

# Unpacking the pluralism paradox: collaborative governance outcomes in jurisdictionally complex environments

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## ABSTRACT

**Background.** In collaborative governance, many of the factors that give rise to the need for collaboration are also identified by scholars as undermining its effectiveness. Complex task environments mean that multiple and varied interests are necessary to address problems, but this inherent pluralism may also increase conflict. This suggests a pluralism paradox. **Aims.** Our article advances theory and provides evidence about pluralism associated with jurisdictional affiliation and their relationship to collaborative governance outcomes during wildfires. **Methods.** We analyzed data from 139 jurisdictional leaders from 15 wildfire disasters in the United States that took place in 2017 and 2018. **Key results.** Consistent with extant theory on collaborative continuums, we find evidence to suggest that organizational pluralism associated with jurisdictional affiliation may not be uniformly predictive of different collaborative governance outcomes. **Conclusions.** Evaluations of communication and information management were less likely to reflect differences tied to jurisdictional affiliation when compared with episodic cooperation and incident-level operational strategy, which were more likely to reflect differences in jurisdictional values, signaling an increased likelihood of conflict. **Implications.** In addition to providing empirical evidence about the dynamics of pluralism in collaborative settings, we offer practical insights into opportunities for building collaborative capacity in jurisdictionally complex environments.

**Keywords:** collaboration, collaborative governance, conflict, disaster, diversity, firefighting, incident management, jurisdictional complexity, leaders, pluralism, wildfire.

## Introduction: collaborative governance and conflict

As task environments become more complex, there is an increased need for organizations to work together outside of hierarchical governance structures to address challenging problems (Gray 1985; Bryson *et al.* 2006; Ansell and Gash 2008; O'Leary and Bingham 2009; Emerson *et al.* 2012). Although there are many competing definitions of collaborative governance (e.g. Ansell and Gash 2008; Emerson *et al.* 2012), we take Sørensen and Torfing's (2007, p. 3) definition, described as a non-hierarchical form of governance 'based on negotiated interaction between a plurality of public, semi-public, and private actors'.

Scholars of collaborative governance are interested in horizontal governance structures and processes that support information exchange, coordination and collaboration among a group of diverse actors without the benefit of hierarchical authority. (The absence of hierarchical authority across a collaborative arrangement does not preclude the influence of leadership within an organization or agency from exercising downward influence on those lower in the organization or agency.) The term 'actors' in this literature is generally a collection of leaders representing different organizations and agencies. These organizations and agencies may be hierarchically organized internally but often must work collaboratively with other organizations and agencies over whom they have no bureaucratic authority. No single actor can marshal the resources required to address the task at hand (Provan and Milward 1995; Provan *et al.* 1996). And yet, inherent to the integration of multiple interests are tensions related to identifying,

reconciling and managing the differences that brought them together in the first place (Lawrence and Lorsch 1967; Saz-Carranza and Ospina 2011; Vangen and Huxham 2012).

A tension in the collaborative governance literature is that the very conditions that necessitate collaboration are also conditions that can undermine its effectiveness (Gray 1985; Margerum 2002; Ansell and Gash 2008; Emerson *et al.* 2012; Bryson *et al.* 2017; Wang and Ran 2021). Several authors identify key endemic tensions in collaborative activity (Provan and Kenis 2007; Saz-Carranza and Ospina 2011; Bryson *et al.* 2017; Wang and Ran 2021) and there seems to be some consensus in the literature around a few key areas where collaborative mischief can occur. These include power dynamics, a history of conflict, lack of goal agreement and managing diversity. In this article, we focus on diversity and the role that the concept of pluralism can play in both clarifying and identifying areas of conflict and for consensus building in collaborative governance.

### Diversity, pluralism and collaborative governance

Diversity has been flagged as a significant challenge to collaboration (Huxham 2000; Saz-Carranza and Ospina 2011; Wang and Ren 2021). Diversity turns along many axes including geography, ethnic or cultural dimensions, organizational characteristics, goals, priorities, focus issues and constituencies (Saz-Carranza and Ospina 2011, p. 341). Diverse stakeholders bring their own resources into the collaboration, which is often seen as an advantage, but with this diversity come differences in priorities, professional language, values and organizational culture as well as power variations (Huxham 2000). Diversity among participants can create conflict, and sound management of these differences is a key challenge to creating collaborative advantage (Huxham 2000; Saz-Carranza and Ospina 2011).

Pluralism, which literally means ‘manyness’ has been taken in political contexts to convey how diverse groups operate within political structures – a concept that dates back to *The Federalist Papers* in the United States (Hamilton *et al.* 1961 [1781–1788]; Plattner 2010, p. 89). Pluralism can refer to viewpoints associated with organizational, economic, political, ethnic, linguistic, racial, cultural, or religious affiliations and more recently has been interpreted as tolerance for a diversity of perspectives, beliefs and practices within society, or ‘cultural multiplicity’ (Sartori 1997, p. 62; Plattner 2010). But tolerance and pluralism are distinct, according to Sartori (1997, p. 58) because ‘pluralism *posits* values’, whereas ‘tolerance *respects* values’. In other words, pluralism is a structural feature of a governance situation or context whereas tolerance is an individual or collective orientation to that structural feature.

In the collaborative governance literature, diversity has often been conflated to connote both definitions – the positing of values as a structural feature, as well as tolerance as a

collective orientation. The language of pluralism helps tease apart these differences by focusing on the structural feature of governance where multiple values are at play. Importantly, pluralism is also distinct from institutional complexity. Pluralism refers to affiliations that different groups hold and the values that flow from those affiliations. Institutional complexity refers to overlapping institutional logics (norms, values, practices) and how those are present in organizations. The distinction is that pluralism helps us with the language to understand how affiliation to a larger collective identity can play a role in an institutionally complex environment. In short, something can be institutionally complex and not be organizationally plural. For the purposes of this article, we embrace Dahl’s (1978, pp. 191–192) concept of ‘organizational pluralism’, which is the ‘number and autonomy of organizations that must be taken into account in order to characterize conflicts among a given collection of persons’. (When governance systems permit autonomy (versus being hegemonic), then they experience a greater measure of organizational plurality.)

Organizational pluralism is expressed in collaborative governance when individuals representing different organizations attempt to work together. This can lead to tensions whereby different organizations have diverse and sometimes conflicting goals, values, priorities and expectations (O’Leary and Bingham 2009; Vangen and Huxham 2012).

A ‘pluralism paradox’ stems from the need to have multiple organizations or interests present to address a problem effectively while simultaneously creating potential for values conflict arising from those same organizations. Paradoxes are characterized as being interdependent with persistent yet intrinsic tensions that arise from situations that are both oppositional and conflictual yet synergistically interconnected (Schad *et al.* 2016; Wang and Ran 2021). Achieving the goals of one organization may prevent the realization of the values of another or alternatively, a common goal may mean the subordination of an individual organization’s values to another organization (Vangen and Huxham 2012). Values are often varied in collective action settings. The policy literature identifies values as drivers of collaborative activity (Jenkins-Smith and Sabatier 1999). Deep core beliefs (e.g. fundamental normative beliefs like property rights, liberty, self-determination that are most resistant to change), policy core beliefs (e.g. specific to a policy subsystem, in this case forest and wildfire policy, such as multiple use management, suppression, wildfire for resource benefits, which may be more malleable) and secondary aspects of beliefs (e.g. dependent on implementation details like how to carry out suppression actions or a specific backburn; these are the most flexible beliefs) help inform how coalitions form and change over time (Jenkins-Smith *et al.* 2014). Challenges arise when there are differences in fundamental values, which are often deeply held. Different organizations will have different sets of values, and when said organizations must work together, they may have different expectations related to different value outcomes.

In this study, we were specifically interested in understanding the role organizational pluralism plays in explaining differences in collaborative governance outcomes associated with a jurisdictionally complex disaster context. Research suggests that collaboration is likely to be less effective where there is a history of conflict or deep value differences between or among parties (Weber 1998), power dynamics that privilege some actors' values over others (Gray 1985; Purdy 2012), a lack of shared understanding about the problem and/or the goal(s) (Agranoff and McGuire 2003; Bryson *et al.* 2006; Ansell and Gash 2008) and structural complexity and diversity among actors (Huxham and Vangen 2000). And yet, there are situations, even under these counter-intuitive conditions, where we see collaborative governance emerge and function. This raises the question – if pluralism is a structural feature of many collaborative governance contexts, does it uniformly affect all collaborative governance outcomes?

Understudied in the literature is how organizational pluralism affects collaborative governance performance. In this article, we seek to advance theory about organizational pluralism and its relationship to collaborative governance outcomes in environments with a diversity of jurisdictional interests where extant literature suggests collective action should be challenging. We probe individual stakeholder perspectives to identify where and how perspectives rooted in organizational pluralism are uniform or deviate across the different types of outcomes negotiated in a collaborative governance effort. Understanding the role of organizational pluralism in explaining individual-level perspectives has significance, not only for how organizations interact in collective action settings, but also for how and where we find and potentially remedy conflict in collaborative governance outcomes at the systems level. In short, we investigate: are all collaborative governance outcomes equally susceptible to organizational pluralism? Are some collaborative governance outcomes more robust in organizational pluralism than others?

## Multijurisdictional disasters, wildfire and pluralism

Complex disasters are rich contexts for studying collective phenomena because they require the coordination of a diverse set of agencies and organizations (Kapucu 2005, 2006; Comfort and Kapucu 2006; Comfort 2007; Ansell *et al.* 2010; Nowell and Steelman 2013). Consider, for instance, the scale and scope of US-based disasters such as the Loma Prieta Earthquake (1989), Hurricanes Katrina (2005) and Maria (2017), and Superstorm Sandy (2012). When large-scale disasters cross multiple jurisdictional boundaries, no single entity has the authority, capacity, or legitimacy to direct or control the response. Failure to work together effectively can result in dangerous, if not deadly, outcomes (Kapucu and Van Wart 2006; Eikenberry *et al.* 2007).

Common to many disasters, then, is the need for a diverse range of agencies and organizations representing specific

jurisdictional and/or functional roles to collaborate effectively. In other words, disasters routinely have two structural features of interest. First, they require cross-jurisdictional collaboration, which necessitates the engagement of an array of different organizations and agencies through collaborative governance arrangements because there is no single superordinate authority (O'Leary and Bingham 2009). Second, the array of organizational actors engaged in a disaster response is commonly described as having different values and priorities, which means disasters are frequently characterized by a non-trivial degree of organizational pluralism (Nowell *et al.* 2019).

Large wildfire disasters are an information-rich context for the current study for at least four reasons. First, jurisdictionally complex wildfire incidents are inherently organizationally pluralistic. They involve numerous jurisdictions that have been shown to have different perspectives about what right looks like (Nowell and Stutler 2020) and research suggests that organizational pluralism related to the management of wildfire in the US tends to cluster by local, state, federal, public, private and tribal jurisdictional affiliation (Flemming *et al.* 2015). Second, wildfire has limited concern for jurisdictional boundaries, yet wildfire management must be holistic in both strategy and tactics. In other words, it is neither feasible nor safe for each jurisdiction to attempt to manage their portion of the wildfire to maximize their own interests. This means that wildfire management is a collaborative enterprise where fire operations must be coordinated and unified across affected jurisdictions (Nowell and Steelman 2015; Bodin *et al.* 2022).

Third, jurisdictions have historically had different land management goals and priorities, which in turn has created a significant history of goal conflict in efforts to collaboratively manage wildfire (Davis *et al.* 2019; Charnley *et al.* 2020; Miller *et al.* 2022). State agencies, for example, have historically been focused on narrow use values, such as timber management and production or rangelands (Koontz 1997; Davis *et al.* 2019), whereas some federal land management agencies, like the United States Forest Service (USFS) and Bureau of Land Management (BLM), are directed to manage for multiple use values, including timber, wildlife, cultural values and ecosystem services (Koontz 1997; Davis 2001). How wildland fires are managed can become a contested tool against the backdrop of these competing value sets. While state and local agencies may be keen to see fire extinguished or suppressed to preserve economic value of timber or rangelands, the USFS and BLM may prioritize a broader range of fire management approaches beyond suppression (Stelman and McCaffrey 2011), such as allowing wildland fire to play a more natural role to regenerate the landscape for ecosystem services or cultural values. Consistent with this, Fleming *et al.* (2015) examined perceptions of mission alignment among USFS personnel. The authors found that mission alignment was viewed as least problematic among federal agencies with common multi-use missions and most problematic

when considered across jurisdictional levels (local, state and federal).

Finally, wildfires are one of our most commonly occurring disasters (Donatti *et al.* 2024), which then lend them to more routine observation and research. Wildfires are growing in complexity both biophysically and socio-politically (Fischer *et al.* 2016; Steelman 2016; Schultz and Moseley 2019) and hundreds of large wildfires necessitate emergency response each year. In recent years, Australia, Canada, Greece and Chile have seen destructive wildfires. In the United States alone, the Lahaina Fire in Maui, HI (2023), the Camp Fire in CA (2018) and Chimney Tops two Fires in TN (2016) have made headlines. This makes wildfires increasingly a topic of interest in a variety of scholarly areas including governance (Abrams *et al.* 2015; Steelman 2016; Ager *et al.* 2017; Hamilton *et al.* 2019; Schultz and Moseley 2019; Clement 2022; Miller *et al.* 2022; Kirschner *et al.* 2023, 2024; Pandey *et al.* 2023; Clement *et al.* 2024).

In sum, the wildfire disaster context is one in which multiple interests face expected conditions that should make working together challenging – interdependent and diverse actors, power dynamics, goal disagreement and structural conflict rooted in competing land use missions across jurisdictions are part of the day-to-day operating environment – and yet, this is also a context with a long history of successful collaboration. This raises the important question: are certain collaborative governance outcomes more resilient to organizational pluralism?

## Collaborative governance during wildfire disasters

Emerson *et al.* (2012) define collaborative governance as ‘the processes and structures of public policy making and management that engage people constructively across the boundaries of public agencies, levels of government and/or public, private, and civic spheres’ (p. 2). Collaborative governance can take many forms and can also be directed towards several different outcomes. Distinctive from collaborative governance in disaster contexts is their emergent nature (Drabek and McEntire 2003; Choi and Brower 2006). Collaboration can occur before, during and/or after a wildfire. In this article, we focus on collaboration during the disaster.

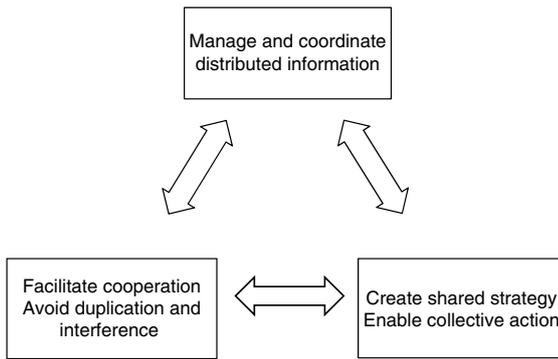
However, collaboration during a wildfire response is not typically an isolated event. It is perhaps best understood as a collaborative episode that occurs within a network of actors who – because of their mutual connection to a geographic region – often have relationships with one another that precede the wildfire event and may carry on after the event. It is for this reason that relationship building before a disaster is seen as important because pre-existing relationships are critical for improving communication and coordination during a disaster (Dynes 2002; Norris *et al.* 2008; Aldrich and Meyer 2015). Theory and evidence suggest that

pre-disaster relationships building and effective communication before a wildfire can lead to better outcomes during the fire, although the amount of contact or communication needed for robust relationship building is not well understood (Nowell and Steelman 2015, 2025). The network of agencies and organizations that must work together during the fire is usually well known before the fire. Wildfire preparedness efforts specify the importance of pre-fire meetings, tabletop exercises and workshops to create collaborative opportunities ahead of the wildfire (Stelman and McCaffrey 2013).

Nonetheless, most communities experience wildfires infrequently. Consequently, their governance structures can be unpracticed and are often temporary (Wang and Kapucu 2006; Kapucu *et al.* 2010). Unlike other collaborative arrangements that demonstrate a lifecycle over time (Ulibarri *et al.* 2020; Imperial 2023), coordination and collaboration that emerges during a disaster can be more ephemeral. Although relationships may endure beyond the incident, the collaborative governance structure that emerges to respond to the disaster dissipates quickly once the immediacy of the threat is over. As dictated by federal policy (see National Incident Management System or NIMS), disaster response in the United States relies on a series of tools and conceptual frameworks for collaborative governance referred to as the Incident Command System (ICS), and these are meant to help standardize response in these emergent conditions.

A portion of ICS provides tools and legal frameworks that allow different affected jurisdictions to be represented directly or indirectly as part of a unified ICS (for discussion, see Nowell *et al.* (2019)). Fire operations are centrally coordinated by an incident command team. However, the incident command team is purely an agent of the various jurisdictional interests affected by the wildfire and has no authority to act outside of the authority granted to it by the different jurisdictional interests involved. Accordingly, the general ‘form’ of collaborative governance is largely consistent across incidents, albeit customized in each case based on the composition of the affected stakeholders as well as the preferences of the leaders (Stelman *et al.* 2021). These governance arrangements take the form of joint delegations of authority, unified command, area command and/or *ad hoc* coordination (Stelman *et al.* 2021).

In abstract, collaborative governance can be described as enabling three major categories of outcomes (see Fig. 1). First, collaborations seek to manage distributive information problems by creating forums and conduits that move information around various interests and facilitate information flowing from those who have it to those who need it. In the context of wildfire disaster response, these types of activities are crucial and include activities like ensuring the information that goes out to the public is both up to date and not contradictory (Nowell and Steelman 2013; Steelman *et al.* 2014). Second, collaborative governance attempts to manage resource dependencies that exist among different actors by facilitating outcomes such as cooperation and coordination.



**Fig. 1.** Collaborative network activities.

For example, in the context of wildfire disaster response, jurisdictions are frequently called on to help each other and lend each other personnel and equipment (Nowell and Steelman 2013; Nowell *et al.* 2022).

Last, collaborative governance seeks to facilitate collective action outcomes by creating governance processes through which different goals can be negotiated and reconciled in pursuit of a unified, holistic strategy and set of priorities for the incident. During a wildfire disaster, this task focuses on understanding different jurisdictional interests in terms of not only what needs to be protected, but also negotiating which strategies are best suited to accomplishing these goals given the resources available (Nowell *et al.* 2022). On large, jurisdictionally complex wildfires, it is common that some interests must be compromised in the pursuit of other interests that have been deemed to be of higher priority. For example, a land management jurisdiction may oppose allowing bulldozers to cut a fire break through an important habitat area; however, the same jurisdiction may allow bulldozing to take place if they believe it is the only way to protect a local community.

Extant literature and theory on collaboration suggest that not all collaborative efforts are created equally, which means the organizational pluralism associated with competing jurisdictional interests may be more problematic for some collaborative efforts relative to others (Bryson and Crosby 1992; Hogue 1993; Himmelman 2001; Mandell and Steelman 2003; Gajda 2004). Often, authors discuss these differences in collaborative efforts as contingency factors that drive the design of collaborative institutions (Mandell and Steelman 2003; Provan and Kenis 2007). For example, Himmelman (2001) and others argue that there is an interaction continuum that moves from information sharing through coordination and cooperation and finally terminates with collective problem solving. As one moves along this continuum, the nature of the collaborative task is viewed as more difficult as it requires more relationship capacity and institutional support (Nowell 2008).

Missing from this literature is consideration of the fact that many collaborative governance contexts maintain a fairly static governance form and yet engage in an array of

different cooperative and collaborative efforts ranging from information management to collective decision making and action. Because wildfire disasters are organizationally pluralistic and have a common governance form as dictated by policy, this poses a unique opportunity to examine when, and in what areas, these collaborative efforts are able to address organizational pluralism as activities are negotiated along the aforementioned continuum to create alignment (or not).

Based on previous theorizing of collaborative continuums, we posit three hypotheses related to collaborative governance outcomes and organizational pluralism: first, we posit that collaborative governance outcomes involving the management and coordination of information will be least affected by organizational pluralism. In a disaster context, information sharing activities are less likely to be perceived as a zero-sum value proposition. Further, lack of coordination in information sharing creates problems for everyone. This suggests that informational sharing activities are potentially most amenable to shared values reasoning in which all organizations are similarly motivated to ensure information gets where it needs to go in a coordinated and consistent fashion. In short, zero-sum logic is a poor fit for the management and coordination of information.

Second, on the other end of the continuum, we hypothesize that collaborative governance outcomes that focus on creating a shared wildfire management strategy are likely to be the most contentious as well as the most susceptible to conflict among organizational interests. For these outcomes, some values may need to be subordinated to others. Given the different missions guiding land jurisdictions, it may be structurally impossible to craft a strategy that optimizes values for all interests; thus, zero sum logic will apply to some strategies for fire management.

Finally, we suggest that collaborative activities focused on facilitating episodic coordination between affected jurisdictions will fall somewhere in the middle of the continuum. These will be more susceptible to conflict arising from information management activities but less prone to conflict among interests relative to wildfire strategy outcomes.

## Methods

When we can predict how someone will assess the effectiveness of a collaborative governance outcome based on their jurisdictional affiliation, controlling for incident level variation, we have reason to suspect that organizational pluralism is at play. Jurisdictions are the geographic boundaries within which an administrative entity has legal authority to act. We first test the hypothesis that organizational pluralism is, in fact, a significant factor in explaining collaborative governance outcomes on 15 jurisdictionally complex wildfire disasters. We investigate organizational pluralism by examining five jurisdictional affiliations and their relationship to 10 different

collaborative governance outcomes relevant to incident response to wildland fire disasters.

## Sample

Our investigation focused on 15 jurisdictionally complex wildfire disasters throughout the United States that occurred in 2017 and 2018. Ten of these 15 wildfires were nominated through a key informant snowball sample that identified incident commanders who had participated in the 2017 wildfire season and were well positioned as subject matter experts. We also conducted archival analysis of ICS 209s, which are the documents that track daily activity on large wildfire incidents, and triangulated those that presented the greatest indicators of complexity, including number of jurisdictions represented, values at risk and size. In 2018, we sampled an additional five jurisdictionally complex incidents.

Our respondent sample consisted of 139 leaders representing federal, state, tribal, local and private jurisdictions who were nominated during interviews with incident command staff. Representatives were identified as the highest-ranking individual representing that jurisdiction who was actively engaged in the incident. These leaders define the focus of the organization and have been delegated to do so. This list was verified and augmented by subsequent informants during the interview process until we reached a point at which no new informants were identified. Interviews were conducted by phone and transcribed for analysis. In addition, interview participants were asked to complete a 10-question survey assessing the key dimensions associated with the management of the wildfire. For the 2017 case study fires, we identified a total of 98 interviewees and completed 88 interviews (90% response rate). For the 2018 case incidents, we identified a total of 64 key informants and conducted 49 interviews (77% response rate). Our sample by jurisdictional affiliation is summarized in Table 1.

## Measures

### Outcomes

The outcome measures for this study were developed and validated during a previous study (Nowell and Steelman 2015) and are designed to reflect key aspects of collaborative governance outcomes in jurisdictionally complex wildfires.

**Table 1.** Respondents by jurisdictional affiliation.

	Frequency	%
Federal	62	44.6
Local	17	12.2
Private	19	13.7
State	37	26.6
Tribal	4	2.9
Total	139	100.0

There are 10 outcome measures in total. As shown in Table 2, three items are conceptually associated with communication and information management, three are associated with episodic cooperation and coordination between jurisdictions, and four items focus on incident level strategy and priorities – all of which map to our hypotheses. Descriptive analysis indicated that all items were normally distributed within acceptable limits.

### Jurisdictional affiliation

The independent variable of theoretical interest in this study is the jurisdictional affiliation of the respondent. A jurisdiction is defined as an administrative entity with legal authority to make decisions and take action within the confines of a geographic boundary and a defined domain of responsibility. All respondents in this dataset were individuals affiliated with a public or private jurisdictional land ownership (e.g. USFS, BLM, National Park Service, Bureau of Indian Affairs, State Fire Agencies, commercial timber landowners) engaged in 1 of the 15 wildfire incidents. Based on the findings from Fleming *et al.* (2015), respondents were coded by jurisdictional level in terms of whether they were federal, state, local, tribal, or private.

### Controls

Because of the hierarchical nesting of the data, incident ID (FireID) was controlled for in all analyses (Table 3). This is important for this analysis as it controls for variation in collaborative performance at the incident level, allowing us to better isolate the hypothesized relationships. In addition, we also controlled for whether the respondents' jurisdiction was a 'lead agency' on the incident. Lead agencies are agencies authorized to request the assistance of federal incident management teams and are frequently perceived to have greater sway in directing fire management strategy with the incident management team (Table 4).

### Analysis

To examine the predicted pattern across different categories of outcome variables, a general linear multivariate analysis of variance (MANOVA) model was used. MANOVAs are a useful statistical tool for this research question as they allow investigations into and comparison of multiple dependent variables, which then allows the investigator to consider both the overall effect of an independent variable using multivariate modes and consider univariate effects associated with each dependent variable separately. These models allow us to examine the extent to which responses for different outcomes could be explained by jurisdictional affiliation, controlling for FireID and lead agency designation. We also anticipated that organizational pluralism might be more pronounced on certain incidents. To control for this, we included a jurisdictional ID by incident ID interaction term in all models (Tables 3 and 4).

**Table 2.** Collaborative governance performance outcome measures.

Network activity type	Outcome measures <sup>A</sup>	Mean (s.d.)	Range
Communication and information management	All concerned jurisdictions prioritized maintaining good communication among jurisdictions	1.93 (0.98)	5
Communication and information management	Credit for success and effort was shared among jurisdictions during public meetings and media events	2.13 (1.1)	5
Communication and information management	Public information was coordinated among cooperating jurisdictions to ensure continuity of the message	2.0 (.99)	5
Episodic cooperation and coordination	There was a general willingness across affected jurisdictions to offer assistance to other jurisdictions	1.78 (1.07)	5
Episodic cooperation and coordination	'Borrowed resources' were released in a timely fashion to minimize burden on the lending agency	2.04 (1.0)	5
Episodic cooperation and coordination	Local resources were incorporated into the incident management operations	1.83 (1.11)	5
Incident level strategy	A coordinated set of fire management objectives were agreed on among all affected jurisdictions	2.14 (1.1)	5
Incident level strategy	Critical values at risk were broadly understood by all major stakeholders	2.20 (1.35)	5
Incident level strategy	Efforts to protect identified values were appropriate given available resources	2.09 (1.37)	5
Incident level strategy	The overall strategy taken in managing this fire was appropriate	2.26 (1.35)	5

<sup>A</sup>Based on a Likert scale ranging from 1 = strongly agree, 2 = somewhat agree, 3 = neither agree nor disagree, 4 = somewhat disagree, and 5 = strongly disagree.

**Table 3.** Respondents by fire incident summary.

Incident ID	Frequency	%
1.00	9	6.5
2.00	15	10.8
3.00	13	9.4
4.00	9	6.5
5.00	6	4.3
6.00	8	5.8
7.00	4	2.9
8.00	11	7.9
9.00	8	5.8
10.00	9	6.5
11.00	8	5.8
12.00	11	7.9
13.00	17	12.2
14.00	5	3.6
15.00	6	4.3
<b>Total</b>	139	100.0

**Table 4.** Lead agency summary.

	Frequency	%
Non-lead	111	79.9
Lead agency	28	20.1
<b>Total</b>	139	100.0

To test for the homogeneity of covariances across outcomes, we used Box's *M* test. This test was significant in analysis of the combined set of all 10 outcome variables, indicating the covariances are not equivalent across outcomes. To address this, the outcomes were grouped into three separate models based on the hypothesized nature of the activity. The Box's *M* test results were insignificant for each of the three models, indicating the assumption of homogeneity was not a concern. Further, we also used the more conservative Pillai's Trace statistic on all models. Results between the combined model (all 10 outcomes) and the separated models demonstrated a consistent pattern of significance. We then conducted *post hoc* analyses to examine patterns across jurisdictional levels for each outcome individually. We hypothesized that jurisdictional affiliation would not be a significant predictor in communication and information management outcomes, would be a weak predictor of episodic cooperation outcomes and would be a strong predictor of outcomes related to incident-level strategy.

## Results

### Communication and information management

First, a MANOVA was performed on three collaborative performance outcomes associated with communication and information management. The independent variable of theoretical interest was jurisdictional affiliation controlling for variation in outcomes across incidents as well as between lead and non-lead agency affiliations. Box's *M* (45.12;  $F = 0.96$ ,  $P = 0.53$ ) was not significant, which indicates that the homogeneity of covariance is assumed across groups.

**Table 5.** Between-subjects effects for communication and information management.

	Type III sum of squares	d.f.	Mean square	F	Significance	Partial eta squared
All concerned jurisdictions prioritized maintaining good communication among jurisdictions	6.938	4	1.735	2.258	0.070	0.096
Credit for success and effort was shared among jurisdictions during public meetings and media events	4.278	4	1.069	0.958	0.435	0.043
Public information was coordinated among cooperating jurisdictions to ensure continuity of the message	4.427	4	1.107	1.366	0.252	0.060

\*\* $P < 0.01$ ; \* $P < 0.05$ .

**Table 6.** Between-subjects effects of jurisdiction for episodic cooperation and coordination outcomes.

	Type III sum of squares	d.f.	Mean square	F	Significance	Partial eta squared
There was a general willingness across affected jurisdictions to offer assistance to other jurisdictions	3.804	4	0.951	1.127	0.349	0.050
'Borrowed resources' were released in a timely fashion to minimize burden on the lending agency	13.817	4	3.454	4.547	0.002*	0.175
Local resources were incorporated into the incident management operations	18.304	4	4.576	5.848	0.000**	0.214

\*\* $P < 0.01$ ; \* $P < 0.05$ .

With the use of the Pillai's Trace criterion, the combined dependent variables were not significantly related to jurisdictional affiliation (0.163,  $F = 1.22$ ,  $P = 0.269$ , Partial  $\eta^2 = 0.055$ ); nor was there evidence of a significant interaction between jurisdictional affiliation and the incident (0.921  $F = 1.177$ ,  $P = 0.16$ , Partial  $\eta^2 = 0.307$ ). To investigate the impact of jurisdictional affiliation on the individual dependent variables, we performed a univariate  $F$ -test, using an alpha level of 0.05. Likewise, no significant differences were found between jurisdictions in the univariate analysis for any of the communication and information management outcome variables (see Table 5). These findings are consistent with and support our hypothesis that organizational pluralism had limited consequences for collaborative governance outcomes associated with communication and information management.

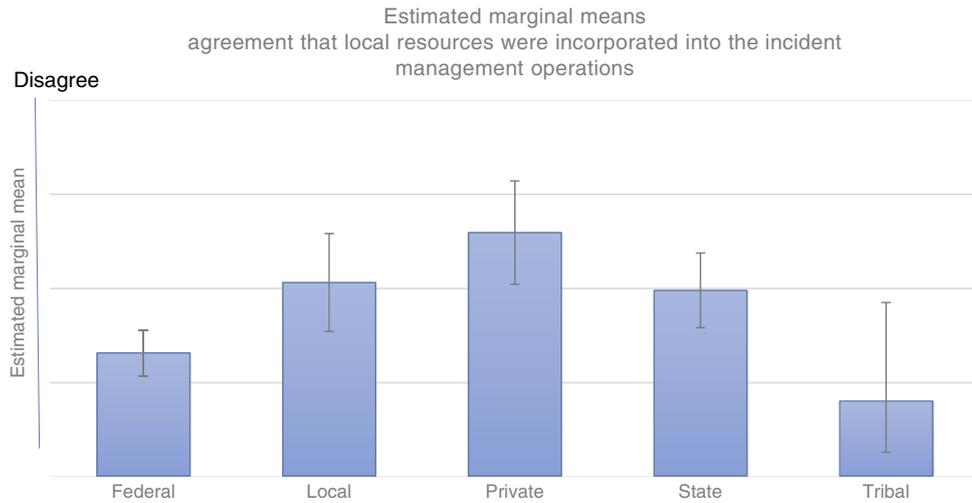
### Episodic cooperation and coordination

A second between-subjects MANOVA was performed on three collaborative performance outcomes associated with episodic cooperation and coordination between jurisdictions during the incident. As before, the independent variable of theoretical interest was jurisdictional affiliation controlling for variation in outcomes across incidents as well as between lead and non-lead agency affiliations. Box's  $M$  (101.26;  $F = 1.21$ ,  $P = 0.145$ ) was not significant, which indicated that the homogeneity of covariance can be assumed across groups.

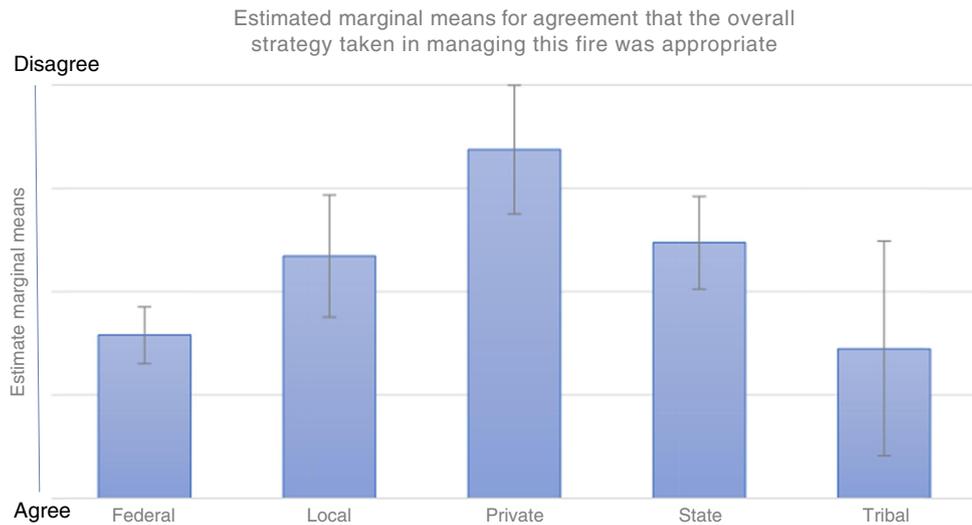
With the use of Pillai's Trace criterion, the combined dependent variables associated with episodic cooperation and coordination were significantly related to jurisdictional affiliation (0.310  $F = 2.48$ ,  $P = 0.004$ , Partial  $\eta^2 = 0.10$ ). There was also evidence of a significant interaction between jurisdictional affiliation and incident (1.02  $F = 1.42$ ,  $P = 0.02$ , Partial  $\eta^2 = 0.34$ ), suggesting organizational pluralism played a greater role in some incidents than others. To investigate the impact of jurisdictional affiliation on the individual dependent variables, we performed a univariate  $F$ -test, using an alpha level of 0.05, for each dependent variable (see Table 6). There were significant differences between jurisdictions in the univariate analysis for two of the three collaborative governance outcome variables.

As shown in Table 6, jurisdiction affiliation showed a non-significant relationship to assessments of general willingness to offer assistance across jurisdictions. Jurisdictional affiliation mattered in explaining assessments of whether borrowed resources were released in a timely fashion as well as whether local resources were incorporated into the incident management operations.

Recalling that higher scores reflect greater dissatisfaction, *post hoc* analysis indicated that respondents representing private jurisdictions were significantly less satisfied relative to all other jurisdictions for all outcomes in this model. Leaders representing state jurisdictions were significantly less satisfied relative to federal and tribal representatives in their concerns about local resources being incorporated into



**Fig. 2.** Marginal means by jurisdiction for satisfaction with use of episodic cooperation and communication (higher scores represent greater dissatisfaction).



**Fig. 3.** Marginal means by jurisdiction for satisfaction with overall incident level strategy (higher scores represent greater dissatisfaction).

the fire operations. However, state leaders were not as dissatisfied as private leaders. An example of the distribution of the marginal means across jurisdictional categories is shown in Fig. 2. (Because we are representing estimated marginal means, the raw data anchors are not represented in Figs 2 and 3. Estimated marginal means are best interpreted as effects sizes relative to each other, which is what we have displayed.)

These findings partially support our hypothesis that collaborative activities focused on facilitating episodic coordination between affected jurisdictions would fall somewhere in the middle of the continuum. Organizational pluralism had mixed predictive value for collaborative governance outcomes associated with episodic cooperation and coordination.

### Incident-level strategy

Finally, a MANOVA was performed on the four outcome measures that measured collaborative success related to developing a cohesive incident level strategy. As before, the independent variable of theoretical interest was jurisdictional affiliation controlling for variation in outcomes across incidents as well as between lead and non-lead agency affiliations. Box's  $M$  (105.61;  $F = 1.23$ ,  $P = 0.13$ ) was not significant, indicating the homogeneity of covariance can be assumed across groups.

With the use of Pillai's Trace criterion, the combined dependent variables were significantly related to jurisdictional affiliation (0.406,  $F = 2.43$ ,  $P = 0.002$ , Partial  $\eta^2 = 0.102$ ). There was also evidence of a significant

**Table 7.** Between-subjects effects of jurisdiction for incident level strategy.

	Type III sum of squares	d.f.	Mean square	F	Significance	Partial eta squared
A coordinated set of fire management objectives were agreed on among all affected jurisdictions	10.931	4	2.733	2.783	0.032*	0.115
Critical values at risk were broadly understood by all major stakeholders	14.736	4	3.684	2.973	0.024*	0.121
Efforts to protect identified values were appropriate given available resources	26.764	4	6.691	5.726	0.000**	0.210
The overall strategy taken in managing this fire was appropriate	24.503	4	6.126	6.150	0.000**	0.222

\*\* $P < 0.01$ ; \* $P < 0.05$ .

interaction between jurisdictional affiliation and the incident ( $1.32 F = 1.34$ ,  $P = 0.02$ , Partial  $\eta^2 = 0.33$ ), again indicating organizational pluralism had a stronger relationship to incident level strategic outcomes on some incidents relative to others. To investigate the impact of jurisdictional affiliation on the individual dependent variables, a univariate  $F$ -test using an alpha level of 0.05 was performed for each outcome variable separately (see Table 7). There were significant differences between jurisdictions in the between-subjects analysis for all four outcome variables.

Based on partial  $\eta^2$ , jurisdictional affiliation contributes the greatest amount of variation in explaining whether leaders felt that actions taken were appropriate. For example, jurisdictional affiliation explained one-fifth of the variation in whether informants felt that the overall strategy taken to manage the fire was appropriate. Jurisdictional affiliation had comparatively less explanatory power in differentiating whether fire management objectives were agreed on and values at risk were understood. This suggests that, at least in this dataset, jurisdictions were more likely to agree on intended strategy, but diverged when it came to evaluating the appropriateness of what took place in terms of the execution of fire management strategy.

Our hypothesis that fire level strategy would be more susceptible to organizational pluralism relative to communication and information management was supported. However, there was only partial support for our hypothesis that incident level strategy-related outcomes would be more susceptible to jurisdictional pluralism relative to episodic cooperation and coordination type outcomes. This was true for only one of the three outcomes associated with episodic cooperation and coordination (see Table 6). For the other two outcomes, the  $\eta^2$  values in a fully combined model were equal to or greater than the  $\eta^2$  for wildfire strategy outcomes.

*Post hoc* analyses revealed a consistent pattern for all outcome measures. Private jurisdictional leaders were the most critical, followed by state leaders, whereas federal and tribal representatives, on average, had the most positive assessments (see example in Fig. 3). However, owing to the limited representation of tribal representatives in this dataset, findings related to tribal leaders should be interpreted with caution.

## Discussion

Collaborative governance in jurisdictionally complex environments has an inherent paradox. Complex environments mean that multiple organizations are necessary to address problems, but organizational pluralism in these environments also gives rise to divergent perspectives, values, goals, assessments and expectations related to those very differences (Lawrence and Lorsch 1967; Saz-Carranza and Ospina 2011; Vangen and Huxham 2012; Wang and Ren 2021). Our research advances extant theory to provide empirical evidence for some of the specific conditions under which collaborative governance outcomes are more susceptible to organizational pluralism challenges. In doing so, we demonstrate the value that the concept of pluralism can bring to the scholarship on collaborative governance and why it may be important to distinguish pluralism from diversity.

Interpersonal dynamics are essential to collaborative governance and are often used as an explanatory variable in collaborative success (Gray 1985; Bryson *et al.* 2006; Emerson *et al.* 2012), but there is more to the story. We explored how the organizational identities of individuals affect variation across different collaborative governance outcomes. Our results indicated that organizational pluralism associated with jurisdictional affiliation was a key factor in explaining how leaders understood many – but not all – of these outcomes.

Results from our study illuminate several key insights. First, our study highlights that organizational pluralism is an important structural feature to assess in multi-jurisdictional settings as it has bearing on how we understand collaborative governance outcomes. Organizational perspectives are not monolithic. The absence of this monolithic perspective means there is greater room within collaborative governance outcomes to find consensus or conflict – and we have theories that can begin to explain why and how we see this differentiation, as well as methods and metrics to uncover them (cf. Bodin *et al.* 2022). The literature on pluralism suggests that in the context of pluralistic cleavages, it is critical to focus on findings areas of agreement (Dahl 1978; Sartori 1997). The policy literature suggests that agreement

in deep core values can be more challenging than policy-related values, thereby creating opportunity for alignment where fundamental values might otherwise create conflict (Sabatier 1988; Jenkins-Smith *et al.* 2014). The language of pluralism and the investigation of its role in explaining variation across individual perspectives associated with different collaborative governance outcomes demonstrate empirically where these cleavages and opportunities are in the context of disasters, where that consensus resides and where conflict is most prevalent.

Second, our study offers further evidence to suggest that not all collaborative governance outcomes are equal when viewed through the lens of organizational pluralism. This finding builds on important research advanced by other authors who address contingency factors in the design of collaborative institutions (Mandell and Steelman 2003; Nowell 2008; Provan and Kenis 2007). We find some support for what Himmelman (2001) has identified as a continuum of interaction. Pluralism associated with jurisdictional affiliation on wildfire disasters does not appear to have the same consequence for all collaborative governance outcomes. There are certain collaborative governance outcomes such as communication and information management where – consistent with collaborative continuum theories – we do not see evidence of jurisdictional polarization despite finding evidence of its presence on other outcomes. This is important because collaboration is understood to be based on trust (Gray 1989) and trust is difficult to build in the context of absolute polarization. However, if trust can be built through engagement on less contentious outcomes such as the coordination and dissemination of public information, it may create a foundation for more productive engagement on more challenging outcomes such as wildfire strategy. This is part of the premise behind values pluralism and finding multiple facets where consensus can be built (Dahl 1978; Sartori 1997). Pluralism matters more for some outcomes relative to others in a manner that is at least partially consistent with Himmelman's (2001) theory. This finding also suggests that a developmental dynamic may be at play (Ulibarri *et al.* 2020; Imperial 2023), albeit one more finely tuned to the emergent nature of disaster contexts. As such, these findings have implications for the design and management of collaborative governance activity given the functions it serves as well as the potential tensions therein. Future research should consider the longitudinal effects of repeated engagement among jurisdictions on both patterns of pluralism and how conflict and consensus emerge over repeated interactions, as would be expected in communities where wildfire occur. An additional area for research is whether and how collaboration and communication prior to a fire affect specific collaborative outcomes during the fire.

Third, we bring greater nuance to understanding where organizationally pluralistic differences lie. Values-based pluralism suggests that there are some values that are incommensurate with others' values. The question is where we see this

incommensurability emerge and where does it not. We offer some empirical evidence on this important point. Consistent with extant theory, evidence suggests communication and information management tasks are fairly robust to pluralism stemming from jurisdictional differences. The theoretical mechanism is that these outcomes require less negotiation of competing missions and are less likely to be perceived as zero-sum values outcomes (i.e. win/lose). In short, the values-based differences are less stark. Everyone benefits from sound management and coordination of information on a wildland fire, and when it comes to spreading and sharing information about the wildland fire, there are no clear losers.

Fourth, and consistent with extant theory, evidence suggests outcomes related to wildfire strategy are particularly susceptible to organizational pluralism stemming from jurisdictional differences. Fire management strategy on complex incidents generally requires values trade-offs as well as the prioritization of goals, which means some interests will be subordinated to others. Decisions are likely to privilege – or be perceived to privilege – certain interests over others. As such, what effectiveness means in the context of incident strategy looks different depending on values embedded within organizational affiliations. Private and state interests were more likely to be dissatisfied with strategy outcome, but not uniformly so. As the mission of the organization narrows, there is less room to find overlap in values. All-out suppression to protect privately held timberland is incommensurate with allowing a fire to play its natural role in the ecosystem to restore it. These findings are consistent with Fleming *et al.* (2015), who identified clear differences in perceptions of mission alignment among federal, state and local personnel, as well as Nowell *et al.* 2022, who found perceptions of co-management differed along a continuum of desired interdependency.

Finally, findings were mixed regarding episodic cooperation and coordination among jurisdictions. In particular, and counter to our hypothesis, fairly strong organizational pluralism effects were observed for whether respondents agreed that local resources were sufficiently incorporated into the response and whether borrowed resources were released in a timely fashion. However, there was no observed organizational pluralism effect associated with willingness to offer assistance across jurisdictions. The mechanism underlying this finding is unclear, but perhaps it reflects the importance of local resources as a means through which some jurisdictions gain greater influence in the strategic decisions on a wildfire. In other words, private and state jurisdictions may feel that the fire strategy is more reflective of their respective interests if representatives from the area are more incorporated into the response. This finding highlights the importance of understanding how different outcomes may reveal a more nuanced picture of whose values are subordinated to others and the power dynamics associated with wildfire response. The use of local resources as a pathway to gain more local representation and hence value expression in an incident response is an area for future research.

In summary, we find that organizations and agencies who disagree can still function in collaborative governance settings – in part – because organizational pluralism does not affect all outcomes equally. Interests in jurisdictionally complex disasters are likely to engage in a range of collaborative governance activities and have different perspectives on the outcomes and associated effectiveness of these activities. Second, some collaborative governance outcomes are more susceptible to disagreement stemming from jurisdictional pluralism. Resource use and operational strategy are more likely to be viewed as privileging certain jurisdictional interests over others, thereby accentuating values differences and increasing the likelihood of conflict. Third, to build trust in jurisdictionally contentious environments, leaders may want to emphasize efforts less likely to be perceived as ‘zero sum’ value outcomes such as collaborative communications and information management, which are less divisive. Finally, on jurisdictionally complex incidents, managers should pay special attention to the potential for conflict between federal and state/private managers owing, in part, to values-based differences in mission among these organizations. Anticipating these conflicts, these key stakeholders could begin to address these challenges ahead of a wildfire during pre-fire season workshops, table-top exercises and meetings.

These insights provide some nuanced, empirical insight into the dynamics of organizational pluralism in collaborative settings. Providing greater understanding of where we can expect to find conflict can lead to not only more realistic expectations, but also more resilient collaborative designs targeted at specific contexts and potentially better managed outcomes for all involved.

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**Data availability.** Aggregated data will be made available on request to authors.

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