

How Institutions Shape Trust during Collective Action: A Case Study of Forest Governance on
Haida Gwaii

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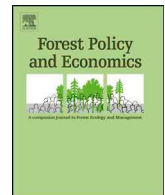
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*Prepared for delivery at the Workshop on the Ostrom Workshop (WOW6) conference, Indiana
University Bloomington, June 19–22, 2019. © Copyright 2019 by author(s)*



Contents lists available at ScienceDirect

Forest Policy and Economics

journal homepage: www.elsevier.com/locate/forpol

How institutions shape trust during collective action: A case study of forest governance on Haida Gwaii[☆]

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ARTICLE INFO

Keywords:

Collective action
Institutions
Trust
Indigenous
Co-management
Governance

ABSTRACT

Trust between actors involved in collective action can lower transaction costs, create incentives to invest in collective activities and help actors to achieve joint gains. While existing theoretical frameworks note the importance of institutions for motivating trust and the trust literature identifies characteristics of institutions that motivate trust, empirical research regarding natural resource governance is needed to inform development of institutions for this type of collective action situation. This paper builds on an existing theoretical framework linking institutions, trust and collective action by exploring the characteristics of institutions that motivate trust. Empirical grounding was provided in the form of a case study of collaborative forest governance on Haida Gwaii, an archipelago located off the coast of British Columbia, Canada. Conflict between the Council of the Haida Nation and the Province of British Columbia regarding widespread industrial logging led the two parties to establish two structures to collaboratively govern forests and lands on Haida Gwaii: the Haida Gwaii Management Council and the Solutions Table. Interviews with past and present members of the Haida Gwaii Management Council and the Solutions Table were used to identify three forms of formal rules and one form of informal rules as well as fourteen associated characteristics that motivated trust. Cluster analysis reduced the fourteen characteristics to four clusters: alignment of interests, fairness, cohesion and satisfactory terms of cooperation.

1. Introduction

Trust is known to be important for collective action (Kahan, 2003). Individuals who have faith that others will contribute to collective activities will voluntarily respond in kind, leading to subsequent cooperation in kind as individuals observe others contributing to public goods (Kahan, 2003; Berkes, 2010). Mutual trust also lowers transaction costs associated with monitoring others' actions (Kramer and Tyler, 1996; Pretty and Ward, 2001; Vanni, 2014) and administering incentive schemes to entice compliance (Kahan, 2003). In her Nobel Prize¹ lecture, Dr. Elinor Ostrom noted the “central role of trust” in addressing collective action problems among individuals involved in multi-level, polycentric governance of common-pool resources (Ostrom, 2009). Her lecture concluded with a call to identify how institutions help or hinder collective action, including by motivating trust (Ostrom, 2009).

However, trust remains an understudied construct within the context of collective action. While some scholars have explored the role of social capital and norms (e.g. Keefer and Knack, 2005; Ostrom and Ahn, 2009), literature on collective action “has paid more attention to payoff functions than to how individuals build trust” (Ostrom, 2009). The trust literature offers insights regarding characteristics of institutions that motivate trust and Farrell (2009a,b) calls for “a properly developed theoretical account of how trust and institutions interact.” Ostrom and Ahn (2009) provide a theoretical foundation for this work by outlining the relationship between institutions, trust and collective action. Empirical research, including case studies, can help to identify which characteristics of institutions that appear in the trust literature are particularly relevant for motivating trust and, subsequently, collective action.

Collaborative forest governance on Haida Gwaii, an archipelago

[☆] This article is part of a special issue entitled “Governing our forests: The evolving political economy of multiple values and multiple stakeholders,” published at the journal *Forest Policy and Economics* 107C, 2019.

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¹ Ostrom received the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel; commonly (inaccurately) referred to as the Nobel Prize in Economics.

<https://doi.org/10.1016/j.forpol.2019.05.007>

recibido en 7 abril 2018; recibido en versión revisada en 4 marzo 2019; aceptado en 13 abril 2019

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located off the coast of British Columbia, Canada, offers an opportunity to explore the characteristics of institutions that motivate trust to support collective action. Conflict between the Council of the Haida Nation and the Province of British Columbia (B.C.) regarding widespread industrial logging led the two parties to sign a Reconciliation Protocol in 2009, which established two distinct but related structures to govern forest and land use on Haida Gwaii: the Haida Gwaii Management Council (HGMC) and the Solutions Table. This paper presents a case study of the characteristics of institutions that motivate trust based on interviews with past and present members of the Haida Gwaii Management Council and of the Solutions Table.

As Indigenous communities across Canada – and around the world – regain control over lands and resources, experiences from Haida Gwaii can provide insights for how institutions can motivate trust and support collective action involving Indigenous and non-Indigenous governments. This paper builds on an existing theoretical framework that links institutions, trust and collective action (Ostrom and Ahn, 2009) and characterizes institutions that motivate trust to support collective action based on empirical research from a case study of collaborative forest governance on Haida Gwaii.

1.1. Trust, collective action and the role of institutions

Ostrom and Ahn (2009) outline the relationship between institutions, trust and collective action (Fig. 1). According to this framework, forms of social capital – including trustworthiness, networks and institutions – motivate trust which, subject to contextual variables, supports collective action.

Trust has been explored from the disparate perspectives of economics, management, marketing, psychology and sociology and is defined in many ways throughout these bodies of literature (Castaldo, 2002; Castelfranchi and Falcone, 2010; Schilke et al., 2015). One common definition, employed in Ostrom and Walker (2003: 6), describes trust as the “intention to accept vulnerability based upon positive expectations of the intentions of the behavior of another” (Rousseau et al., 1998: 395). The perception of trust by an individual, referred to as “subjective trust,” is believed to arise as result of the existence of trust antecedents which motivate trusting actions, or “behavioural trust” (Gillespie, 2003; Das and Teng, 2004; Colquitt et al., 2007; Gillespie, 2012). Antecedents of trust include actions such as making promises, shaping expectations of behavior, expressing normative values and developing a shared identity (Davis and Holt, 1993; Ostrom, 2003). Trust between actors involved in collective action can enable joint gains that exceed the value of those possible through acting alone (Ostrom and Walker, 2003). Mutual trust also lowers transaction costs by reducing the need to monitor others (Pretty and Ward, 2001; Vanni, 2014) and creating incentives to invest in collective activities based on confidence that others will do the same (Berkes, 2010). However, the temptation to betray another’s trust – for example, by breaching the terms of a contract or agreement – in pursuit of short-term gain creates a challenging environment for building or maintaining trust among actors (Ostrom, 2003). Despite this temptation, people cooperate more frequently than rational choice models would predict (Davis and Holt, 1993: 325; Ostrom, 2003). “Building trust,” notes Ostrom (2003, 34) “appears to be a key link in the communication-cooperation connection.”

Poteete et al. (2009) note that early theories of collective action focused on individual resource users acting independently and in self-interest, leading to resource depletion if not for private ownership or regulation (Poteete et al., 2009). Examples included the Tragedy of the Commons (Hardin, 1968), the Prisoner’s Dilemma (Rapoport and Chammah, 1965) and the problem of free-riding (Olson, 1965). However, field-based studies documented many cases of successful collective natural resource governance in the absence of private ownership or government regulation, leading game theorists and other scholars to develop new equilibrium concepts and more realistic models of human

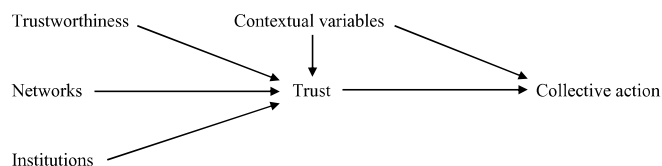


Fig. 1. Trust, forms of social capital and their linkage to achieving collective action (Ostrom and Ahn, 2009).

behavior and strategic interaction (Poteete et al., 2009). This included development of the Institutional Analysis and Development Framework (Kiser and Ostrom, 1982) which sought to explain collective action in field settings of diverse and complex institutions (Poteete et al., 2009). Thus, early explorations of collective action that focused on actions taken by a group of individuals in pursuit of members’ perceived shared interests (Marshall, 1998) gave way to analyses of complex, multilevel and polycentric institutions (Poteete et al., 2009), including co-management (Berkes, 2009; Vanni, 2014) and institutional collective action (Feiock, 2013).

Co-management describes a partnership that bridges levels of governance by sharing power, knowledge and responsibility between a central government and local resource users (Singleton, 1998: 7; Berkes, 2009: 1692; Berkes, 2010; Vanni, 2014). In such arrangements, different levels of organizations bring their respective comparative advantages in generating and mobilizing knowledge at different scales (Vanni, 2014: 28) to support collective action through increased efficiency and legitimacy (Singleton, 1998: 3). By comparison, institutional collective action (ICA) describes decisions that involve two or more independent formal authorities (Feiock and Scholz, 2010; Feiock, 2013). ICA recognizes that, while only individuals are capable of action, individuals often act as composite actors in the name of or in the interest of a group or organization (Ostrom, 2005; Feiock and Scholz, 2010: 7). Such arrangements can result in collective action dilemmas among government authorities “similar to those much-studied problems for individuals” (Feiock and Scholz, 2010: xv) in which decisions made by one independent formal authority do not consider costs or benefits imposed on others (Feiock and Scholz, 2010; Feiock, 2013). However, in both types of arrangements, collective action may be motivated by the potential to increase quality and lower cost of information, enhance effectiveness of monitoring and enforcement and increase legitimacy of the system through involvement of multiple actors in its development (Vanni, 2014).

Institutions are an important form of social capital that can help actors increase trust during collective action (Ostrom and Ahn, 2009). They can act as antecedents of trust by creating favourable assumptions and expectations about a potential trustee’s behaviour and reducing the risk of one or more parties behaving in an untrustworthy manner (Möllering, 2006; Farrell, 2009a, 2009b; Bachmann and Inkpen, 2011). The trust literature refers to this phenomenon as “institution-based trust” (Bachmann and Inkpen, 2011) and describes how institutions can offer assurances (e.g. Yamagishi and Yamagishi, 1994) to prospective trustors and sanctions (e.g. Shapiro et al., 1992) to potential defectors. Ostrom (1986, 1990: 51, 2011) defines institutions as “the sets of working rules that are used to determine who is eligible to make decisions in some arena, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or must not be provided and what payoffs will be assigned to individuals dependent on their actions.” This set of rules typically includes some combination of formal rules, such as laws, agreements and contracts, as well as informal rules, such as customs, traditions and norms (Coleman, 1990; Coletti et al., 2005; Bachmann and Inkpen, 2011), that collectively represent shared understandings among actors regarding what actions are required, prohibited or permitted (North, 1990; North, 1991; Crawford and Ostrom, 2005; Ostrom, 2011). Such institutions are used by individuals to organize

Table 1
Characteristics of institutions that motivate trust (Hotte et al., 2019).

Influence on trust	Source
Justice, fairness and expectations	Aryee et al. (2002); Dirks and Ferrin (2002)
Alignment of interests; value alteration; selectivity in transactions; research/information revelation	Bhattacharya et al. (1998)
Norms; sanctions	Coleman (1990)
Control systems	Coletti et al. (2005)
Mutual interests; interpersonal trust; joint dispute resolution; policies and procedures; reporting structure; staffing and training; decision-making process; rituals, ceremonies and networking; proactive information collection; setting objectives; planning and budgeting	Das and Teng (2001)
Interaction frequency; symmetry of dependence; multiplicity of relationships and cooperation-related incentives	Eberl (2003)
Structural assurance belief; situational normality belief	McKnight et al. (1998)
Expectations embedded in norms, structures and institutions	Newell and Swan (2000)
Interaction of past exchange experiences and expectations of continuity	Poppo et al. (2008)
Power in social exchange	Schilke et al. (2015); Wu and Wilkes (2016)
Leadership styles	Schaubroeck et al. (2011)
Affect; emotion; violation and repair; distrust; international and cross-cultural issues	Schoorman et al. (2007)
Communication; cooperation; performance	Seppanen et al. (2007)
Relational form, depth and risks	Sheppard and Sherman (1998)
Type of instigation; network size; flexibility/adaptability; influence	Willem and Lucidarme (2014)
System-based trust (satisfactory terms, adoption of alternative dispute resolution, reputation)	Wong and Cheung (2005)

and govern themselves to reduce information asymmetry, provide guidelines for behaviour and increase the likelihood of collective action by reducing the temptation to defect – in essence, to behave in a trustworthy manner (Möllering, 2006; Bachmann and Inkpen, 2011). Because rules are subject to interpretation (Aligica and Boettke, 2009, 2011), stability of actions based on rules hinges on existence of shared meaning among actors (Ostrom, 2011). However, shared meaning itself can shift over time due to changes in norms, events or the state of knowledge (Ostrom, 1980).

The trust literature points to several characteristics of institutions that motivate trust by creating favourable or unfavourable assumptions and expectations about actors' behaviour (Bachmann and Inkpen, 2011). These characteristics are summarized in Table 1. However, this literature encompasses a broad range of institutions. While it offers a list of characteristics of institutions that may be conducive to trust, empirical research regarding natural resource governance institutions is needed to inform development of formal and informal rules that are tailored to this type of collective action situation (Ostrom, 2009).

Contextual issues of power also have important implications for trust and collective action in co-management and ICA arrangements. Because institution-building occurs in a particular political, social and economic context (Prabhu et al., 2007; Berkes, 2010), the ability to exercise power and the kinds of powers held by each party can shape institutions in important ways (Ribot et al., 2006; Berkes, 2010). For example, rules may be crafted by actors themselves, imposed by one governing body or some combination thereof and are shaped by exogenous influences. While Ostrom (1990) asserts that resource users themselves must devise their own rules, norms, and sanctions to ensure that group interests are in line with those of individuals to influence behaviour and create legitimacy (Vanni, 2014), the level of power-sharing, devolution of powers and retention of existing powers may be more strongly influenced by one party in co-management – typically, by state governments. And while formal rules are explicitly negotiated, informal rules often emerge from independent instances of social bargaining between actors in a manner that reflects implicit power relations (Farrell, 2009a,b). Actors that are more powerful may be expected to be more successful in these social bargaining situations, with actors' expectations crystallizing over time and reinforcing imbalances of power (Farrell, 2009a,b). If one party possesses a high degree of power, they may have little or no incentive not to renege on their commitments (Farrell, 2009a,b). Thus, the risk of trusting may be perceived by a potential trustor as too great. Trust is only possible to the extent that both parties value continuation of the relationship and have some

reason to take the other's interest into account (Farrell, 2009a,b).

1.2. Collaborative forest governance and trust on Haida Gwaii

Collaborative management, or collaborative governance, are often used as synonyms for co-management (Berkes, 2010). In Canada, collaborative management typically refers to an informal (non-legal) relationship, while the term co-management is reserved for formal power-sharing arrangements involving a state government and local resource users (Berkes, 2009, 2010). However, no single, universally accepted definition of co-management exists because there is a continuum of arrangements with different degrees of power sharing (Pinkerton, 1989; Armitage et al., 2007; Berkes, 2010). Where two or more parties to a co-management agreement participate and share power under their own authorities, the relationship resembles an ICA arrangement. At the other end of this continuum, participation in collaborative governance may be limited to an advisory capacity (Bowie, 2013).

Approximately 490 bilateral and trilateral agreements have established collaborative governance arrangements involving Indigenous organizations and governments and provinces regarding lands, resources and economic development in Canada (Papillon, 2015). Development of these agreements has been motivated by a combination of jurisprudence regarding Aboriginal rights and title (e.g. *Delgamuukw v. British Columbia*, *Haida Nation v. British Columbia*) and conflict associated with increasing pressure on natural resources (Papillon, 2015). These institutions have developed in an environment where trust is particularly elusive due to a history of assimilation and domination carried out under Canadian laws such as the *Indian Act* (Blackstock, 2001). These laws have, over the past 150 years, been used to restrict First Nations² Peoples' freedom to practice their culture, to access the justice system and to self-determination, among other injustices (Blackstock, 2001; Carlson, 2010; Coates and Carlson, 2013). Federal and provincial institutions treated First Nations people as inferior and assumed responsibility for decisions on their behalf, including through the reserve and residential school systems (Blackstock, 2001). While some blatantly discriminatory elements of the *Indian Act* have been removed, the colonial intent of the Act is preserved in its remaining form. This legacy has generated conflict and mistrust between First Nations and federal or provincial governments (Canada et al., 1996;

² In Canada, Indigenous Peoples are variously described as belonging to one of three groups: First Nations, Inuit or Métis. The Haida are one of the First Nations (Takeda and Røpke, 2010).

Table 2

Documents that outline formal rules for collective action for forest governance on Haida Gwaii.

Agreement	Highlights
Strategic Land Use Agreement (2007)	<ul style="list-style-type: none"> ● Outlined sustainable forestry practices ● Established terrestrial protected areas over 52% of land area ● Described interim and permanent protection measures for new protected areas ● Identified land use objectives and governance structures ● Lowered the annual allowable cut (AAC) from 2.2 million cubic metres per year (m³/y) to 800,000 m³/y ● Committed to joint analysis and determination of future timber harvest
Kunst'aa guu-Kunst'aayah Reconciliation Protocol (2009)	<ul style="list-style-type: none"> ● Committed to seeking “a more productive relationship” ● Represented “an incremental step in a process of reconciliation of Haida and Crown titles” ● Outlined shared and joint decision-making respecting lands and resources on Haida Gwaii ● Introduced the Haida Gwaii Management Council and Solutions Table
Land Use Objectives Order (2010)	<ul style="list-style-type: none"> ● Addressed technical components of ecosystem-based management ● Expanded on Province-wide land use objectives to include locally-important cultural and ecological features
<i>Haida Gwaii Reconciliation Act</i> (2010)	<ul style="list-style-type: none"> ● Delegated authority for the following decisions to the Haida Gwaii Management Council: <ul style="list-style-type: none"> ○ Determining the Annual Allowable Cut for timber ○ Establishing and amending objectives for the use and management of land and resources ○ Developing protected area management plans ○ Establishing policies and standards for identification and conservation of heritage sites

Blackstock, 2001) and has important implications for how power is shared in collaborative governance by assigning authority for natural resource decisions primarily to federal and provincial governments.

Collaborative forest governance on Haida Gwaii, which involves the Council of the Haida Nation and the Province of B.C., has developed against the backdrop of this legacy and the history of industrial resource extraction it supported (Lee, 2012). Haida Gwaii, known for a time as the Queen Charlotte Islands, is an archipelago of more than 350 islands located off the North Coast of British Columbia, Canada, and home to some of the world's last remaining tracts of intact coastal temperate rainforest (Gaston et al., 2008; Takeda and Røpke, 2010). The cool, oceanic, humid-perhumid climate, with mean annual precipitation of 1100 to 4200 mm (Environment Canada, 1980), supports a range of ecosystems, a largely forested landscape (Gaston et al., 2008) and a current annual allowable cut of 921,500 cubic metres per year through licenses administered by the Province of B.C. (BC MFLNRO, 2012).

The Haida's connection to the lands and waters of Haida Gwaii dates back more than 10,000 years (Takeda and Røpke, 2010). Throughout the 20th century, Haida Gwaii was subject to widespread industrial logging and the Haida were denied a voice in natural resource governance decisions by federal and provincial governments (Takeda and Røpke, 2010). Even after a Supreme Court ruling in *Haida Nation v. British Columbia* recognized the strength of the Haida's claim to Aboriginal title and established the Province of B.C.'s obligations regarding consultation and accommodation (Jones et al., 2017), the Province of B.C. failed to act accordingly in its decision regarding a forest tenure (Takeda and Røpke, 2010).

This failure sparked a protest in 2005, called Islands Spirit Rising, which focused on increasing the role of the Haida in forest governance (Dean, 2009). The protest generated political pressure that resulted in interim protection for culturally and ecologically significant areas and features, launched a renewed land use planning process and set in motion a series of negotiations that led to four documents that underpin collective action for forest governance on Haida Gwaii (Table 2) (Council of the Haida Nation and Province of British Columbia, 2007, 2017; Council of the Haida Nation, November 2010; Takeda and Røpke, 2010; Egan, 2011).

These four documents, the terms of which were negotiated and agreed to by the Council of the Haida Nation and the Province of B.C., provided the basis for formal rules for two governing bodies: the Haida Gwaii Management Council and the Solutions Table (Fig. 2). The former consists of two representatives of the Council of the Haida Nation, two representatives of the Province of B.C. and one neutral chairperson who is jointly appointed. The latter also includes four members, two from the Council of the Haida Nation and two from the Province of B.C.;

however, one co-chair is appointed from each organization. While the Haida Gwaii Management Council makes decisions, the Solutions Table is a vehicle for consultation and accommodation.

These developments have increased the degree of influence of the Council of the Haida Nation over decisions about lands and resources on Haida Gwaii relative to the former top-down governance approach. Collective action on forest governance has led the Haida to achieve several of their goals for resource management including protection of Haida cultural sites, a 50% reduction in the annual allowable cut of forests, implementation of ecosystem-based management and a doubling of the area of parks and protected areas (Penikett, 2012). Consequently, this approach to forest governance is often looked to as an example by other jurisdictions (e.g. National Centre for First Nations Governance, 2013; Dowie, 2017: vii).

The events leading up to the establishment of collaborative forest governance on Haida Gwaii illustrate a fundamental ICA dilemma: as resource use began to approach a critical threshold, decisions by one government with formal authorities over aspects of forest and lands management (i.e. the Province of B.C.) imposed growing negative externalities on another government and rights holder (i.e. the Council of the Haida Nation) (Feiock and Scholz, 2010). The existence of these negative externalities led to conflict and transaction costs in the form of litigation and protest. To achieve both governments' objectives, representatives of the Council of the Haida Nation and the Province of B.C. had to move from a place of distrust and conflict to one of collective action. These developments have increased the degree of influence of the Council of the Haida Nation over decisions regarding lands and resources on Haida Gwaii compared to other top-down Provincial governance approaches. Trust has been essential for these collaborations, which are indicative of a broader shift in government-to-government relationships involving Indigenous communities across Canada. The experiences of individuals involved in forest governance through the Haida Gwaii Management Council and the Solutions Table can offer insights regarding how formal and informal rules can motivate trust among actors in collective action situation. By empirically examining the institutional rules that motivate trust in forest and land management processes on Haida Gwaii, this research also addresses Ostrom's call to action to identify institutional rules that motivate trust and support collective action.

2. Methods

A case study approach was used to empirically examine characteristics of formal and informal rules that motivate trust among actors involved in collective action for forest governance on Haida Gwaii. This approach was chosen because it provides an opportunity to examine

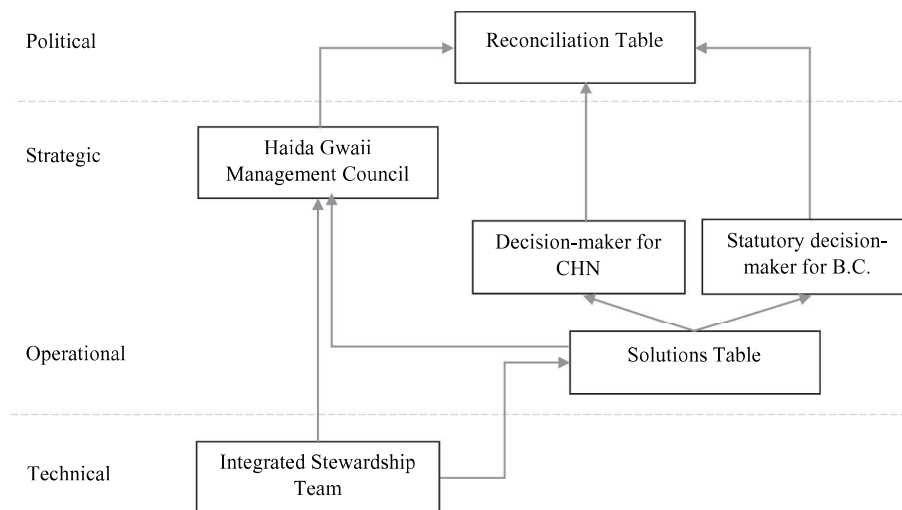


Fig. 2. Governing bodies involved in forest and land management on Haida Gwaii. (Hotte et al., 2019).

logic posited by theorists by comparing empirical evidence with relevant theories and determining whether it is consistent or challenging (Janssen and Ostrom, 2006). Case studies have been used extensively in the literature regarding collective action theory to compare logic posited by theorists to empirical evidence, determining whether it is consistent or challenging (Janssen and Ostrom, 2006).

In this study, we empirically examined characteristics of formal and informal rules that motivated trust among actors involved in collective action for forest governance on Haida Gwaii through the Haida Gwaii Management Council and the Solutions Table (the “collaborations”). The research was planned cooperatively with representatives of the Council of the Haida Nation (CHN) and the Province of B.C., with approval subsequently sought and obtained from both the CHN and the Office of Research Ethics at the University of British Columbia (UBC).

Data was obtained through semi-structured, in-depth interviews with seventeen people who are currently or were formerly involved in one of the collaborations for a period of at least one year. This included eight representatives of the Council of the Haida Nation, nine representatives of the Province of B.C. and two individuals who had participated in the Haida Gwaii Management Council as neutral chairs. All interviews were conducted by the lead author on Haida Gwaii, either in person or by telephone, over a two-month period beginning in mid-February 2017. These interviews explored experiences of individuals in the collaborations, their perceptions of trust and influences that they felt shaped these perceptions. Open-ended questions (e.g. “Tell me about your experiences with X.”) and clarifying questions (e.g. “Can you give me an example of Y?”) focused on subjective and behavioural trust (Gillespie, 2003; Das and Teng, 2004; Colquitt et al., 2007; Gillespie, 2012) and followed an unconstrained format and allowed conversation to flow naturally (Rubin and Rubin, 2005). Questions focused primarily on collective choice rules, which determine who is eligible to make operational rules and how they may be made and changed (Kiser and Ostrom, 1982; Ostrom, 2005), as these are most relevant to the collective action situations in which interviewees operate. Interviews were audio-recorded, transcribed verbatim and systematically coded and analyzed using NVivo software (Rubin and Rubin, 2005).

NVivo 11 software supported interpretation of qualitative codes and abstraction of themes. Initial codes regarding characteristics of institutions that motivate trust were identified from peer-reviewed literature (Table 1). This initial list of codes was expanded during interviews to capture participant experience, support analysis from both theoretical and emergent perspectives and create a typology based on

related concepts (Rubin and Rubin, 2005). Codes regarding the forms of formal and informal rules used by the Haida Gwaii Management Council and the Solutions Table were identified from the interviews. A codebook was maintained in NVivo 11 that contained a list of codes accompanied by a definition, brief description, instructions for when to use the code and when not to use the code (i.e. inclusion and exclusion criteria) and an example (Rubin and Rubin, 2005). A sample of three transcripts was coded by an independent researcher, who was not affiliated with the research, to analyze internal consistency of codes based on a comparison of codes assigned by the lead author and the independent researcher. Internal consistency was analyzed using Cohen's kappa ($\kappa = 0.44$) and weighted kappa statistic ($\kappa_w = 0.44$) (Davey et al., 2010). These coefficients indicate fair to moderate (George and Mallery, 2003) agreement between coders. Due to the large number of codes used in this study, this level of interrater reliability was deemed acceptable.

Data analysis was performed in an iterative cycle that allowed continuous comparison of new results with previous findings to inform subsequent analysis (Rubin and Rubin, 2005). Once all interviews had been coded, transcripts were reviewed again and, where necessary, recoded to reflect codes that had been derived through subsequent interviews. Agglomerative hierarchical cluster analysis was then performed using NVivo 11, which employs the complete linkage (i.e. farthest neighbour) algorithm to calculate Pearson correlation coefficients based on words within each theme and concept code. The most similar concepts were grouped under their respective themes to develop a coherent narrative of the trust-building process across cases. The resulting coding structure is represented in Appendix I.

A matrix query was conducted in NVivo to identify references to that linked rules-in-use and characteristics that motivated trust. Query results were exported to Microsoft Excel and an “if” statement was used to convert numerical data to a qualitative indicator of presence (“X”) or absence (“ ”) at each intersection. Cutting and sorting was then used to identify quotes that described characteristics of rules-in-use that motivate trust (Ryan and Bernard, 2003). Expert views are reported anonymously; numbers in parentheses that follow interview quotes indicate a specific interviewee response.

3. Results

Interviewees described three forms of formal rules (agreements, procedures and terms of reference and legislation) and one form of informal rules (norms), as well as fourteen associated characteristics

Table 3
Characteristics of formal and informal rules that motivate trust.

		Characteristics of rules													
		Alignment of interests						Fairness		Cohesion		Satisfactory terms			
		Adaptability	Shared beliefs	Flexibility	Responsiveness	Shared values	Shared vision	Influence	Unfettered authority	Shared identity	Stability	Accountability	Developed by collaborators	Shared objectives	Transparency
Forms of rules	Agreement	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Procedures and terms of reference	X			X	X	X	X	X	X	X	X	X	X	X
	Legislation	X		X		X		X				X	X	X	
	Norms	X	X	X		X		X		X	X		X		X

that motivated trust. Cluster analysis reduced the fourteen characteristics to four clusters: alignment of interests, fairness, cohesion and satisfactory terms of cooperation. These forms of rules and the characteristics that motivate trust are summarized in Table 3 and described in this section, supplemented by excerpts from participant interviews.

3.1. Agreements

Agreements were noted to provide clarity regarding shared objectives and secure commitment among actors. Importantly, interviewees noted that these agreements should be developed by both parties, recognize respective authorities of the parties and commit them to jointly developing further rules such as procedures and terms of reference.

“We agree that [the forests and lands] can be looked after, and we agree to a structure to look after them and then develop the rules there.” (Interviewee 9).

Several interviewees from both collaborations also noted that agreements should be adaptable to evolving needs of both governments over time. Representatives from both governments acknowledged frustrations resulting from the pace and degree of change since the Kunst'aa guu-Kunst'aayah Reconciliation Protocol was signed. This particular agreement, named with the Haida word for “the beginning” (Dowie, 2017: 125), was intended to mark the beginning of a new relationship among the parties. However, a few interviewees noted that changing political priorities have reduced political will to continue to work on the relationship. This has been viewed by some as a lack of commitment, which has led to a decline in trust.

“[...] we agree that these are the things we need to move on jointly now and everything else, we need a better system than we had before and we need to work on what the future of those decisions and that kind of engagement is going to look like as time goes along, into the future.” (Interviewee 14).

“[...] trust is continuing to build on a relationship, keep moving forward in some fashion, but also keep understanding that there's two partners in the relationship that demand attention.” (Interviewee 5).

Agreements can also act as a substitute for trust, especially due to the changing nature of governments. While mutual understanding may be reached among senior leaders within two governments at a particular time, changes in one or both governments can lead to shifting

priorities. Agreements enshrine commitments made by both governments and provide a point of reference that reduces the risk of engaging in collective action.

“[...] don't leave them to trust, but rather, be clear about what the arrangement is [...] down to the signed agreement.” (Interviewee 9).

Interviewees also specifically noted the importance of two elements of agreements – decision-making processes and joint dispute resolution.

Joint decision-making, which is used by members of the Haida Gwaii Management Council members and requires consensus except in the event of a tie-breaking vote, provides both parties with equal influence and was viewed as having a positive influence on trust. Joint decision-making was viewed as appropriate by representatives from both governments given the strength of claim to Aboriginal title of the Haida.

“[It's a] very positive process. It's not perfect but it's very positive and it was built together. And we have equal say there.” (Interviewee 1).

“You have representatives that have equal authority, no more, no less, than the representatives that the other party has.” (Interviewee 14).

In contrast, the Solutions Table uses shared decision-making, under which the Province of B.C. retains authority for making final decisions on applications. Consensus is not required among collaborators, which has created tensions between the two governments. While collaborators attempt to reach consensus on applications, the Province of B.C. can and, in some cases, must under Provincial legislation, make a unilateral decision to sign off on an application that is opposed by representatives of the Council of the Haida Nation if it meets the technical requirements established by the Land Use Objectives Order.

“At the Solutions Table proper, it's pretty equal. When it [leaves] the Solutions Table, it's unequal. The Crown still makes the decision.” (Interviewee 5).

Dispute resolution processes are used to manage disputes between actors in the event of conflict regarding a decision. Collaborators expressed concerns regarding dispute resolution processes of both the Haida Gwaii Management Council and the Solutions Table; however, relatively greater confidence was expressed in the former.

In the absence of consensus among members of the Haida Gwaii

Management Council, the neutral chairperson is expected to cast a deciding vote. Interviewees noted that by forcing the chairperson to take a position, this process has the potential to erode trust.

“I don't think it would be good for the relationship between the Haida and the Province for the Chair to have to come in and make a decision.” (Interviewee 13).

At the Solutions Table, emergence of non-consensus issues led to the creation of a new process through which additional consultation is sought at a higher level of authority within both governments. The process was developed by collaborators and provides a transparent record of discussions that outlines areas of disagreement regarding issues that meet the technical requirements of the Land Use Objectives Order; however, these discussions are not required to result in consensus. This has generated concerns regarding influence and fairness.

[...] the two senior level reps from each government [have] some dialogue to try to reach, or to try to bring it back to consensus. But it hasn't worked out to any solutions to date [...].” (Interviewee 12).

[...] a proliferation of non-consensus means somebody needs to sort something out at a higher level.” (Interviewee 7).

3.2. Procedures and terms of reference

Agreements were associated with procedures and terms of reference that provided specific guidance to actors. The Kunst'aa guu-Kunst'aayah Reconciliation Protocol, for example, includes the Streamlined Process, which outlines procedures for the Haida Gwaii Management Council and Solutions Table.

“Appendix A to the Streamlined Process [...] has 14 different Acts in it and it goes through all the different types of authorizations and whether they're Scenario 1s or 2s. [It's] very key to how the process works.” (Interviewee 4).

Procedures and terms of reference were described as important for establishing guidance for actors, including clarifying a shared vision, values and/or objectives and establishing accountability to those aspects. Developing procedures together was important for building trust, helped actors to clarify shared objectives and provided opportunities for actors to tackle challenges together. In situations where norms regarding relevant issues and knowledge differed among representatives of the two governments, terms of reference helped to bridge the divide by drawing attention back to a shared vision and objectives.

“We need to be in the room with a blank piece of paper and let's start together. [...] [W]hen we don't have that, there's just no trust.” (Interviewee 1).

“The process of building the administrative structure [...] was pretty helpful, I think, in helping build that confidence [...] [I]t became a common effort.” (Interviewee 15).

[...] we do look at things differently and have different values but to date, because we have clear mandates, it's been pretty straightforward.” (Interviewee 3).

Interviewees described that, while some procedures were formally established through documents such as the Streamlined Process, others were established collectively by actors themselves. The Haida Gwaii Management Council, for example, established a procedure to maintain continuity among members through staggered terms. This procedure was contrary to the Streamlined Process but helped knowledge and norms pass from one set of Council members to the next. Some interviewees noted challenges at the Solutions Table because the scope of responsibilities changed over time and new responsibilities were added without collaboratively developed institutional rules.

3.3. Legislation

Legislation and regulations, such as the *Haida Gwaii Reconciliation Act* (2010) and Land Use Objectives Order, were described by interviewees as both a result of distrust and a motivator for trust. Some interviewees pointed to the stringency and prescriptiveness of the Land Use Objectives Order as evidence of the lack of trust between the parties when the Kunst'aa guu-Kunst'aayah Reconciliation Protocol was negotiated. Others noted that these same characteristics helped to establish specific, shared objectives of the two parties, which served to motivate trust. These perspectives were complementary, rather than conflicting, and indicate the dual role of legislation and regulations. Interviewees from both governments and both collaborations expressed support for the Land Use Objectives Order and described it as a positive development. Joint development and implementation of the *Haida Gwaii Reconciliation Act* (2010) and the Land Use Objectives Order were noted as important characteristics for motivating trust.

“[The LUOO] gives you a recipe of what you have to do. The prescriptiveness of the objectives is what demonstrates a lack of [trust].” (Interviewee 7).

“We probably have the most stringent regulatory regime in the world on Haida Gwaii here. So, I feel good about that and I trust that we're managing that together very well.” (Interviewee 1).

While several interviewees described the importance of representatives of the two parties working together to develop legislation and regulations, a few noted that these documents remain limited by the Provincial legislative framework. This creates a persistent imbalance in the level of influence each party can exert in the process, with the Council of the Haida Nation operating at a disadvantage.

3.4. Norms

Interviewees described norms related to honesty, permeability, respect, commitment and tackling challenges together. The first three relate to communication, while the latter two relate to behaviour. Honesty was noted to help actors to align interests through communication and required permeability to ensure actors were prepared to listen and be open to others' perspectives as well as respect for differences. Nested within the norm of honesty was an expectation of proactive information sharing, both among collaborators and with their respective organizations, that meant actors trusted others to raise any issues that were relevant to their collective role. Commitment and tackling challenges together enabled actors to persevere in times of disagreement and continue to seek consensus. A norm regarding commitment to seeking consensus was noted to both support decision-making and help avoid use of the dispute resolution process. Thus, the strength of this particular informal control enabled it to act as a substitute for formal controls.

Norms were noted to have been consciously shaped among actors during the early stages of collective action and continued thereafter; however, new actors experience a period of adjustment. A few interviewees from the Province of B.C. also noted the role of hiring and recruitment, through which actors are selected to participate in collective action, in maintaining these norms by selecting individuals who behave accordingly.

Shared values and beliefs were important for shaping norms; where differences existed, interviewees described struggling to act according to norms. Interviewees from both collaborations made statements that reflected values regarding which issues and what knowledge they felt were relevant during collective action. While interviewees from the Council of the Haida Nation tended to note the importance of traditional knowledge and a holistic approach to decisions that reflected the Haida value of *Yahguudang* (respect for all things), interviewees from the Province of B.C. referred more frequently to objective and science-

based decisions that were seen to be within the mandate of the collaboration. In situations where actors disagreed about which topics were open to discussion or what information was admissible when making decisions, trust diminished. At times, distrust of one another's knowledge hindered actors' ability to shape collective norms related to relevant issues and knowledge. Norms of permeability and respect helped to mitigate the effects of differences in values;

“[...] there's Haida law and traditions and there's a whole slew of things [...] that aren't in Provincial mandate.” (Interviewee 3).

Interviewees also noted differences between the two governments with respect to beliefs about influence. While the Haida governed forests on Haida Gwaii for millennia, the Province of B.C. has primarily assumed authority for decisions over the past 150 years. The *Kunst'aa guu-Kunst'aayah Reconciliation Protocol* recognizes these differences in beliefs “with regard to sovereignty, title, ownership and jurisdiction over Haida Gwaii” (Council of the Haida Nation and Province of British Columbia, 2009). Interviewees noted that these differences in beliefs have manifested in actors behaving according to norms regarding their organization's perceived level of influence, rather than a shared norm of equal influence established within the spirit of the Protocol. This was specifically noted with reference to handling of non-consensus issues among members of the Solutions Table by more senior level bureaucrats.

“[The Province has] done it a certain way for so long [...] I think it's kind of different for them.” (Interviewee 3).

“I think that adds to a sense of lack of trust and the sense that we're not really true equals yet in this voyage that we're on.” (Interviewee 13).

Norms were seen to have some degree of substitutability with procedures and terms of reference. For example, norms of honesty and proactive information sharing prompted actors to engage in practices that supported transparency in ways that were not formally documented in procedures and terms of reference.

4. Discussion

The case study and its underlying theoretical framework (Ostrom and Ahn, 2009) focused on how formal and informal institutions motivate trust; however, trust has also been shown to motivate development of institutions. For example, trust between individuals is important for establishing new collaborations (Coleman and Stern, 2018) and jointly developing institutions (Ansell and Gash, 2008; Emerson et al., 2012; Coleman and Stern, 2018). This finding supports the notion of a cyclical process through which designing institutions builds trust which can subsequently be reinforced by these institutions (Mayer et al., 1995; Nooteboom, 2005; Davis et al., 2018). The theoretical framework should thus recognize this cyclical relationship between institutions, trust and collective action.

Furthermore, while institutions may establish constraints that reduce the risk of defecting from collective action by reducing the benefits of defection and increase its costs, however, the role of individuals' personal characteristics and interpersonal relationships should not be overlooked. Micro-level influences on trust include psychological dimensions that are shaped by an individual's own life experiences and interactions with other actors (e.g. Mayer et al., 1995; Rousseau et al., 1998). While the case study focused on the characteristics of formal and informal rules that motivate trust, other areas of the literature that are relevant to the discussion are the characteristics of individuals and of interpersonal relationships. Ostrom and Ahn (2009) identify trustworthiness and networks as important for trust, but do not consider the role of individual characteristics. Integration of these aspects in further research can contribute to a more holistic theoretical framework for trust in the context of collective action.

The case study identified fourteen characteristics of formal and informal rules as having a positive influence on trust. These characteristics were reduced to four clusters: alignment of interests, fairness, cohesion and satisfactory terms of cooperation.

Alignment of interests, which is noted in the literature as having an influence on trust (Lewicki and Bunker, 1996; Bhattacharya et al., 1998; Das and Teng, 2001), encompassed elements of adaptability, shared beliefs, flexibility, responsiveness, shared values and shared vision. However, the case study also highlighted an important difference in shared values, with specific implications for norms of collective action: while the Haida value of *Yahguudang* asserts that everything is connected (Council of the Haida Nation, 2007), the Province of B.C. strictly adheres to jurisdictional authorities for decision-making (Pinkerton, 2007). This difference in approaches, which is described in the literature in terms of holism versus segmentalism (Pinkerton, 2007), created challenges among actors in this study who needed to determine what information and which issues were relevant to decision-making.

Fairness, which is noted in the literature (Newell and Swan, 2000; Dirks and Ferrin, 2002; Aryee et al., 2002), was linked to influence (Willem and Lucidarme, 2014) and unfettered authority. Equal influence, particularly in decision-making and joint dispute resolution processes, was particularly important. This finding is unsurprising given the potential for coercion (Williamson, 1993) in situations where power or influence are imbalanced. Joint development and implementation of the *Haida Gwaii Reconciliation Act* (2010) and the Land Use Objectives Order, as well as joint decision-making by the Haida Gwaii Management Council, were noted as examples where equal influence had motivated trust among actors. In contrast, provincial legislation that both established the decision-making authority of the statutory decision maker for the Province of B.C. and limited their discretion in decision-making made equal influence challenging for members of the Solutions Table, with negative consequences for trust.

Cohesion was expressed in terms of shared identity and stability. Shared identity is described in the trust literature with reference to identification: actors are more likely to trust others they identify as similar to themselves (Lewicki and Bunker, 1995, 1996; Bhattacharya et al., 1998) and be concerned for one another's outcomes (Bhattacharya et al., 1998). When fully developed, a shared identity can enable actors to internalize one another's desires and intentions (Lewicki and Bunker, 1995, 1996). Stability is noted in the literature with reference to continuity due to its role in generating expectations of behaviour among actors, supporting sequential actions and connecting the past with the present and future (North, 1991; Lewicki and Bunker, 1995; Bhattacharya et al., 1998; Poppo et al., 2008). From a game theory perspective, actors are more motivated to honour trust if interactions are repeated (Eberl, 2003).

Satisfactory terms of cooperation (Wong and Cheung, 2005), as perceived by collaborators, included aspects of accountability, development by collaborators, shared objectives and transparency (Willem and Lucidarme, 2014). These terms provided clarity and guidance to collaborators, supported alignment of interests and limited opportunism. Collaborators expressed greater satisfaction with terms that were developed jointly, rather than imposed by one party, suggesting a strong connection to fairness.

Indeed, the four clusters that emerged in this study demonstrated some degree of overlap. Shared objectives, for example, may be part of a broader shared vision. Satisfactory terms must reflect fairness and alignment of interests and cohesion may be supported by alignment of interests. Nevertheless, these clusters help to highlight overarching themes that unite the characteristics of rules that motivate trust.

These characteristics were described with reference to three forms of formal rules (agreements, procedures and terms of reference and legislation) and one form of informal rules (norms). While all four forms of rules were associated with alignment of interests, fairness and satisfactory terms of cooperation, only three forms of rules were associated with cohesion. The notable omission was legislation, which did

not necessarily need to support cohesion to motivate trust. Instead, legislation functioned more as a tool to induce cooperation. Some researchers argue this is evidence of mere coordination or confidence, rather than of trust (Williamson, 1993; Eberl, 2003). The distinction is particularly murky because formal rules and trust can be either complements or substitutes (Woolthuis et al., 2005). Eberl (2003) emphasizes that trust includes an emotional dimension that “cannot be fully controlled by organizational measures.” The case study showed that a sense of cohesion can be supported through procedures and terms of reference that document the shared nature of the relationship and support transitions between actors but that norms also play an important role. Elements of cohesion were both supported by norms, which contributed to a sense of shared identity and stability, and enabled the establishment of norms.

The case study also indicated some degree of substitutability between formal and informal rules. A norm regarding commitment to seeking consensus was noted to substitute for reliance on a dispute resolution process; however, existence of both controls safeguarded against breakdown in one or the other. Terms of reference also served as a substitute for norms among representatives of the two governments regarding what types of knowledge and issues are relevant to discussions. Evidence of the imperfect nature of this substitution is provided by non-consensus issues between the Council of the Haida Nation and the Province of B.C. at the Solutions Table. While the *Kunst'aa guu-Kunst'aayah Reconciliation Protocol* and the *Streamlined Process* formally outlined the relationship between the two parties, Haida norms of reliance on traditional knowledge and *Yahguudang* (respect for all things) continue to conflict with norms of Provincial representatives regarding objectivity, science-based decision-making and a focus on mandates.

While the case study focused on the role of formal and informal rules in motivating trust among actors, the social, economic and political setting in which these rules are created and operationalized also has profound effects (North, 1991; Williamson, 1993). In the framework presented by Ostrom and Ahn (2009), these contextual variables have important implications for trust. The Haida Gwaii Management Council and Solutions Table operate within federal and provincial legislative frameworks and, as such, are subject to established power dynamics that have created the potential for coercion and opportunism. The legacy of colonialism and history of assimilationist policy operationalized under this legislative framework continues to present a barrier to trust by and shifting the costs of defection from collective action onto the Council of the Haida Nation. In the event of non-consensus among members of the Solutions Table and a decision by the Provincial statutory decision-maker under their authority, established under the provincial legislative framework, the Council of the Haida Nation must bear the costs of a lawsuit or protest. While these terms were agreed to by both parties under the *Kunst'aa guu-Kunst'aayah Reconciliation Protocol*, the institutional environment has created forces that make power-sharing in collective action challenging.

The case study highlights fundamental differences in approaches to power and participation among the Council of the Haida Nation and the Province of B.C. The *Kunst'aa guu-Kunst'aayah Reconciliation Protocol* notes that “The Parties hold differing views with regard to sovereignty, title, ownership and jurisdiction over Haida Gwaii,” with each claiming sovereignty (Council of the Haida Nation and Province of British Columbia, 2009). This would indicate an institutional collective action arrangement in which each party engages in collective action under its own authority, such as at the Haida Gwaii Management Council. The Solutions Table, however, operates akin to a collaborative governance arrangement in which the Council of the Haida Nation act in an advisory capacity as local resource users. This imbalance in the costs of defection was noted as a serious threat to trust.

5. Conclusions

This paper delved deeper into characteristics of institutions that motivate trust to support collective action. It focused on formal and informal rules and provided linkages to theoretical works from the trust literature and empirical case study of collaborative forest governance on Haida Gwaii. The case study identified fourteen characteristics of formal and informal rules that motivated trust. These characteristics were grouped into four clusters that highlight overarching themes among characteristics of rules that motivate trust: alignment of interests, fairness, cohesion and satisfactory terms of cooperation.

Jointly developing rules and ensuring they were adaptable to evolving needs over time was particularly important for motivating trust. Where distrust existed, such as during the early stages of collective action, some forms of formal rules acted as both a substitute for trust and a motivator for it. Informal rules, in the form of norms, were shaped by actors over the course of collective action. The case study also indicated some degree of substitutability between formal and informal rules; however, existence of both forms of rules safeguarded against breakdown in one or the other. Trust literature suggests that formal institutions may be relatively more important during early stages of collective action (Lewicki and Bunker, 1995; Bachmann and Inkpen, 2011). Over time, actors gain information about one another and relatively greater weight is placed on informal rules and interpersonal relationships (Lewicki and Bunker, 1995; Bachmann and Inkpen, 2011). Longitudinal or comparative case study approaches that examine relative influences of formal and informal rules over time are needed to test these theories.

The case study also highlights the importance of power-sharing for trust. While the trust literature identifies characteristics of institutions that motivate trust, some of which relate to power-sharing, contextual variables can limit the degree to which power is shared and constrain the potential to create trust. This may be particularly relevant to cases of collective action involving Indigenous and non-Indigenous governments, where parties disagree on their respective authorities.

An important next step in this area of research would be to develop studies to better understand the influence of institutional characteristics on trust and to identify measureable outcomes of collective action. Exploring situations where participants make decisions under different sets of rules can help to predict actions and outcomes in a range of institutional settings. This type of information could be used to develop rules that support collective action among actors who manage common-pool resources.

Acknowledgments

The authors wish to express their gratitude to the Council of the Haida Nation for its interest and participation in this research and to the seventeen interviewees who made time to share their experiences. Two discussants and two co-editors of this special issue also provided invaluable feedback that improved the quality of this manuscript. This work was supported by the Social Sciences and Humanities Research Council (SSHRC) of Canada.

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