumental self-interest or a more public value orientation of what's best for society/community. Yet, as discussed above, the failure to integrate collaboration into performance evaluations meant that this expectation had not been fully institutionalized, allowing for support to be conditional upon the collaborative processes' success meeting the organization's instrumental goals such as acres treated and timber volume sold.

Connecting Values to Actions

There are two critical ways in which government actors utilize their discretion to support collaborative institutions. These could be thought of as little "d" decisions, and big "D" decisions. The former refers to decisions that define the opportunities for collaborative influence on government

decisions. These little "d" decisions take the form of a willingness to accept influence and in turn, engage in institutional work directed at defining opportunities for influence and demonstrating responsiveness (Pennick, in prep).

> *"I think the expectation was that we do what works, you know? We do what makes the public feel involved and listened to and that it's not--this is what I really appreciated—that it wasn't just a part of a process. Like a, it wasn't just a part of a NEPA process where we checked off that we did scoping, or we checked off that we did this." -Forest Supervisor [FS4]*

Big "D" decisions refer to those decisions for which formal authority is required. Thus, the existence of discretion is a necessary precondition for front line workers that enables them to act on their prosocial and self-determination values and create meaningful opportunities for public input, which creates an environment conducive to collaborative governance.

What often gets missed in the "barriers" literature is that the same bureaucratic actors who reveal the barriers are also finding ways to thread the needle and pursue social movement values amidst structural constraints. For example, one line officer described the challenges of the agency's conditional or weak commitment to collaboration: first, that collaboration and relationship-building were not included in DR position descriptions (until very recently) making it hard to potentially justify to a non-supportive superior, and that Forests and/or Regions do not always prioritize collaborative projects in the pipeline, letting them get bumped or back-burnered. Yet, this same line officer had slowly, over several years, built a program of work addressing what they saw as salient public values related to wildfire adaptation. Rather than being motivated by organizational compliance pressures or personal self-interest in promotion, the respondent described their motivation in the following quote:

> *I used to say, you know, show me in my job description, where it is, in my job to understand, you know, what's going on with the recreational groups and the timber industry, and trying to understand how they collide, or don't. And, you know, connecting people. I really viewed that being my job, as kind of a relationship connector. So, my, my big complaint at the time was, wait a minute, how can this not be the most critical thing that I do? I mean, yes, it's important to have targets and show that to Congress. I totally understand that. But how do we get there? And how do we build these relationships and emphasize it? -District Ranger [DR5]*

Discussion

The results of this study revealed that in the face of tension between personal and organizational values, managers and staff working at the street level pursued strategies to maintain the legitimacy of collaborative institutions based on their value orientations. These value orientations motivated government actors to use their discretionary capacity to accept influence and engage in actions that demonstrated responsiveness in the absence of organizational incentives or rewards. And while multiple value orientations motivated actor engagement in and support for collaborative governance, the degree to which these were motivated by the intrinsic value of collaboration in principle versus more instrumental values has important implications for institutional change and resilience.

For example, prosocial values focused on the "common good" had strong alignment with decision premises based on the public value narrative. Prosocial values created the motivation for actions and decisions that demonstrated a willingness to accept influence from the public, including creation of meaningful opportunities for the public to provide input and engage in deliberative dialogue. The expression of prosocial values was also related to a willingness to expand the boundary around the kinds of information deemed valuable. That is, it reflected an interest not just in "substantive" comments or input, but an interest in public preferences and values, which has been largely delegitimized as the decision-making process has become more formal and regulated. In this way, the prosocial values of individual actors reflected an agency narrative aligned with the emerging public administration paradigm in which government is accountable to the public and government decisions are expected to reflect public values.

Participants also expressed strong narratives around the value of feeling effective at their jobs and seeing results on the ground. For many of these participants, collaboration was a means to an end, rather than being grounded in concepts of participatory democracy or procedural justice, indicating a contingent approach where actors were willing to support collaborative public participation so long as it continued to increase their sense of efficacy and ability to get work done. Both prosocial values and self-determination values were particularly critical for maintaining institutions in an organizational context that lacked incentives and rewards and served to making up for the weak commitment to collaboration by the organization. These themes help to build a proposition that the Forest Service as an agency has failed to fully commit to collaborative governance as a way of doing business which has undermined processes of or efforts towards institutionalization.

From an organizational theory perspective, the Forest Service's level of commitment to collaboration suggests it has been enacted in a somewhat "ceremonial" way through discursive strategies without ensuring that this support has evenly trickled down to front-line workers in the form of consistent

expectations, job descriptions, rewards or incentives. We find that front-line workers pursue collaborative public participation and related institution-building strategies through their discretionary capacity to shape the opportunity structures for public influence, which is motivated by a combination of intrinsic and extrinsic motivational values, and to a far lesser extent regulated motivation deriving from organizational instrumental values.

In evaluating the role of value orientation as motivation for institutional change in governance processes, it is important to recognize both the strengths and the hazards that any value orientation may present (see Table 4-3). For example, self-determination values can be highly effective in promoting institutional changes related to collaborative governance when it fulfills both personal and organizational goals, which may also lead to greater job satisfaction and retention. However, individuals may shirk these expectations to engage in collaborative governance if they do not feel it meets their needs for autonomy or efficacy in their job. One example is NEPA staff who may assess their job satisfaction and efficacy on whether a decision document meets the policy's disclosure requirements, which may not be dependent upon or improved by collaborative governance processes.

Individuals motivated by organizational instrumental values, or regulated motivation, may be incentivized to engage in collaborative governance processes if the organization's goals, the goals of their direct supervisor, and cultural norms are in alignment. The hazard is that if organizational commitment to collaborative governance is conditional on, for example, improvements in pace and scale of management outcomes, or overly tied to a specific administration's agenda, then institutional change efforts will likely falter if any of these conditions are no longer being met.

The last category of motivation, prosocial value orientation, has the benefit of not being dependent upon the alignment of institutions across scales, a condition that previous scholarship has shown to be difficult to attain (Steelman 2010). Nor is it dependent upon administrative priorities or management outcomes. But failure to align with the priorities of political elites or produce expected outcomes can create accountability and legitimacy dilemmas for an organization (Rivera and Knox 2022) if collaboration is valued as a means at the expense of its end results.

Table 4-3 Benefits and weaknesses of value orientations as motivations for institutional change.

Value Orientation	Strength	Weakness
Self-determination	When goals align, fulfills both personal and organizational goals and increases job satisfaction	Individuals may shirk expectations to collaborate if personal goals are not met
Organizational-Instrumental	Can work well if there is alignment among institutions at multiple levels	Commitment to collaboration maybe be conditional on delivering outcomes or a particular administration's agenda
Prosocial	Does not require organizational rules, incentives or rewards	May sacrifice efficiency or other performance outcomes

The results of this study highlight the challenges that public administrators face as they attempt to balance personal and organizational goals and values. Within the US Forest Service, front line workers must navigate the tensions between public values and professional agency while operating in a policy framework that continues to rely on a rational planning paradigm (Timberlake et al. 2021). At a broader level, this work also underlines the need to distinguish between "regime values" regarding the relationship between government and society, and the public values that define the normative basis of administrative behavior (Wiersma Strauss 2021).

This study is not without its limitations. The focus on Forest Service employees that had experience with collaborative public participation processes may have led to some degree of self-selection bias that led people who are very supportive of collaboration to be more likely to agree to participate. It could be argued that many staff and line officers do not always choose whether to be involved in collaborative projects, either because they adopted them from previous line officers, or because, in the case of staff, they were assigned to these projects. However, we cannot control for the possibility that employees who value collaboration seek out jobs on forests known for having a strong culture of collaboration.

Conclusion

This study endeavored to explore the contentious role of values in discretionary decision-making among government actors working at the street level. In doing so we also sought to connect values to action through the concepts of motivation and decision premises as a means to further the theory

development about the role of values in decision making and how the values of individual public administrators are tied to macro-level values regarding the public sector's "expected and legitimate contributions to society" (Wiersma Strauss 2021, p. 379)

At a more practical level, this study sought to understand what motivates government actors to engage in practical actions aimed at the creation, maintenance or disruption of institutions as seen through the lens of collaborative public participation within the US Forest Service. In doing so, I drew an important distinction between formal and informal decisions based upon their relation to formal authority and organizational position and considered the implications of further studies focused on the motivation for action in discretionary decision-making.

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Chapter 5: Conclusion

Overview

In the following chapter, I discuss how the three empirical chapters respond to the research objectives, review key themes across the chapters and comment on their implications for practitioners, for the Forest Service, and for future research. This dissertation research enters the conversation after multiple decades of research and practice in collaborative governance of national forests. And yet, this research addresses fundamental questions about the practice of collaborative governance in low-resourced regions, the experiences of Forest Service employees operating at the street-level and the ways in which they are changing the way they do business. The role organizational and individual values play in motivating or constraining their efforts is also addressed.

This effort also had the ambitious goal to challenge the hegemonic narrative of an agency unable or unwilling to change or adapt in the face of new societal demands and expectations. Studies of collaborative policy implementation within the Forest Service seemed to all circle around the formal and informal institutional barriers to change, reducing Forest Service employees to a rule-following archetypal monolith. This dissertation, then, is an attempt to give credit where credit is due; to make individuals the subject of my academic curiosity and research and acknowledge and document the often invisible, but no less transformational effect of individual Forest Service employee actions and efforts to bend the arc of a large organization.

The need for this research after so many decades of scholarship on this topic indicates that the practice of collaboration may have outpaced the research. However, it also suggests that collaboration in public administration is no longer operating at the vanguard but is reflective of a shift taking place at the macro-level towards a new dominant social paradigm built around participatory democratic principles, citizenship, and shared governance. My account of this topic addresses both theoretical questions about the drivers and mechanisms of institutional change in state-centered models of collaborative governance and practical questions about the organizational barriers to change and the myriad ways in which government actors are actively shaping governance institutions on the ground.

The focus on the US Forest Service provides an interesting case on the opportunities and barriers to change in an organization developed as a model of Progressive-era reforms. It is further complicated by the complexity of laws and policies that have been layered on top of each other along with place-based legislative "fixes" and judicial rulings amid changing expectations regarding how the organization should fulfill its multiple-use mandate. As many scholars have noted, this has created a decision environment in which public administrators must navigate competing logics and changing

expectations within an organization whose culture and norms have been slow to adapt. Yet, collaboration in Idaho and Montana is more than just a collection of random acts, but represents a movement contributing to what Abrams (2019) posits is a governance transition within the US Forest Service and national forest administration. When assessed with this level of influence and importance, it naturally raises normative and positive questions about the value and effectiveness of such efforts and how they compare with more traditional public involvement and planning processes. As the remainder of this chapter indicates, there are positive changes afoot and remaining questions for advancing understanding and knowledge on bureaucratic adaptations to new a governance paradigm.

In the following section, I reflect on each of my original research objectives and the associated findings and discuss methodological limitations that may impact generalizability and replicability. I then draw out a series of cross-cutting themes, highlighting the implications of this work for future research, for practitioners and for the Forest Service.

Reflections on Research Objectives

This dissertation sought to examine how collaborative public involvement as an alternative governance arrangement influences the administration and management outcomes of a federal agency at the street-level. As such, I approached this research with three primary objectives. First, I sought to understand whether empirical evidence could be found connecting collaborative public participation to changes in management outcomes. Chapter 2 of this dissertation addresses this objective by analyzing 14 years of project-level planning and implementation data in Idaho from US Forest Service databases, comparing collaborative and traditional projects on a suite of metrics related to pace, scale, complexity, and legal outcomes. As the research reveals, collaboratively developed projects were larger and more complex than traditional projects and were associated with greater planning efficiency. While these are not the only metrics that matter, we argue that for public managers operating in a performance management framework where they are evaluated on their ability to treat acres and harvest timber, outputs and outcomes matter. Of course, this analysis was restricted to projects in Idaho, indicating a need to ask similar questions and replicate this analysis in other states and regions and at broader scales in order to understand how the relationship between collaboration and management outcomes varies across regions, administrative units, and other administrative and political scales.

The second objective of this dissertation was to explore the purposive actions of government actors in enabling the outcomes documented in Chapter 2. Chapter 3 addresses this objective by exploring the actions of street-level bureaucrats working in a complex policy environment. Using interviews of Forest Service line officers and staff, I describe the range of strategies they enact to create, support

and undermine (resist) new norms and processes to support collaborative decision-making in an organizational environment with inconsistent rules, incentives and sanctions. In doing so, I shed light on the ways in which actors navigate conflicting demands and how individual agency, institutional structures and organizational culture interact inside the "black box" of a federal land management agency. This chapter uncovers the many ways in which these actors actively shape the opportunity structures for meaningful participation and influence, demonstrate responsiveness and fill institutional voids.

The third objective of this dissertation was to explore the role that organizational and individual values play in motivating or constraining the efforts of street level actors' efforts to develop and maintain new institutional arrangements. Using the same interview data from Chapter 3, Chapter 4 focuses on the role of discretion as a mechanism and values as a motivational driver to engage in institutional work. In doing so, I elaborate on the concept of discretion, considering the differences between formal and informal decisions and how these decisions are enacted by line officers and staff in different ways and with different effects. This chapter reveals that individual values play an important role in motivating institutional work in support of collaborative public participation, but that the degree to which this motivation is intrinsic versus instrumental has significant implications for institutionalization and resilience.

Some General Reflections on Methods and Potential Limitations

The scope of this dissertation was limited to national forest staff in Idaho and to a lesser extent western Montana due, in part, to time and resource constraints. While the studies were not designed to be generalizable, they do highlight some important themes that are worth investigating in more depth and in other similar and different regions—particularly with an eye towards community-level and regional institutional capacities.

The rich data collected through interviews with Forest Service employees provided important context for the results documented in Chapter 2, which had already been published, but drawing out direct connections between the qualitative and quantitative data at the project or Forest level was not feasible due to temporal mismatch between the two data sources. Project-level data analyzed in Chapter 2 included projects planned and implemented between 2004 and 2017 while the qualitative interviews were conducted in 2021-2022 and had an inherent bias towards more recent experiences with collaborative projects through what cognitive psychologists term the "recency effect" (Turvey and Freeman 2012). The inability to control for exogenous variables like changes in administration, which came up as a prominent theme in the interviews, limit the ability to draw conclusions about the relationship between institutional work, value orientations and observed management outcomes.

Future work to design a study to investigate these relationships at the project level would contribute to our understanding of the micro-level influences of collaborative governance on administrative behavior, discretionary decision-making and outcomes.

The interviews did provide some important insights into how collaboration interacts within the structure of NEPA, and served to qualify findings from Chapter 2, specifically regarding the relationship between collaborative public involvement processes and planning efficiency. As reported in Chapter 3, the in-depth interviews revealed that much of the "work" of collaboration is occurring outside of the formal NEPA process and was thus not captured in quantitative metrics used to measure planning timelines. These qualifications on the internal validity of planning efficiency measures derived from administrative data have important implications beyond the studies included in this dissertation and should be considered in any study using the Planning, Appeals and Litigation System (PALS) database.

This finding also has significant implications for previous studies that have attempted to measure the influence of public involvement on bureaucratic decisions through changes in the content of environmental planning documents. First, because collaborative involvement is heavily weighted towards the pre-scoping phase, collaborative influence has already been incorporated into the documents summarizing proposed actions to be taken that are released to the public during the scoping phase. The findings also validate, albeit to a lesser extent, that decision-makers internalize public preferences into their decision documents to reduce the threat of litigation and meet public expectations. Thus, this study validates these claims while also elaborating the specific mechanisms and activities through which public preferences are internalized, suggesting also that collaborative public involvement processes may lead to spill-over effects as the preferences revealed through deliberative processes are internalized into other projects that may not involve citizens in the same way. Indeed, a few respondents voiced this opinion in the interviews indicating that once collaborative or public preferences were known, there was less need to continue to invest the time and energy in deliberation and consensus-building.

A final reflection on the qualitative portion of this study addresses the methodological constraints created by the global COVID-19 pandemic. Most, if not all, of the interviews were conducted while employees were working from home. This likely created an atmosphere in which participants felt more willing to be candid in their reflections on collaboration, particularly as they related to tensions between individual and organizational values and priorities. The unique context in which this study was conducted has important implications for the replicability of these findings. Future research attempting to address similar questions will need to consider the context in which Forest Service

employees are participating and the degree of privacy afforded in order to make valid comparisons between studies.

Prominent Themes and Implications for Future Practice and Fesearch

Across the three empirical chapters of this dissertation, a number of cross-cutting themes emerged that I summarize here with the dual intent of outlining contributions to the literature and highlighting opportunities and needs for future research. Overall, the themes speak to the drivers and mechanisms of change in the governance of national forests. Specific themes that I discuss include the nature of collaboration in the northern Rockies, the influence of local- or micro-level adaptations in processes of change, and the differential contributions and roles of line officers and staff. Collectively, these themes demonstrate that theories of change for collaborative governance are multiple, nuanced and perhaps more complicated than scholars have recognized. For this reason, a key area for future research is to further explicate a conceptual model that organizes the various drivers and mechanisms of change identified here. As a starting point, I offer a preliminary conceptual model to help identify questions and guide future research in this area.

Contextualizing Collaborative Governance: Networked versus State-centered

One of the unexpected outcomes of this dissertation was the need to describe and contextualize the form of state-centered collaborative public involvement occurring in the northern Rockies. Scholarship on the transition from command and control to more open and responsive governance processes occurring within the US Forest Service have elaborated models in which decision-making and implementation are achieved through networks of state and non-state actors. These models align with collective action frameworks that posit government institutions secure resources and legitimacy in and through networks of actors. There has also been work to explore their drivers and mechanisms in order to build a theory of change (Abrams 2019; Abrams et al. 2020; Abrams et al. 2021; Abrams et al. 2017b). Empirical and theoretical work on these models describe the important work of non-state actors in filling institutional voids, operating across scales, and leading institutional change efforts (Abrams et al. 2017a; Abrams et al. 2015).

But collaborative models of governance can also resemble community advisory groups in the sense that they involve citizen groups who develop recommendations with local units or in response to specific proposals or plans, but that have no decision-making authority, are largely informal, and lack the agency to act on their own. This form of collaborative governance is most common in lower-resourced regions and communities typified by fewer community-based organizations that can act as implementing partners. Forest collaborative groups in Idaho and Montana have indicated that they

face significant challenges related to lack of funding, lack of facilitation, and the absence of implementing partners (Zamesnik and Seccombe 2021).

In this way, it was important to elucidate the specific values and actions of bureaucratic actors operating in social environments in which investments in community capacities have not been sufficient to build the capabilities of the "third sector" to engage in the kinds of institutional work documented by scholars in other regions (Abrams et al. 2015; Danks 2009; Cowan et al. 2022). Across the three empirical chapters of this dissertation, the results suggests that collaborative governance, its outcomes, the values and decision premises that motivate it, and the practical actions that substantiate it, may look different, and may be more critical, in state-centered versus network governance arrangements as government actors, rather than community-based organizations, work to fill institutional voids.

Opportunities and Challenges in Local-level Adaptations to a New Governance Paradigm

A key driver of this work is based in my decade of experience as a citizen member of a collaborative group in which I observed the tensions involved in trying to influence governmental decisions and actions. It was from this experience that I turned my focus on Forest Service employees and their daily actions in order to make sense of the finding that collaboration was in fact influencing the management of national forests in Idaho. From this vantage point, I hypothesized that the observed changes in management outcomes would be a function of two main variables: the creation of opportunities for collaborative groups to provide meaningful input combined with a willingness to accept influence in decision-making. As Chapter 3 indicates, participants described a wide range of ways in which they created, modified or disrupted boundaries and practices in order to accomplish these two objectives. In addition, they also described the ways in which they demonstrated responsiveness to collaborative groups, a key feature of New Public Governance.

Elaborating the practical actions of front-line workers within the Forest Service helps to not only make their work more visible, but also focuses the lens on the need to critically evaluate organizational culture and norms that hinder this work. Through these interviews it was clear that actors utilize their agency to engage in institutional work amid institutional and organizational constraints. That is, it is important to point out that government actors engaged in these activities despite a lack of incentives or rewards and without clear organizational expectations that they do so. In fact, in some cases, their work significantly departed from the direction and priorities of superiors who were less committed to collaborative governance in practice or in principle.

From an applied standpoint, these results suggest that top-down policy changes have had limited influence on the adoption of collaboration as a principle. Rather, while incentives are nice, they are not necessary. However, some participants indicated a need to remove the threat of sanctions. Enactment of organizational changes such as these may operate to make line officer positions more desirable, particularly for those individuals that hold strong prosocial values, as they will feel that their values are more in line with and supported by the organization's values. It is worth noting one positive and promising development that occurred while this dissertation was being written. During one of the interviews, a line officer who had expressed frustrations with the mismatch between how they saw their role and how they were evaluated reported with excitement that the organization had very recently revised line officer position descriptions with the outcome of better aligning the actual work and prosocial values of line officers with organizational values and expectations. I believe changes such as these have the potential to go a long way towards changing organizational culture and embracing the governance transition as it is occurring on the ground in Idaho and Montana, and throughout the West.

The Role of Discretion and Values as Mechanism and Driver of Institutional Change

The appropriate role of values in bureaucratic decision-making is highly contested. This seems particularly true in the context of land management agencies who are mandated to make decisions using the "best available science". Yet, it is also not new idea to suggest that even scientific facts are value-laden, by virtue of being embedded in a context of values that then shape the very existence and definition of problems to be solved (Foster 1980 as quoted in Rivera and Knox 2022). Furthermore, many studies of Forest Service decision making admit that personal values play at least some role in shaping the content and outcomes of said decisions. Yet few have elaborated exactly what these values are and how they influenced decisions, nor the kinds of decisions that were affected.

This study takes an initial and important step towards answering this question by breaking apart the concepts of discretion, discretionary decision making, decision premises and value orientations. It's a lot to chew on and deserves significantly more attention in order to investigate each concept on its own. However, it is worth noting a few of the more prominent propositions. First, not all decisions are the same; some involve formal delegated authority and some involve the small, daily decisions that may seem unremarkable in isolation but may have significant impacts in aggregate. Second, public administrators draw on multiple decision premises to inform their discretionary decisions and that the appropriateness of any premise may depend on the type of decisions being made. Third, I argue that not all discretion is problematic. In fact, discretion is the means by which front-line workers not only make their work more meaningful, but the way that they bring together the

dominant social values with the value systems of their communities. Fourth, the influence of values in decision making is not a moral hazard to be avoided. Rather, different combinations of value orientations and decisions require different organizational strategies such that some decision premises are promoted via incentives, such as formal decisions, while other decisions may involve organizational structures and norms that ensure employees feel competent and effective in their jobs. Less formal decisions may require visionary leadership in order to support and encourage prosocial values in motivating actions and decisions. Such changes could go a long way towards addressing the perceived dissonance between individual administrator values and organizational values.

Conclusion

Collaborative governance of public lands has been a component of public lands management for at least three decades. During this time, collaboration has also been added as a process requirement in multiple policies directing land management planning. The research conducted as part of this dissertation finds that public administrators play a crucial role in accomplishing institutional work and change in support of collaborative forms of governance. However, the efforts of public administrators appear to be occurring in spite of, rather than because of, top-down policy mandates due to lack of alignment between collaborative governance principles and organizational goals and values.

This research contributes to a growing body of work seeking to understand how public managers and staff respond to and promote change in the context of old and outdated policies, procedures and norms (Moseley and Charnley 2014; Timberlake et al. 2021; Timberlake and Schultz 2017; Wollstein et al. 2021). Taken together, this body of research jointly reinforces the importance of discretion, legitimacy, and institutional work enacted at the street-level for enabling the creation and maintenance of new institutions that are resilient in the face of environmental and political change.

Finally, this work also suggests that the study of public lands governance has much to gain from public administration scholarship on administrative behavior and street-level bureaucracies and institutional studies of organizations. Administrative behavior theories focus on how individuals operating within organizations make decisions and take actions based on their own goals, values, and perceptions of their roles. Street-level workers refer to the frontline personnel who interact directly with the public and provide public services and research in this area suggests that street-level bureaucrats rely on discretion in implementing policies, interpreting rules, and making decisions that reflect public values. Institutional pressures also influence the behavior and decision-making of individuals and organizations in the form of formal rules, regulations, and policies, as well as informal norms and expectations. New institutional theories provide an alternative lens for exploring the influence of actors and agency on institutions and institutional change. These theories emphasize

the role of individuals and organizations in shaping institutions and suggest that institutions are not fixed, but rather evolve over time in response to changes in the environment and the practical actions of actors.

What are the drivers and mechanisms of change in the governance of national forests? This study argues for greater attention to the often invisible, but no less impactful, practical actions of Forest Service employees working at the street-level. It also calls for greater integration of public administration and management frameworks into studies of national forest governance in this time of complexity and change. More work is needed to document the efforts of Forest Service employees in institutional and organizational change processes including, but not limited to, the institutionalization of new governance arrangements. There is a concurrent need to build new theories of change that recognize the roles of both state and non-state actors as agents with the discretionary capacity to act in pursuit of a range of values and goals.

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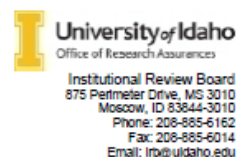
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Appendix A: Institutional Review Board Approvals

University of Idaho
Office of Research Assurances

Institutional Review Board
875 Perimeter Drive, MS 3010
Moscow, ID 83844-3010
Phone: 208-885-6162
Fax: 208-885-6014
Email: irb@uidaho.edu

March 31, 2021

To: Dennis Robert Becker

Cc: Chelsea Pennick

From: University of Idaho Institutional Review Board

Approval Date: March 31, 2021

Title: The role of bureaucratic behavior in collaborative governance of public lands: an investigation into agency and institutional work within the US Forest Service

Protocol: 21-044, Reference: 012713

Exempt under Category 2 at 45 CFR 46.104(d)(2).

_____

On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the protocol for this research project has been certified as exempt under the category listed above.

This certification is valid only for the study protocol as it was submitted. Studies certified as Exempt are not subject to continuing review and this certification does not expire. However, if changes are made to the study protocol, you must submit the changes through VERAS for review before implementing the changes. Amendments may include but are not limited to, changes in study population, study personnel, study instruments, consent documents, recruitment materials, sites of research, etc.

As Principal Investigator, you are responsible for ensuring compliance with all applicable FERPA regulations, University of Idaho policies, state and federal regulations. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice. The Principal Investigator is responsible for ensuring that all study personnel have completed the online human subjects training requirement. Please complete the *Continuing Review and Closure Form* in VERAS when the project is completed.

You are required to notify the IRB in a timely manner if any unanticipated or adverse events occur during the study, if you experience an increased risk to the participants, or if you have participants withdraw or register complaints about the study.

IRB Exempt Category (Categories) for this submission:
Category 2: Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: i. The information

obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; ii. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or iii. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by .111(a)(7).

Appendix B: Inteview Guide

RESEARCH ON COLLABORATION WITHIN THE US FOREST SERVICE

Interview Guide - USFS – Summer/Fall 2021

<u>Introduction</u>

Thank you for taking time out of your busy schedule to get on the phone with me today. My name is Chelsea Pennick and I am a PhD candidate at the University of Idaho. I am conducting a study on collaboration and its influence on the Forest Service. This study is funded through an agreement with the Pacific Northwest Research Station.

I first want to go over your role in the study and what you can expect. Your participation is entirely voluntary and you can decide to stop at any time during this interview. Your responses will be kept completely confidential. Any use of this interview will be summarized with other responses and if quoted will not be associated with your name or district, only your role will be identified. To make sure I capture our conversation and don't misrepresent you, I'd like to record this conversation – is that okay with you?

[start recording]

Do you have any questions about your rights? Do I have your permission to proceed?

To give a little more background, this research is a follow up to the study that was published recently looking at the outcomes of collaborative Forest Service projects in Idaho. These findings suggest that collaboration may be changing the way the FS does business in some way.

We are conducting this study to better understand the mechanisms by which collaboration is changing the way the FS does business and more specifically what might be contributing to improvements in outcomes and efficiency.

<u>Background</u>
Aims: create rapport, ease into interview

- What is your current position/title? How long have you been in this position?
- What other roles have you held within the Forest Service?
- When did you first get involved in collaboration?

<u>Perspectives on Collaborative Project Findings:</u>

Our previous study found that collaborative projects treated more acres and met a greater number of objectives than non-collaborative projects. We also found that they did not, on average, take any longer to plan. This means that collaborative projects are potentially accomplishing more for every day spent in planning.

- I'd like to start by talking about our first significant finding. We found that projects that had the involvement of an established collaborative group, like the [insert collaborative name] group, treated more acres than projects collaboratives were not involved with. This information came from FACTS and allowed for double counting of acres.
    - Does this reflect your experiences with collaborative projects?
    - If so, to what do you attribute this finding?

- Our second finding was that collaborative projects met a greater diversity of objectives than non-collaborative projects. This was also measured using FACTS and looked at the number of unique activities and the number of unique activity groups such as Hazardous Fuels, Timber, Recreation, etc.
    - Does this reflect your experience with collaborative projects?
    - If so, to what do you attribute this finding?

- Our third significant finding was that collaborative projects did not take any longer to plan, on average, than non-collaborative projects. And this was somewhat surprising because there seemed to be a conventional wisdom that collaboration slowed down the planning process.
    - Does this reflect your experiences with collaborative projects?
    - If so, to what do you attribute this finding?
    - If not, how has your experience differed?

- Our final finding, when taking the previous results together, found that collaborative projects were accomplishing more for every day spent planning.
    - What do you think about this finding and how does it compare to your experiences?

Experience with specific projects

I'd like to talk about your experience with the **[collaborative name]**

- What was your role in these projects?
- Who else from the agency was involved in this project?
- Was there anything new or different about how this project proceeded? (procedures/processes/communication)

Trying New Things

Thinking back over the history of your involvement in collaborative projects and with collaborative groups:

- In general, do feel there is support for trying new things/collaboration?
    - How do employees generally go about trying new things?
    - Who initiates collaboration?
    - Are employees generally free to collaborate or do they need to run things by a superior first?

- Would you say the agency is "doing things differently" as a result of collaboration?
    - How so?

- Collaborative members have remarked on the willingness of agency staff to "take risks" and "try new things". Do you agree with this? Can you give me some examples?

- How important is Forest Service culture in regards to collaboration?
  - At what level?
  - Are there social or administrative conditions that would make collaboration easier?

Decision-making:

Finally, we are interested in the ways in which collaboration may be changing decision-making processes:

- Would you say that decision **processes** have changed? (e.g. *how* you make decisions is different)
- Do you feel that collaboration has changed **who is involved** in decision making?
- To what extent would you say that collaboration is changing the **content** of decisions? How?
  - Were there any elements of collaborative projects that you have worked on that may have seemed "risky" previously?

Wrap-up

- Thinking again about the goal of this study [understanding changes in management outcomes by connecting to changes in agency practices], what is one thing you want to make sure I understand from our conversation from today?
- Is there anything you'd like to add that we didn't get to?
- Is there anyone else that you would suggest that I talk to in relation to this topic and [insert project name] project specifically?

Thank you very much for sharing your time with me this [morning/afternoon]. If you have any follow up questions or comments or want to be kept informed about the results of this study, please feel free to call or email me at any time.