Institutional Work in the Transformation of an Organizational Field: The Interplay of Boundary Work and Practice Work

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We are grateful to the Social Sciences and Humanities Research Council of Canada, which supported this research. We would also like to thank Mauro Guillén, Tima Bansal, Roy Suddaby, Tina Dacin, Andy Hoffman, several anonymous reviewers, and seminar participants at EGOS, the University of Western Ontario, and the University of Victoria for providing helpful feedback on earlier drafts of this article. We'd also like to thank Linda Johanson for her invaluable editorial assistance.

We draw on an in-depth longitudinal analysis of conflict over harvesting practices and decision authority in the British Columbia coastal forest industry to understand the role of institutional work in the transformation of organizational fields. We examine the work of actors to create, maintain, and disrupt the practices that are considered legitimate within a field (practice work) and the boundaries between sets of individuals and groups (boundary work), and the interplay of these two forms of institutional work in effecting change. We find that actors' boundary work and practice work operate in recursive configurations that underpin cycles of institutional innovation, conflict, stability, and restabilization. We also find that transitions between these cycles are triggered by combinations of three conditions: (1) the state of the boundaries, (2) the state of practices, and (3) the existence of actors with the capacity to undertake the boundary and practice work of a different institutional process. These findings contribute to untangling the paradox of embedded agency-how those subject to the institutions in a field can effect changes in them. We also contribute to an understanding of the processes and mechanisms that drive changes in the institutional lifecycle.

Institutions are commonly understood as enduring social patterns (Hughes, 1936), but research has shown that they go through periods of marked change as well as stability (Tolbert and Zucker, 1983; Scott, 2001). Researchers interested in explaining institutional change and stability have increasingly recognized the importance of agency. Although change has traditionally been identified with exogenous shocks (Fligstein, 1991; Hoffman, 1999) and stability with the constraining effects of institutions (DiMaggio and Powell, 1983), a significant stream of work has emerged that focuses on actors' work to create, maintain, and disrupt institutions (DiMaggio, 1988; Oliver, 1991, 1992; Dacin, Goodstein, and Scott, 2002; Lawrence and Suddaby, 2006). The core issue that drives this literature is that of "embedded agency' (Holm, 1995; Seo and Creed, 2002; Greenwood and Suddaby, 2006)—how actors whose thoughts and action are constrained by institutions are nevertheless able to work to affect those institutions. Traditional conceptions of institutions suggest that "in highly institutionalized systems, endogenous change seems almost to contradict the meaning of institution" (Scott, 2001: 187). So the question becomes how embedded agency is possible.

This issue has been addressed in organizational research primarily from two perspectives. The first has been to examine the role of actors in translating exogenous shocks, including political and legal events (Tolbert and Zucker, 1983; Holm, 1995; Hoffman, 1999), social movement challenges (Strang and Meyer, 1993), technological changes (Barley, 1986), and other disruptive events (Fligstein, 1991) into field-level changes (Beckert, 1999; Rao, Monin, and Durand, 2003; Munir, 2005). A second approach has focused on the position of members in a field. These studies have shown that institutional innovators are often those in peripheral positions (Leblebici et al., 1991; Rao, Morrill, and Zald, 2000) or new

189/Administrative Science Quarterly, 55 (2010): 189-221

entrants (Zilber, 2002; Hensmans, 2003; Hargrave and Van de Ven, 2006) or members whose positions bridge the boundaries of multiple fields (Greenwood and Suddaby, 2006; Kostova, Roth, and Dacin, 2008).

Both of these approaches provide partial answers to the paradox of embedded agency and highlight the interplay of two important social phenomena: boundaries—the distinctions among people and groups (Bowker and Star, 1999; Carlile, 2002)—and practices—"shared routines of behavior" (Whittington, 2006: 619). The interplay of boundaries and practices is central to the work of actors to translate exogenous events across field boundaries into field-level practices and the role of peripheral, central, or new field members (positions relative to field boundaries) in introducing and institutionalizing alternative sets of practices. Important questions remain, however, with respect to how actors' work to affect boundaries and practices leads to institutional change or stability. Strong boundaries around fields lead them to become "isolated from or unresponsive to changes in their external environments," creating contradictions between the norms and practices accepted in fields and those legitimate in the broader society (Seo and Creed, 2002: 226). These contradictions lead to increasing pressures for change as outsiders recognize the field is out of step. Such contradictions can culminate in sometimes radical shifts, but the processes through which contradictions can lead to change are less well understood. Similarly, studies that focus on members' positions with respect to boundaries (outside, peripheral, central) have generated as many puzzles as answers—how outsiders gain the knowledge and legitimacy to influence a field's practices, how central players become motivated to effect changes in practice, and what role crossboundary connections play in effecting both stability and change. These issues remain unresolved because research has tended to adopt a narrow focus on either change or stability and has paid limited attention to the interdependence of boundaries and practices and its effects on stability and change.

To address this gap, we present a study of institutional change and stability in the coastal forest industry in British Columbia (BC). Our focus is on the interplay of the work done by actors to affect boundaries and the work done to affect practices in this process. Boundary work represents the attempts of actors to create, shape, and disrupt boundaries (Gieryn, 1983, 1999). Research on boundary work in organizations has focused primarily on professional/occupational boundaries (Abbott, 1988; Arndt and Bigelow, 2005) and on the ways in which actors work to establish coordination across boundaries (Carlile, 2002; Bechky, 2003b; Kellogg, Orlikowski, and Yates, 2006). Following the notion of boundary work, we refer to institutional work aimed at creating, maintaining, or disrupting practices as "practice work." Practices represent shared routines (Whittington, 2006) or "recognized forms of activity" (Barnes, 2001: 19; emphasis added), rather than activity itself. Thus practice work refers to actors' efforts to affect the recognition and acceptance of sets of routines, rather than their simply engaging in those routines.

Our approach to boundary work and practice work is consistent with the structurationist notion (Giddens, 1984; Sewell, 1992) that all action is embedded in the social structures that it simultaneously produces, reproduces, and transforms. Whereas the general structuration argument applies to all action, the notion of institutional work highlights more reflexive forms of action that are aimed at intentionally affecting institutions (Lawrence, Suddaby, and Leca, 2009). Such intentional action is not homogenous, however (Emirbayer and Mische, 1998). The work of actors to affect boundaries and practices may involve "projective," futureoriented agency (Emirbayer and Mische, 1998)-the form of agency that has dominated discussions of institutional entrepreneurship (DiMaggio, 1988; Maguire, Hardy, and Lawrence, 2004). But it may also involve "habitual" agencyselection among sets of established routines—or "practical/ evaluative" agency focused on addressing the "dilemmas, and ambiguities of presently evolving situations" (Emirbayer and Mische, 1998: 971). Thus we adopt an understanding of fields as co-evolutionary systems in which boundaries and practices exist in a recursive relationship significantly affected by the heterogeneous boundary work and practice work of interested actors. Our aim in this paper is to understand how boundary work and practice work affect each other, how they together affect institutional change and stability, and what conditions lead to shifts in a field from stability to change and from change to stability.

RESEARCH ON BOUNDARY WORK AND PRACTICE WORK IN INSTITUTIONAL CHANGE AND STABILITY

The Interplay of Boundaries and Practices

Boundaries. In sociological research, the most general conception of a boundary is as a distinction that establishes categories of objects, people, or activities (Lamont and Molnár, 2002). In this paper, we adopt a narrower conception of boundary as a distinction among people and groups. In this regard, we follow research on boundary objects (Carlile, 2002), boundary spanners (Rosenkopf and Nerkar, 2001; Levina and Vaast, 2005), and organizational boundaries (Santos and Eisenhardt, 2005). In the study of organizations, a dominant boundary of interest is the organizational field, which describes "a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside the field" (Scott, 2001: 56). Holm (1995: 404–405) provided an example of an organizational field in the fishing industry in Norway, members of which were originally distinguished from non-members by geographic origins, social background, and the use of a common technology, "factors [that] created favorable conditions for collective identification and mobilization." In response to economic problems in the industry, the fishers established an interest group to act politically and a sales organization to represent collective interests. They convinced the Norwegian government to legally mandate that herring could only be sold through the field's sales organization, which also had the right to license and control fish buyers and regulate fish supply with catch restrictions. Thus the boundary demarcating the Norwegian

herring fishery field was initially based on common geography, technology, and social background and then was made formal through legal definitions of who could catch, sell, and buy herring.

This example points to the profound material consequences of boundaries, which make them the object of practical and strategic consideration. At a practical level, boundaries act as "tools by which individuals and groups struggle over and come to agree upon definitions of reality" (Lamont and Molnár, 2002: 168). Those definitions of reality, however, become "an essential medium through which [to] acquire status and monopolize resources" (Lamont and Molnár, 2002: 168). Lamont and Molnár (2002: 168) argued that boundaries among people and groups translate into "unequal access to and unequal distribution of resources (material and nonmaterial) and social opportunities." Such effects bring boundaries into focus as objects of strategic interest for actors motivated either to maintain or to disrupt systems of privilege (Gieryn, 1983, 1999). When, for example, Norwegian fish merchants succeeded in redefining the boundary around the herring fishery, they gained greater control over increasingly scarce resources (Holm, 1995).

Practices. Practices are shared routines (Whittington, 2006) or "recognized forms of activity" (Barnes, 2001: 19) that guide behavior according to the situation (Goffman, 1959; Pentland and Reuter, 1994). As such, practices "belong" to social groups, rather than to individuals: groups define the correctness of a practice and provide ways for members to learn them (Barnes, 2001; Schatzki, 2001). Thus practices are not simply what people do (Whittington, 2006). For the activity of an individual or groups to be recognizable by others as an instance of a practice, it must conform to certain social expectations. Although practice research and theory has tended to focus on "the tacit and informal, reflecting its origins in the sociology of everyday life," formal, explicit routines are also critical to understanding practices in organizations (Whittington, 2006).

Boundaries and practices are distinct but interdependent phenomena, neither reducible to the other, and each pointing to different features of a social scene (Goffman, 1974). Swidler (2001) helps clarify the nature of this interdependence by drawing on Armstrong's (2002) study of changes in San Francisco's lesbian and gay community. In 1971, "attempts to build a single, unifying organization to represent San Francisco's homosexual community were replaced by . . . the proliferation of literally hundreds of organizations focused around diverse identities and interests" (Swidler, 2001: 81). Swidler (2001) argued that what made this shift so powerful was that it transformed the boundary defining the gay community from one that focused on common interests to one that emphasized diversity. This new boundary altered the portfolio of legitimate practices in the gay community, such that "organizers should not aspire to create a single unified organization to represent the community," and "the discovery and public assertion of new identities was part of the community building project" (Swidler, 2001: 82). For our study, the critical insight concerns

the impact of boundaries on the practices of a group: Armstrong's (2002) study showed that boundaries not only define membership but can crucially shape the practices of the community.

Swidler (2001) went on to argue for a recursive relationship between boundaries and practices by showing how the new boundary not only altered the community's practices but was also underpinned by specific practices. In this case, the critical practice underpinning the new boundary was the Lesbian/Gay Freedom Day Parade inaugurated in 1971 (Armstrong, 2002). The parade was organized so that participation required an application by a group, and news coverage became in part dependent on the number and diversity of groups participating. Swidler (2001: 83) thus argued that a new practice (the parade) led to a new boundary ("membership in the community equals having a group to identify with"), which in turn fostered a derivative set of practices ("asserting one's membership in the community means creating or joining a group").

Thus boundaries and practices are distinct, interdependent features of groups that exist in a recursive relationship, with boundaries delimiting sets of legitimate practices, and practices supporting particular group boundaries. This relationship is central to understanding both institutional stability and change. Research in anthropology and sociology points to the stabilizing impact of this relationship, showing that strong boundaries facilitate surveillance and enforcement mechanisms in communities (Gusfield, 1975; Collins, 1981) and encourage shared understandings of social obligations and norms (Douglas and Wildavsky, 1983; Durkheim, 1984, 1995). The protection that boundaries afford to practices that might be at odds with the broader environment also facilitates stability (Brown, 1983), as does the ongoing reproduction of the relationships that those boundaries and practices define (Barnes, 2001) and enactment of the conceptual schemas inherent in the boundaries (Swidler, 2001). Studies of professional and occupational fields (Dezalay and Garth, 1995; Greenwood, Suddaby, and Hinings, 2002; Bechky, 2003a, 2003b) echo this theme: research on professional accounting, for example, shows how educational and licensing practices underpin explicit, formal boundaries, which in turn help to maintain elaborate sets of practices, such as those associated with audit and tax procedures (Abbott, 1988; Lawrence, 2004; Greenwood and Suddaby, 2006).

Although boundaries and practices work to stabilize each other, their relationship can also lead to significant change. Boundaries and practices have material effects on the distribution of power and privilege, which can fuel conflicts both within and across boundaries (Collins, 1981; Bourdieu, 1993). Such dynamics have been demonstrated in research on social movements (Zald and McCarthy, 1987; Lounsbury, Ventresca, and Hirsch, 2003), including the civil rights, women's liberation, and gay rights movements, which have all focused on remaking boundaries and the practices they support (McCarthy and Zald, 1977; Benford and Snow, 2000). A key way in which social movements alter boundaries and practices is through the creation of new organizational forms, such as investor rights

watchdog groups and consumer leagues that challenged the use of poison pills by managers to fend off takeover attempts and unscrupulous pricing practices by merchants (Rao, Morrill, and Zald, 2000). Thus the relationship between boundaries and practices is important in understanding both institutional change and stability. The impacts of boundaries, practices, and the relationship between them on institutional change and stability motivate actors to try to affect them through both boundary work and practice work.

Boundary work. Boundary work (Gieryn, 1983, 1999) refers to actors' efforts to establish, expand, reinforce, or undermine boundaries (Llewellyn, 1998; Arndt and Bigelow, 2005). Three forms of boundary work have been identified in relevant literatures. First, establishing boundaries to protect autonomy, prestige, and control of resources has been studied in social studies of science (Gieryn, 1983; Burri, 2008) and the sociology of professions (Abbott, 1988; Suddaby and Greenwood, 2005). As Bechky (2003a: 721) noted, "occupations fiercely guard their core task domains from potential incursions by competitors." Second, strategies to manage cross-boundary connections have focused on the use of boundary spanning actors (Hargadon and Sutton, 1997; Bartel, 2001) and boundary objects (Star and Griesemer, 1989; Bechky, 2003b; Kellogg, Orlikowski, and Yates, 2006), which include processes and artifacts that "work to establish a shared context" (Carlile, 2002: 451). In organizations, for example, design drawings and project management software can facilitate coordination across groups and departments (Carlile, 2002, 2004; Bechky, 2003b). Similarly, boundary organizations (Lawrence and Hardy, 1999; O'Mahony and Bechky, 2008) are used to coordinate groups while maintaining their distinct identities (Miller, 2001). Third, boundary breaching has been studied in the social movement literature (Zald and McCarthy, 1987; Schneiberg and Lounsbury, 2008). These scholars focus on framing and resource mobilization as two key strategies (McCarthy and Zald, 1977; Benford and Snow, 2000) that can influence opportunity structures, conceptualized as the relative openness of the political system (McAdam, 1996) or an industry (Schurman, 2004) to activist influence.

Although boundary work studies have identified a wide variety of strategies and examined their effectiveness across contexts, they have tended to overlook the interaction of different forms of boundary work and their evolution. Studies of boundary closure, connecting, and breaching have occurred in relative isolation, with little understanding of how or when actors might shift from one form to another. Though such a focus may not be critical within an individual stream of boundary work research (e.g., studies of occupational boundary closure), it is an important one if we are to understand the role of different forms of boundary work in institutional change and stability and how they might be associated with changes in social systems over time.

Practice work. Practice work differs from boundary work in the kind of objects at which it is directed—practices rather than boundaries. This distinction is reflected in the different literatures in which they have been examined. The study of how actors affect the practices that are legitimate within a

domain—what we refer to as practice work—has mainly focused on how practices are created, maintained, or disrupted, typically focusing on only one of those activities. Actors' efforts to create practices and construct mechanisms to ensure their usage have been studied as institutional entrepreneurship and innovation (DiMaggio, 1988; Hargrave and Van de Ven, 2006). Maguire, Hardy, and Lawrence (2004), for example, found that HIV/AIDS activists created new practices to connect community groups with regulators, pharmaceutical firms, and treatment providers in order to influence treatment decisions. Disrupting practices involves dismantling the normative, cognitive, and regulative mechanisms supporting them (Lawrence and Suddaby, 2006). Social movement research has highlighted this form of work, including activists' attempts to disrupt the practices associated with genetically modified food (Schurman, 2004), unscrupulous pricing (Rao, Morrill, and Zald, 2000), and the use of DDT (Maguire and Hardy, 2009). In contrast, work done to maintain practices has received less attention (Scott, 2001). Lawrence and Suddaby (2006: 230) argued that maintaining practices involves developing and policing the normative, cognitive, and regulative structures that underpin them in two main ways: "ensuring adherence to rules systems" (e.g., Fox-Wolfgramm, Boal, and Hunt, 1998) and "reproducing existing norms and belief systems" (e.g., Zilber, 2009). More recent work has also highlighted the importance of work done to defend practices that are under attack (Maguire and Hardy, 2009).

Recent studies of boundaries and practices have proceeded in parallel but remain disconnected. Both literatures incorporate a new sensitivity to agency but largely overlook the interplay of boundary work and practice work. Boundary work research has demonstrated its impact on the stability of practices and the distribution of benefits accruing from them without attending to the recursive relationship between boundaries and practices (Gieryn, 1983; Arndt and Bigelow, 2005; Suddaby and Greenwood, 2005). Similarly, research on practice work suggests the importance of boundary work without explicitly focusing on it: studies of institutional entrepreneurship, for instance, have shown that new practices often emerge from beyond the boundaries of a field (Maguire, Hardy, and Lawrence, 2004), at its periphery (Leblebici et al., 1991), or where fields intersect (Suddaby and Greenwood, 2005). Both literatures indicate that the relationship between boundary work and practice work may be profoundly important, yet this relationship has been little explored. One recent exception is Kellogg's (2010) study of two hospitals' experience in complying with regulatory change, in which she found that Alpha hospital successfully changed its practices while Beta did not. Residents in Alpha used cross-boundary connections to build "relational spaces" in which they could develop new practices and a "crossposition collective" across status boundaries to overcome resistance.

Figure 1 summarizes the relationships among boundaries, practices, boundary work, and practice work suggested by existing research. Boundaries and practices exist in a recursive relationship in which practices enact and support

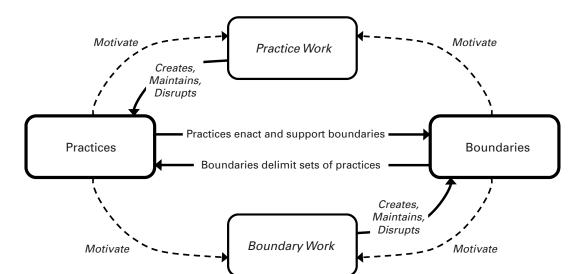


Figure 1. The recursive relationships among boundaries, practices, boundary work, and practice work.

boundaries, while boundaries delimit the legitimate scope of practices. Practices can motivate both practice work and boundary work: if actors are dissatisfied with existing practices, they may engage in practice work to affect the practices directly, but if boundaries prevent such action, they might first engage in boundary work to create the conditions under which they can influence practice. Similarly, boundaries can motivate both boundary work and practice work: an actor disadvantaged by existing boundaries may be motivated to disrupt that boundary but, if unable, might work to disrupt the boundary indirectly by delegitimating the practices associated with it. Thus the framework that underpins our study points to a complex set of relationships among boundaries, practices, boundary work, and practice work.

This framework points to two unresolved issues. The first concerns the interplay of boundary work and practice work in relation to institutional stability and change. Prior research has shown how boundary work and practice work are each used to support institutional stability or to effect change. How boundary work and practice work act together in this regard, however, has been left largely unexamined. As Kellogg's (2010) study suggests, the combined effects of boundary and practice work can influence the evolution of institutions, yet we know little about them, in particular, whether there are empirically identifiable configurations of boundary work and practice work that co-occur. Further, research has not examined whether such configurations might be linked to specific patterns of institutional stability or change. This leads us to our first research question: What are potential configurations of boundary work and practice work, and what patterns of institutional stability or change do they support?

The second issue concerns the movement of the system as a whole from conditions of stability to change and vice versa. If fields can be understood as co-evolutionary systems in which boundaries, practices, boundary work, and practice work exist

in a recursive relationship, an important issue is how these elements of institutions and kinds of institutional work can lead to an evolution of the social system from one state to another. This leads to our second research question: What role do boundaries, practices, boundary work, and practice work play in effecting shifts between institutional stability and institutional change?

METHODS

Empirical Context: Institutional Change in British Columbia Coastal Forestry

To address our research questions, we draw on a study of the forest industry in British Columbia, Canada from 1985 to 2006. During this period, forest companies and their stakeholders engaged in a "war of the woods" over logging practices. The forestry field was highly institutionalized and stable prior to a lengthy period of instability in the mid-1980s, followed by significant innovation, then restabilization after 2003. During this time, forest harvesting practices changed, as did the participants in decision making about forest practices. In other words, both practice change and boundary change occurred.

Forests cover about 500,000 square kilometers (more than 300,000 square miles) of British Columbia (BC), and until recently, forestry was BC's main industry, accounting for about 50 percent of exports and 300,000 jobs. In the early 1980s, environmental groups and First Nations (Canada's aboriginal peoples) began to oppose the nearly ubiquitous practice of clearcut logging, a harvesting method that strips all of the trees from an area. Clearcutting had been supported by forest science, economics, expertise, and familiarity to loggers through years of practice and, indirectly, through requlation. Other methods were considered uneconomic, unsafe for loggers, and unsuitable for maximizing forest regrowth. Forestry firms and the business-friendly BC government initially ignored protesters or had them arrested when they blockaded logging roads. The conflict escalated into the 1990s, and over 700 protesters were arrested in 1993 alone.

Despite the best efforts of the forest companies to defend themselves from criticism and the efforts of the BC government (which owned 95 percent of the land) to reassure environmentalists, the conflict persisted, and, consistent with increases in societal concerns for environmental protection, public and international opinion leaned toward the environmentalists' perspective. By 1994, key international customers, at the urging of Greenpeace, threatened to cancel contracts with BC forest companies if the latter did not change their practices. Still, forest companies, their industry association, and the loggers' union continued to insist that clearcutting was the only viable logging method for the BC coast. In 1997, the loggers' union blockaded Greenpeace's ship, and the BC premier called Greenpeace "enemies of the province."

In 1998, however, MacMillan Bloedel, the leading forest company and chief villain in the eyes of environmentalists, announced that it would phase out clearcutting in favor of a

program it developed internally called "variable retention," which earned praise from environmentalists and criticism from other forest companies. Variable retention separated harvesting areas into three zones based on the ecological value of the forests: in old-growth zones, few trees would be harvested; in habitat zones, wildlife corridors would be protected; and even in the least sensitive "timber" zones, 28 percent of the trees would be retained. In 1999, at the urging of key customer groups, six major forest companies joined with four main environmental groups to form the Joint Solutions Project, which would work to change the technology, practices, and regulations of logging in BC with the oversight of a multistakeholder committee formed by the government. The result of this collaboration-the "Eco-system-based management" system-was introduced and accepted by stakeholders in 2003–2004 and ratified by the government in 2006. Eco-system-based management included differential selective harvesting by zone, depending on ecological values, and a stakeholder consultation and oversight process. Clearcutting use dropped from 95 percent in 1998 to less than 45 percent during the period from 2004 until the most recently available report in 2009. Table 1 presents a chronology of events.

Table 1

Chronol	ogy of	Events
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Year	Event
Early 1980s	Environmentalists begin scattered local protests of clearcutting of old-growth forests. First Nations request logging to be stopped on Meares Island and South Moresby Island.
1985	First Nations win an injunction against logging in Meares Island.
1987	The provincial and federal governments make South Moresby a park.
1988	Protests occur over MacMillan Bloedel's logging in Carmanah. Share groups emerge.
1989	The Galiano Island experiment with selective harvesting takes place.
1990	The provincial government declares half of the Carmanah Valley a park.
1991	Environmentalists internationalize their campaigns with foreign media coverage, foreign political influence and talk of boycotts and saving Clayoquot Sound. A "greener" provincial government is elected. The Clayoquot Sound Sustainable Development Steering Committee is formed. The Forest Alliance is established.
1992	A government stakeholder consultation process is initiated. Protests in Clayoquot Sound intensify. A number of parks are created.
1993	The government announces its decision to allow logging in Clayoquot Sound. Protests intensify and over 700 protesters are arrested. An international boycott of MacMillan Bloedel is called.
1994	Secret talks begin with MacMillan Bloedel, First Nations, and environmental groups. Customers cancel contracts with MacMillan Bloedel or demand better forestry practices.
1996	Talks break off between MacMillan Bloedel, First Nations, and environmental groups, and Greenpeace kicks off an international campaign in Clayoguot Sound.
1997	MacMillan Bloedel and First Nations announce an eco-sustainable forestry joint venture in Clayoquot.
1998	MacMillan Bloedel announces it is phasing out clearcutting in favor of variable retention. Environ- mentalists praise the decision. Within six months, environmentalists launch a boycott campaign against wood from the entire coast of BC.
1999	MacMillan Bloedel begins private discussions with five other forest companies. They invite environmentalists into the discussions and the Joint Solutions Project is formed.
2000	The Joint Solutions Project begins talks with external stakeholders. The government forms Land Resource Management Planning tables for the north and central coast areas.
2003	Central coast planning table unanimously recommends eco-system-based management.
2004	North coast planning table unanimously recommends eco-system-based management.
2006	The government approves eco-system-based management.

Data

Data consisted of interviews, field research, organizational documents, and media reports. We conducted 69 semistructured interviews averaging 90 minutes each with current or former executives and managers of MacMillan Bloedel, the leading forestry firm (24); other forest company managers (28); environmentalists (10); government officials (3); and forest-dependent community members (4). Interviews, which were taped and transcribed, were conducted mainly in 1999–2000, though nine took place in 1996, and three were in 2004. Interviews provide insiders' insights as to secret meetings and the motivations behind events but are subject to retrospective biases. To minimize the effect of such biases, we interviewed people at the time of many of the changes in the field (in 1996, 1999, 2000, and 2004) and collected archival documents that record actions and events, and their framing by various groups, at the time they occurred. We analyzed company and stakeholder documents, Web sites, speeches, and more than 5000 media articles published between 1986 and 2006. We also consulted secondary sources, many of which featured summaries and guotations from interviews conducted by their authors (Pinfield, 1995; Parfitt, 1998; Raizada, 1998; Wilson, 1998; Bernstein and Cashore, 2000; Cashore, Vertinsky, and Raizada, 2000; Cashore and Vertinsky, 2000; Stanbury, 2000; Cashore, Auld and Newsom, 2004). These sources enabled us to describe the field prior to 1986. We attended and/or obtained the text for 45 presentations by industry members and stakeholders. Together, these multiple sources provide a rich set of data from which to draw robust conclusions.

Analytic Process

Consistent with Langley's (1999) recommendations for process research, we took multiple approaches to the analysis, which we conducted in five stages. In stage 1, we constructed chronological lists of key events, activities, and interpretations of them, composed of ordered, raw data (quotes from interviews, media reports, documents, and field notes). We sorted these data into meaningful categories to aid in linking actions and reactions, events and responses, in time and space. For example, environmentalists' early protest actions were structured in separate campaigns aimed at preserving specific areas, such as the Carmanah Valley, Galiano Island, Clayoquot Sound, and so on. We sorted much of the data by campaign, but other categories included government actions, First Nations' court decisions, etc. We then composed a narrative of over 100 pages as a first level of abstraction and refined it by comparing it with secondary sources. The narrative, cross-referenced to the raw data, took a broad view of the forestry field and its context and identified relationships and hypothesized cause-effect sequences. Two key actors in the study and three academic observers validated the narrative.

In the second stage, we identified the field's boundary, distinguishing organizations with formal and informal decision making authority over commercial forestry on the BC coast, and the practices (harvesting mode) of interest. To identify this boundary and the field's members, we looked for evidence of exclusion and inclusion in the set of actors who participated in forestry decisions. In the BC coastal forestry field, the BC government's Ministry of Forests was able to restrict membership by virtue of its ownership of 95 percent of the forest land and its ability to regulate practices and grant forest tenures and cutting permits. Yet because commercial forestry was so important to the provincial economy, decisions about it were also influenced by forestry firms, working closely with government and sharing responsibility for managing provincial forests (Cashore, Auld, and Newsom, 2004). Forest company interviewees saw themselves as part of the forestry field, indicating they interacted regularly and shared an area of practice and common issue stances.

Next, in stage 3, we sifted through the narrative, consulting the cross-referenced raw data when appropriate, seeking evidence of work done to affect the boundary and practices we identified, using the boundary work and institutional work literatures to guide us (e.g., Gieryn, 1983, 1999; Bowker and Star, 1999; Lawrence and Suddaby, 2006) but remaining open to emergent phenomena. We compiled a comprehensive set of boundary work and practice work incidents, then engaged in first-order coding using the constant comparison method (Glaser and Strauss, 1967). We linked similar types of boundary work to identify first-order concepts such as "identifying consequences of boundary-protected decision making,' "arrests of protesters," and "stakeholder consultations." We grouped these first-order concepts into second-order themes (Corley and Gioia, 2004) using axial coding (Strauss and Corbin, 1998) and sharpened these themes by comparing them with the literatures on institutional work and boundary work. Second-order themes included boundary work such as "controlling membership," "challenging the boundary," "mobilizing co-opted actors," and "directly defending the boundary," as well as practice work such as "maintaining solidarity," "delegitimizing practices," and "constructing potential solutions." We then cross-checked the forms of boundary work and practice work against the narrative and cross-referenced raw data to verify the trail of evidence.

In a third level of abstraction, in stage 4, we sought evidence of boundary and practice work patterns that co-occurred in time, by actor type and by objective. We identified four cycles of interconnected boundary work and practice work: institutional stability (cycle 1), institutional conflict (cycle 2), institutional innovation (cycle 3) and institutional restablization (cycle 4). We constructed raw data tables for each cycle to provide another iteration between the raw data and this higher level of abstraction (see samples in table 2, below). These cycles together formed a complete lifecycle of institutional stability and change. We devised a process map to link key events and boundary and practice work tactics to their consequences for the boundary and practices.

In the fifth and final stage, by closely examining the narrative for conditions leading up to shifts from cycle to cycle, we sought evidence of triggers that moved the field from one state (e.g., stability) to another (e.g., conflict) by examining statements by interviewees of their motivations for

undertaking the boundary and practice work at each phase and their reasoning for making shifts in their own strategies. We sought confirmation in secondary sources published on the industry and in anything publicly reported on changes in tactics.

FINDINGS

Our first research question asked if there are configurations of boundary work and practice work that support patterns of institutional change and stability. We found four distinct cycles of institutional stability or change, underpinned by specific patterns of boundary work and practice work that operated recursively: (1) institutional stability, involving boundary and practice maintenance; (2) institutional conflict, involving breaching and bolstering the boundary and disrupting and defending practices; (3) institutional innovation, involving establishing experimental boundaries that were protected from institutional discipline and inventing new practices; and (4) institutional restabilization, involving crossboundary connecting and practice diffusion. These cycles were contiguous, with some overlap, and had distinctive, cumulative consequences for the status of the boundary and practices. Table 2 provides supporting gualitative evidence for each cycle. Quotations are cross-referenced by number (in parentheses) in the text and table.

Cycle 1: Institutional Stability

At the start of our study, the BC coastal forestry field had a stable, taken-for-granted boundary and practices: the Ministry of Forests had regulated forestry in consultation with forestry firms since the early 1900s, and clearcutting had been used for decades. This stability resulted from the interplay of boundary work and practice work that had occurred over seven decades.

The boundary that demarcated the BC forestry field was maintained through a complex set of strategies engaged in by both the government and the forestry firms. The Ministry of Forests controlled membership by granting forest tenures and determined the volume of wood to be cut and the harvesting practices to be used. Through consultation at both the professional forester level and, politically, at the executive level, the industry effectively had veto power over policy change (Bernstein and Cashore, 2000; Cashore and Vertinsky, 2000). In 1990, for example, the BC cabinet approved an anti-pollution law that affected forest companies. The minister went to discuss it with forest companies before releasing it to the public. The forest company heads called the premier to complain, and he subsequently vetoed the bill (G. Bohn, Vancouver Sun, Oct. 12, 1991, p. D4). The boundary thus constituted the roles of the actors in the field. Once the rules were set, professional foresters "did what the landlord [the Ministry of Forests] told them to do," and forest workers implemented the practices without guestion (interview with a professional forester at a forest company). The decisionmaking process allowed no external access to forestry decisions. The government and forestry firms legitimated their authority by co-opting groups that might potentially

Table 2

Sample Qualitative Evidence Supporting Boundary and	d Practice Work
Cycle 1: Institu	utional Stability
Actors: Boundary insiders (forest companies and Minis	stry of Forests)
Boundary work: Establishing field boundaries	Practice work: Maintaining institutionalized practices
1.1. "As a society in BC we need to recognize that without a profitable forest products business that a lot of the things that are provided for in society just aren't going to be there" (interview, Interfor senior manager).	1.2. " in BC, the industry is supposed to operate in unison. You get in trouble with your peers if you break out of the pack" (interview, MacMillan Bloedel executive).
Cycle 2A: Institutional Conflict: Ch	allengers' Breaching and Disrupting
Actors: Institutional challengers (environmentalists, Fir	st Nations groups, and allies)
Boundary work: Breaching boundaries	Practice work: Disrupting institutionalized practices
2A.1. An environmentalist commented on arrests of 64 protestors: "We've tried the legal process. We've had marches and rallies. We are at our wits end There is nothing that allows people to have opportunity to be part of any decisions that are being made about their land" (<i>Vancouver Sun</i> , Sept. 25, 1991, p. D3).	2A.3. Logging destroys "the very oxygen that we breathe, uncountable fish, fowl and land animal spe- cies, fresh water supplies, and the indescribably lovely, magical, mystical, irreplaceable expression of nature that is an intact old-growth rain forest" (<i>Vancouver Sun</i> , Aug. 27, 1993, p. A3).
2A.2. After a visit from Greenpeace: "Four large German companies announced yesterday they want to buy paper that isn't derived from destructive logging practices (<i>Globe and Mail</i> , Dec. 18, 1993, p. B3).	2A.4. Friends of Clayoquot Sound TV ad reviews MacMillan Bloedel's conviction record for environ- mental offences and asks, "Who are the real criminals?" (Vancouver Sun, Oct. 27, 1993, p. A3).
Cycle 2B: Institutional Conflict: I	nsiders' Bolstering and Defending
Actors: Boundary insiders (forest companies, Ministry	of Forests, and allies)
Boundary work: Bolstering boundaries	Practice work: Defending institutionalized practices
2B.1. "A supervisor at MacMillan Bloedel acknowledges that the company is among the contributors to Share the Clayoquot. And Maclean's has learned that the province-wide Share groups are formulating a request	2B.4. A BC mayor described the Clayoquot protests as "an assault on the democratic process by a small interest group that didn't get its way" (<i>Globe and Mail</i> , July 9, 1993, p. A16).
for forest-industry funding in the \$1-million range" (<i>Maclean's</i> , Sept. 17, 1990, p. 54). 2B.2. Police "arrested 35 people for disobeving a BC	2B.5. The BC premier said clearcutting "in some instances is 'safer' and 'better for the ecology'" (<i>Globe</i> and <i>Mail</i> , Oct. 25, 1992, p. 47).

- 2B.2. Police "arrested 35 people for disobeying a BC Supreme Court civil injunction against the protest, and [20] spent from three to 45 days in prison" (*Maclean's*, Sept. 17, 1990, p. 53).
- 2B.3. "The Commission on Resources and the Environment... is scheduled to issue a land use plan for the whole of Vancouver Island.... The Clayoquot was specifically exempted when the review was announced.... [T]hose who want to preserve the Sound... suspect the issue was driven onto the cabinet agenda by MacMillan Bloedel" (*Vancouver Sun*, Feb. 24, 1993, p. A12).
- and Mail, Oct. 25, 1993, p. A7).
 2B. 6. "Yet clearcutting is seen as 'devastation' while industry sees it 'as a form of harvesting, like a corn field,' said [MacMillan Bloedel CEO]" (*Globe and Mail*,

July 8, 1991, pp. B1, B3).

Cycle 3: Institutional Innovation

Actors: Institutional entrepreneurs and innovating challengers		
Boundary work: Creating boundaries around experimentation spaces	Practice work: Creating new practices	
3.1. "Pushed by pressure from overseas customers, a half-dozen forest companies have been holding talks with three major environmental groups for months Both sides tried to keep the negotiations under wraps but word began leaking out this week" (<i>Edmonton Journal</i> , Mar. 17, 2000, p. A3).	3.3. Forest project: "We did a lot of modeling—really blasted it with a lot of intellectual horsepower" (interview, MacMillan Bloedel senior manager).	

(continued)

Table 2	(continued)
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Table 2 (continued)				
Cycle 3: Institut	tional Innovation			
Actors: Institutional entrepreneurs and innovating challengers				
Boundary work: Creating boundaries around experimentation spaces	Practice work: Creating new practices			
3.2. "We were able to convince our colleagues that we had to have a few spots in our company where we were doing something different but God help you if it spills over there So we started a few discrete projects" (interview, MacMillan Bloedel senior manager).	3.4. "In an ecosystem you get constant competition and cooperation leading to adaptation and collu- sion and survival. So our initial sort of cut at it was 'Hey, this is like an ecosystem.' Then we sort of said, 'We are all these green people within the company; we are going to go out and put out this ecosystem model. I don't think so—nobody would listen to it.' We had an economist at this point, and he said, 'This is like a market,' and we said, 'It's a perfect analogy!' This is competition, this is not war. It's a very different thing to be competing with environmental groups versus being at war with environmental groups" (interview, MacMillan Bloedel senior manager).			
Cycle 4: Institutio	onal Restabilization			
Actors: Boundary insiders and institutional challengers	;			
Boundary work: Connecting within and across boundaries	Practice work: Promoting practices created			
4.1. "We did a lot of work externally We had meetings with about 12 guys from the Ministry [of Forests] We never had a leak They were not going to be embarrassed when it became public. We met with the union presidents and explained to them what we are doing We also met with industry peo- ple, the other chief foresters of coastal companies and	 4.3. "The additional harvesting costs will be out-weighed by the economic benefits of improved—and continuing—sales, particularly in markets that have been sensitive to the pressure of environmental protesters" (<i>Vancouver Sun</i>, June 10, 1998, p. A1). 4.4. "Forever we had been saying the only safe way to 			
 other companies and our CEO met with other CEOs. We met with First Nations just before the announcement. We wanted to control the announcement ourselves. We had engaged the Greens" (interview, MacMillan Bloedel senior manager). 4.2. "Once the moratorium agreement is in place, other interested parties, including the B.C. government, forest-dependent towns and First Nations with land claims in the area, would join discussions for a broader agreement to establish a new economy on the coast,' said Coady" (<i>Edmonton Journal</i>, Mar. 17, 2000, p. A3). 	log is clearcut, now we are saying, 'Guess what?' we launched a really heavy duty communication struc- ture" (interview, MacMillan Bloedel senior manager).			
	4.5 "It is inspiring that labour, mining, logging companies, small business, communities, tourism, recreation and environmental stakeholders can come to agreement, and First Nations can support these agreements based on their own plans for their traditional territory in the Great Bear Rainforest [environmentalists' name for the north and central coast regions of BC]" (http://www. forestethics.org/downloads/GBRreportcard 2005.pdf, accessed March 3, 2009)			

challenge the boundary—providing high wages for forest workers, employment for local communities, and donations to highly visible charities. While co-opting potential challengers may not have been the initial impetus for these practices, forestry managers and politicians recognized and leveraged the dependence of external groups on the industry in establishing and maintaining field boundaries (1.1).

accessed March 3, 2009).

Members of the BC forestry field also worked to maintain the practice of clearcutting in several ways. First, the Ministry of Forests regulated forest practices and monitored compliance. Second, the ministry and forest companies participated in and supported professional and undergraduate education for foresters, and this education reinforced the legitimacy, efficacy, and ubiquity of clearcutting, in line with the core

values of "maximizing the growth and yield" of the forest and not wasting "merchantable timber." Further, the industry maintained solidarity through collaboration and harmonized industry positioning, facilitated by informal networks and trade associations. Firms were vigilant about not breaking ranks with other industry members in maintaining institutionalized practices (1.2).

The work done to maintain forest practices helped to strengthen the field boundary, and the field's strong boundary helped to stabilize field practices. For instance, the work of the government and forestry firms to entrench clearcutting in the professional education of foresters not only reinforced it as a taken-for-granted practice but also reinforced the boundary around forestry decision making through the maintenance of the professional forestry designation. Similarly, when a federal fisheries agency directed a forest company not to clearcut an area, the Ministry of Forests invoked and reinforced the boundary by threatening to charge the company with waste if it did not clearcut, an action that also reinforced the legitimacy of the practice.

Cycle 2: Institutional Conflict

In the 1980s, conflict arose over both the boundary around formal decision-making authority and the legitimacy of clearcutting as the dominant institutionalized practice. Two interrelated sets of boundary and practice work prevailed: outsiders (environmentalists, First Nations, and allies) worked at breaching the boundary and disrupting the practice of clearcutting, while forest companies and their allies tried to bolster the boundary and defend institutional practices.

The boundary work and practice work of outsiders.

Environmentalists and First Nations used what we refer to as breaching strategies to undermine the boundary delimiting the BC coastal forestry field. They challenged the boundary's legitimacy by disputing existing authority through civil disobedience and legal challenges, claiming it excluded the forests' rightful owners (the people of BC and First Nations) from forestry decisions (2A.1). Challengers also formed alliances to increase their power to affect the boundary: environmentalists and First Nations signed accords with each other and with communities and unions insisting that forestry decisions "no longer [be] made without the active and authoritative participation in all levels of planning by all concerned" (Vancouver Sun, Sept. 25, 1991, p. E1). Challengers also mobilized actors with influence over the forestry firms, including consumers, stock analysts, commercial customers, and foreign governments, to use their clout to weaken the boundary. One environmentalist said, "The time may have come for an international boycott of MacMillan Bloedel" (Vancouver Sun, Apr. 14, 1993, p. A1). Local media was also used to sway the public and the government: whereas in 1985, the Vancouver Sun published only 10 articles on forestry and the environment, from 1991 to 1995, 250 to 400 such articles were published each year.

Environmentalists' and First Nations' boundary breaching efforts were coupled with attempts to disrupt the institutionalized practice of clearcutting. These groups used

dramatic language to delegitimize the practice. They waxed poetic about trees and natural spaces and described clearcutting as "earth rape" (*Vancouver Sun*, July 8, 1992, p. B1), which left "wounds that bleed" (*Globe and Mail*, Nov. 10, 1993, pp. B1, B2) and resulted in a "Canadian Chainsaw Massacre" (*Vancouver Sun*, Dec. 3, 1991, p. B6, citing a *UK Observer* story), environmental and economic collapse, and loss of biodiversity (2A.3). They vilified boundary insiders, calling loggers "eco-lepers" (*Globe and Mail*, Aug. 7, 1993, p. B1–3), accusing MacMillan Bloedel of being the real criminal (2A.4) after arrests of protesters and denouncing the government as an industry "lap dog" (*Globe and Mail*, Apr. 22, 1998, p. A3).

Early efforts to disrupt clearcutting focused communications on actors outside the boundary and made both the boundary and practice the focus of normative debate, but they failed to dismantle the institutional supports for practices within the field. After boundary breaching led powerful actors to influence the field (especially customers), disruption became more effective, and insiders began to question clearcutting. Disruption in turn enabled more boundary breaching: the pressure to end clearcutting led some field members to reconsider public input, while the cancellation of contracts and use of political influence undermined the industry's solidarity by creating disproportionately negative effects on one elite actor, MacMillan Bloedel.

The boundary work and practice work of insiders. Forest companies used several strategies to bolster and defend the boundary in response to challenges. They mobilized co-opted actors to defend the boundary by commissioning a report on proposed policy changes that projected losses of 46,000 jobs and \$4-5 billion in gross domestic product (Globe and Mail, Sept. 29, 1995, pp. B1, B10) and by helping forest workers, their union, and communities to form a group called Share the Resources (2B.1). This group counter-blockaded environmentalists, vilified challengers, stacked formal processes involving consultations with stakeholders, and threatened counterboycotts against the customers of MacMillan Bloedel who threatened sanctions. Field members activated boundary enforcement by having protesters arrested and fighting them in court (2B.2). The usual practice involved the forest company applying for a court injunction against blockades of their logging roads. Then forest companies would call the police in to enforce the injunctions. Protesters were charged with contempt of court. Members also directly defended the boundary. In a speech he gave, MacMillan Bloedel President Robert Findlay said, "to suggest that someone off the street has more credibility on forestry matters than professionals seems preposterous," and as a politician said (to an environmental leader), "If you keep pissing in on the government tent constantly, eventually somebody is going to shut the flap and you can howl in the wilderness for all I care" (Globe and Mail, Oct. 25, 1993, p. A7). Insiders also made symbolic boundary incursions: the government introduced stakeholder consultations but gave them no authority (Raizada, 1998) and limited jurisdiction (2B.3), and MacMillan Bloedel offered a small preserve in one valley to avoid greater losses elsewhere (Watt, 1990).

Boundary insiders also defended the field's practice of clearcutting. They delegitimated challengers and their framing of field practices, claiming that environmentalists were "loose with the facts," had an "unfinishable agenda" (*Vancouver Sun*, Aug. 3, 1988, p. A3), were "guilty of treason" (*Vancouver Sun*, Apr. 11, 1991, p. C4), and that their claims were "grossly exaggerated," "irresponsible," "outrageous," and anti-democratic (2B.4). They also directly defended the practices (2B.5–2B.6), but with limited success.

Despite insiders' work to bolster the field's boundary and defend practices, challengers' escalating breaching efforts were successful in attracting public attention, which influenced the 1991 provincial election, in which a new and greener BC government was elected. By the mid-1990s, when boycotts began, the boundary was compromised: the government gave new power to stakeholder consultation processes, customers of the forest companies were demanding changes in forest practices as a result of pressure they were experiencing from environmentalists, and the courts had ruled that First Nations had to be consulted regarding the use of land they claimed.

Cycle 3: Institutional Innovation

While some actors remained in conflict, others instigated a cycle of institutional innovation involving creating new boundaries around experimental spaces in order to protect them from institutional discipline and creating new solutions and the frames to promote them. MacMillan Bloedel, the chief target of protests, was suffering greater economic and reputational harm than other firms and was motivated to seek solutions. The firm created boundaries demarcating four experimental spaces and isolated them from day-to-day operations. First, in 1989, a selective harvesting experiment was launched on Galiano Island, which involved informal consultations between local residents and the local operations manager there, who subsequently obtained approval from his superiors to launch the experiment. It was successful, but MacMillan Bloedel soon sold the land. Then, in late 1993, after 700 protesters were arrested in Clayoguot, the company created a temporary boundary around secret negotiations with First Nations and environmentalists: "We drew a fence around Clayoquot, which was about 10 percent of the annual harvest, and decided to give it up to the environmentalists and join with them to look at sustainable forestry" (interview, former executive). The third experiment, the Forest Project team, was formed and protected by the chief executive officer in 1998 to seek a solution to the conflict over forestry practices. It involved members of MacMillan Bloedel from diverse areas of the company, who consulted separately with multiple stakeholder groups, including customers, members of the public, the government, environmentalists, and other forest companies, to identify possible solutions. Finally, the field-level Joint Solutions Project was launched in 1999, after the Forest Project provided only temporary relief, as a secret and "temporary peace" (interview, senior forestry manager) between six major forestry firms and four environmental groups (3.1). Each project was enclosed as a separate space through either executive protection (as long as they didn't

"spill over") or secrecy, when projects involved negotiating with "enemies" (3.2). Bounding these projects protected them from intraorganizational, field-level, and outsider scrutiny and sanctions.

The practice work involved in each of these projects involved constructing and framing potential solutions and testing their social acceptability. Selective harvesting was tested in Galiano, refined and extended via social, scientific, economic, and ecological data in the Forest Project (3.3), after which MacMillan Bloedel announced it would stop clearcutting. The practice was extended again through research funded by the Joint Solutions Project, culminating in eco-system-based management, which proved acceptable to firms, government, and outsiders. As potential solutions were identified, proponents crafted powerful narratives to frame them. The Forest Project team, for example, framed the social context as a "market" to help build internal acceptance, saying, "This is competition, this is not war. It's a very different thing to be competing with environmental groups versus being at war with environmental groups" (3.4, interview, MacMillan Bloedel senior manager). A consultant helped craft a story for MacMillan Bloedel's Board of Directors that was met by a standing ovation. The Joint Solutions Project tested and refined solution frames with multiple groups.

Again, the boundary work and practice work in this cycle were mutually reinforcing. Boundaries built around experimental projects enabled the creation of new practices, while protecting them from institutional discipline. The possibility of generating solutions to the enduring conflict provided the motivation for diverse actors to accept new, experimental boundaries and engage in dialogue around the creation of new practices.

Cycle 4: Institutional Restabilization

The fourth cycle, institutional restabilization, began once experimental project teams identified a strong direction for a solution. They connected to other actors both within and across boundaries to promote and diffuse the new practices. Forest Project members connected with the Ministry of Forests and the Workers' Compensation Board to obtain permissions for the clearcutting phase-out. They privately explained its rationale to environmentalists, other forest companies, First Nations, and the government before announcing it publicly so that these groups could develop their own considered responses to it (4.1). When the Joint Solutions Project was made public, conferences were held to connect with and solicit the input of First Nations, communities, loggers' unions, suppliers, and others (4.2). Eco-system-based management was elaborated in consultation with these groups, which then helped to promote it. Both the Forest Project and the Joint Solutions Project motivated the adoption of the new practices by theorizing how they could solve field-level problems (4.3). They also shared their research and experiences to remove barriers to adoption. Each project promoted the legitimacy of its new practices across multiple audiences to facilitate

acceptance (4.4). In 2004, stakeholder groups agreed to the Joint Solutions Project's proposed eco-system-based management, and the government endorsed it in 2006 (4.5).

Again, the boundary and practice work in this cycle reinforced each other. While new practices emerged within closed boundaries, it was necessary to reconnect within and across boundaries to elaborate them and promote diffusion. As practices were legitimized, they helped to restabilize the boundary around the original players (forest companies and the government) with two exceptions: first, First Nations now had the legal right to be consulted on any activity that took place on their claimed land, and, second, eco-system-based management included a limited, permanent role for other stakeholders to influence land uses and monitor practices. The practices incorporated the interests of environmentalists, effectively co-opting them to accept the boundary, just as forest workers, communities, and others were co-opted in cycle 1.

Transitions between Institutional Change and Stability

Whereas our first set of findings showed how the interplay of boundary work and practice work reinforces particular states of institutional stability or change, our second research question focused on understanding the factors that lead to the transitions between institutional stability and change. From our case, we identified sets of endogenous and exogenous conditions that were associated with the movement of the field from one cycle to the next, each of which revolved around three dimensions: (1) the status of the boundary around the field, (2) the status of the core forestry practices, and (3) the existence of one or more actors with the motivation and capacity to initiate the boundary work and practice work associated with the subsequent cycle. Figure 2 summarizes our results on transitions between cycles.

Movement from Institutional Stability (Cycle 1) to Institutional Conflict (Cycle 2)

We found that three conditions were associated with the move from initial stability to conflict: disputed practices, intact boundaries protecting those practices, and the existence of outsiders with the capacity to challenge those practices and boundaries. The practice of clearcutting became disputed as the interests of field members and non-members became misaligned. Decision making about forest practices in the coastal BC forestry industry remained isolated from outside influence for many decades, despite the emergence of the environmental movement as a powerful force in broader policy, public consciousness, and discourse in the 1970s and 1980s (Hoffman, 1999; Maguire and Hardy, 2009). Such a misalignment may be a likely side effect of strong, longlasting boundaries, as the practices within such boundaries remain stable, while beliefs and values in the broader social context change over time.

The second condition that triggered the transition from stability to conflict was the emergence of actors with the

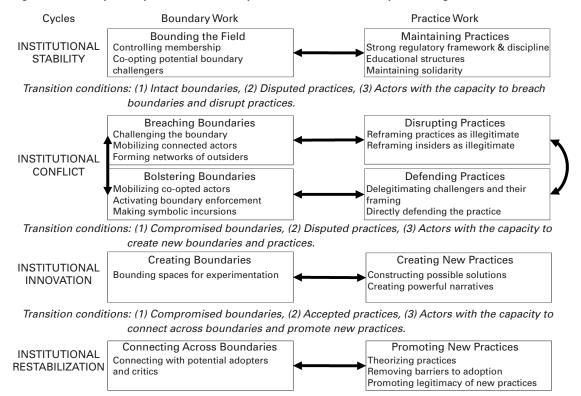


Figure 2. Boundary work, practice work, and cycles of institutional stability and change.

capacity and motivation to engage in the boundary work and practice work of the conflict cycle. Local and international environmental groups focused on moving the issue of clearcutting onto the public agenda. First Nations groups were upset with being excluded from decisions about the land they claimed but lacked the capacity to attract publicity and the financial resources to assert their claims legally. Environmental groups provided the advice and resources First Nations needed to engage in disruptive institutional work by asserting their land claims in the courts and the media. For environmental groups, the alliance with First Nations provided a legal opportunity to forcibly open the boundary through the courts. Together, environmentalists and First Nations were a motivated and influential coalition that forestry firms could not ignore.

A third condition—intact boundaries around forestry decision making—made it impossible for outsiders to directly affect practices. Thus institutional conflict, rather than an immediately collaborative process ensued. In contrast, if the boundary around forestry decision making had been less powerful, and forestry firms and government agencies consequently expected greater influence from others on forestry decisions, there might have been more room for First Nations, environmentalists, and field insiders to work together at the outset. Instead, these conditions led to a cycle of conflict in which agitated outsiders worked to breach the boundary and disrupt the established practices, while field insiders resisted those attempts by bolstering the boundary and defending the

practice of clearcutting. These arguments lead to our first proposition:

Proposition 1: Institutional stability will shift to institutional conflict when (a) the legitimacy of central practices becomes disputed, (b) boundaries protect those practices from disruption, and (c) an outsider exists with the capacity and motivation to engage in boundary work and practice work to challenge those practices and boundaries.

Movement from Institutional Conflict (Cycle 2) to Institutional Innovation (Cycle 3)

The transition from institutional conflict to institutional innovation in the BC coastal forestry industry was triggered by a combination of a compromised boundary around decision-making authority, clearcutting practices that had been disrupted, and an insider with the capacity to initiate the cycle of innovation by establishing new, temporary boundaries. Each of the experimental projects that marked the cycle of institutional innovation followed successful work by outsiders to compromise the decision-making authority boundary and disrupt the practice of clearcutting. The Galiano project followed MacMillan Bloedel's extensive loss of timber rights through court and government decisions in response to environmentalists' and First Nations' actions. The Clayoquot Sound negotiations were triggered by the company's fear that the whole region might be preserved after massive protests led the government to consider opening its decision process there to First Nations and scientists. Declining profits due to cancelled contracts, curtailed operations, and increased public relations and legal costs triggered the Forest Project. Finally, the Joint Solutions Project began when an environmentalist campaign to stop logging in the north and central coast areas attracted the support of key customers.

The compromised boundaries and disrupted practices threatened MacMillan Bloedel's interests and motivated the firm to respond. Yet the transition to institutional innovation also depended on the ability of the company to stop defending the status guo and move toward a novel solution. To do this, MacMillan Bloedel had to protect the experimental projects from institutional discipline by differentiating them from normal operations or by keeping them secret. The Galiano project was differentiated from normal operations on the basis that it was conducted on land owned by MacMillan Bloedel, rather than public land. Owned land was a minor part of MacMillan Bloedel's operations, and far fewer regulations applied to it. The Clayoquot negotiations relied on both secrecy and differentiation-the area was perceived as unique because it was politically charged. Though the Forest Project group was cross-functional, it was isolated from operational groups and its efforts kept secret until just prior to the announcement of its findings. The Joint Solutions Project also used differentiation and secrecy: the moratorium initially covered 126 valleys in the north and central coast area, and negotiations were kept secret from their beginning in 1999 until a press leak in March 2000. Across the four projects, the ability of MacMillan Bloedel and its negotiation partners to

employ secrecy and differentiation allowed them to establish boundaries that protected the experimental projects from institutional discipline.

The shift from institutional conflict to institutional innovation depended on the existence of an insider whose interests were threatened by a compromised decision-making boundary and a disrupted practice and the ability of that insider to establish new boundaries within which projects would be protected from institutional discipline. If challengers had been unable to sufficiently threaten entrenched interests via boundary incursions, incumbents would have lacked the motivation to experiment, and the conflict could have dragged on. Similarly, conflict might have persisted if there was no insider with the ability to establish new bounded spaces for experimentation. This might have occurred if there had been such a cultural distance between incumbents and challengers that any willingness to seek solutions was overwhelmed by fear or distrust. It might also have occurred if there were immovable prohibitions against experimentation: in this study, MacMillan Bloedel needed government permission to experiment with alternative logging practices on public land. These arguments lead to our next proposition:

Proposition 2: Institutional conflict will shift to institutional innovation when (a) practices are disrupted, (b) the boundaries that protect those practices are compromised, and (c) there is a motivated insider with the capacity to establish new boundaries to protect experiments from institutional discipline.

Movement from Institutional Innovation (Cycle 3) to Institutional Restabilization (Cycle 4)

The final transition, from institutional innovation to institutional restabilization, depended on a combination of new practices that were accepted by a variety of actors, a still compromised boundary around forestry decision making, and a coalition of outsiders and insiders with the capacity and motivation to diffuse the new practices and repair the boundary.

The final experiment, the Joint Solutions Project, led to the creation of eco-system-based management and its acceptance by a key group of firms, environmentalists, First Nations, several other stakeholder groups, and the government. This new set of practices would form the foundation for restabilizing the BC coastal forestry field. The ability of firms and government to simply implement this new system, however, was limited by the compromised boundary around forestry decision-making authority. As the coalition among forestry firms and environmentalists became public, other stakeholders, including First Nations, unions, forest-dependent communities, government, and recreational users of the forests, demanded to be included in forestry decision making. The government formed two multistakeholder committees to oversee the development of eco-system-based management, and these committees were charged with making final recommendations to the government. This broad involvement undoubtedly helped to ensure that the new system of practices would be accepted as legitimate, but it also further compromised the boundary around forestry decision-making authority,

because a broad range of actors were now legally entitled to have direct influence over forestry decision making.

The combination of a new system of forestry practices and a compromised boundary around forestry decision making meant that restabilization required practice work to legitimize the new practices across the industry and stakeholders and boundary work to legitimize the somewhat altered boundary so that firms and the government would be able to implement the practices. This work depended on a coalition whose members together had legitimacy among each of the stakeholder groups whose acceptance of the new practices and boundary was needed. The compromised boundary both necessitated and facilitated this work: the groups that would be affected by the new practices had been able to participate in their design, ensuring that their group's interests were reflected in any agreement, to the extent that they could negotiate them. Thus the ability of the coalition to diffuse the new practices and legitimize the boundary depended on a process that reflected the relative power and interests of the actors involved or else the process would have likely reverted to conflict.

Proposition 3: Institutional innovation will shift to institutional restabilization when (a) new practices are created that are broadly considered legitimate, (b) previously legitimate boundaries are compromised, and (c) a coalition of outsiders and insiders exists that has the capacity to cooperate to diffuse the new practices and legitimize a new boundary or re-legitimize the compromised boundary.

DISCUSSION

In this paper, we sought a better understanding of the relationship between boundary work and practice work and its role in institutional change and stability. Prior research has tended to present boundary work and practice work as relatively isolated from one another, with actors' attempts to affect boundaries between individuals and groups generally examined separately from attempts to affect the legitimacy or diffusion of practices. In contrast, we found a recursive, mutually supportive relationship between boundary work and practice work that underpinned cycles of institutional stability, conflict, innovation, and restabilization. Institutional stability relied significantly on mutually reinforcing patterns of boundary and practice work to maintain boundaries and practices. In contrast, institutional conflict was underpinned by competing sets of boundary work and practice work, one aimed at disrupting the status quo and the other at reinforcing it. Institutional innovation was associated with a combination of boundary work and practice work that provided safe spaces for actors to experiment with new ideas and develop new ways of working together. Finally, institutional restabilization was linked to cross-boundary connecting and practice diffusion. We also found that shifts between these cycles were linked to destabilizing combinations of the status of boundaries and practices and the presence of actors with specific capacities. These findings have significant implications for research and practice and contribute to at least three key issues in the study of institutions and organizations.

Implications for the Paradox of Embedded Agency

First, our study contributes to our understanding of embedded agency, a central issue in the study of institutions and organizations (Holm, 1995; Seo and Creed, 2002; Leca and Naccache, 2006). Our study identifies the roles played by two forms of agency-boundary work and practice work-in maintaining patterns of institutional stability and change. It further suggests that the degree to which boundaries and practices are intact and accepted affects the form of agency-habitual, practical, projective-most likely to dominate collective action in a field, while the effects of this agency have implications for the status of boundaries and practices. Our findings suggest that embedded agency may only be paradoxical when viewed at a distance, without enough attention to the state of boundaries and practices and actors' boundary and practice work. The apparent paradox may be untangled, at least in part, by connecting heterogeneous forms of agency-habitual, practical, and projective (Emirbayer and Mische, 1998)-to various states of boundaries and practices. We found that the intact boundaries and accepted practices associated with institutional stability were primarily associated with habitual forms of agency, with both insiders and outsiders largely choosing among well-established, legitimate routines. This pattern shifted when clearcutting became disputed and a coalition of actors emerged that was able to challenge the boundary and practice. Outsiders then engaged in practical agency designed to breach the boundary around forestry decision making and disrupt existing practice, leading insiders to also shift to practical action to defend the status quo. In both cases, agency was primarily oriented toward the present, with both sides reacting to the immediate situation rather than developing future-oriented alternatives. This may have been due at least in part to the restrictions on agency effected by the initially intact boundary around forestry decision making: insiders believed this was a short-term issue, and outsiders were unable to influence new practices directly. As the outsiders compromised the boundary, MacMillan Bloedel managers began to consider the need to change both the boundaries around decision making and forestry practices. They could not do so, however, in the context of a war over boundaries and practices that kept insiders and outsiders engaged in present-oriented practical action. To enable projective agency, temporary boundaries were needed that would shelter actors from surveillance and sanction and allow participants to collectively imagine new practices and boundaries. The promotion of the new practices and repair of the boundary required a shift back to more practical agency focused on connecting the innovations to the immediate needs of competitors and stakeholders. These changes indicate that agency was not simply in play or not at different times, as suggested by "sequential models of agency" (Leca and Naccache, 2006: 628), but, rather, that agency was always present, with different forms manifesting under different institutional conditions.

In abstract terms, we found that when boundaries were intact and practices were accepted, agency was primarily habitual, reproducing past patterns of behavior. When boundaries and practices were contested, agency was mainly practical: actors reacted immediately to a changing environment. The shift to projective agency depended on the construction of new, temporary boundaries that allowed future-oriented intention and action. Our study thus suggests that actors may innovate not by stepping outside of institutional influences but, rather, by constructing new boundaries that shield them from the sanctions to which they would otherwise be exposed. These findings extend the ideas of social movement "free spaces" (Gamson, 1996), in which reformers can interact without being observed, and relational spaces (Kellogg, 2010), in which organizational groups can experiment with new practices. Whether within or between organizations or among social movement members, institutional innovation appears to be enabled when boundaries around experimental spaces protect projective agency from institutional discipline.

Implications for the Study of Organizational Fields

The second issue to which our study contributes is the nature of organizational fields. Fields have traditionally been conceptualized either as communities of organizations with shared meaning systems (Scott, 2001) or as zones of "institutional war" (Hoffman, 1999: 352, citing White, 1992) in which actors compete over the meaning of issues and access to resources (Wooten and Hoffman, 2008). Our study suggests that shared systems of meaning dominate when field boundaries are intact, while conflict and competition emerge when longstanding boundaries are compromised, because differences in the institutional context within vs. outside the field lead to practice disputes. The field of forestry was both sequentially and simultaneously a community of shared meaning and an arena of conflict, rather than only one or the other. During the stability cycle, and throughout much of the institutional conflict cycle, clearcut logging and closed land use decisions were highly institutionalized in BC, despite the disruption campaigns of environmentalists and First Nations. Like a fortress under attack, there was a great deal of noise and action at the perimeter, but life carried on inside, away from the embattled boundaries. This complex image of the field is explained, at least in part, by the boundary, practice, and agency conditions we identified that led to punctuated shifts from stability to change and back. These conditions clarify the dynamics of field-level change as involving multiple, often conflicting actions by actors, the effects of which accumulate over time until they create the conditions necessary for a shift to occur. Simpler images of organizational fields stem significantly from restricted conceptualizations of the field and consequently narrow empirical examinations of the actors involved. Had we focused our data collection exclusively on forestry firms, we would have seen a highly institutionalized field that was able to reach out to stakeholders and deliver significant institutional innovation. Had we concentrated solely on environmentalists and First Nations, we would have encountered a strife-filled sector dominated by conflict and a field ultimately conquered by the activists.

A second implication of the study for organizational fields concerns the role of boundaries in facilitating their stability. A prominent theme in boundary work research has been the efforts of insiders to establish and maintain boundaries in

order to protect autonomy and access to resources (Gieryn, 1983). Our study suggests, however, that this work can have paradoxical effects. First, the success of firms and the government in establishing and maintaining the boundary around forestry decision making was crucial to initiating the cycle of conflict that ensued when clearcutting became a disputed practice. Outsiders' lack of influence over forestry practices forced them and insiders into a pattern of aggressive struggles, rather than any kind of collaborative engagement. Second, closing boundaries nearly always relies on compromises and deals with outsiders: as Selznick (1953) described at the organizational level, the Tennessee Valley Authority had to offer ongoing influence to the powerful stakeholders that made up its operating environment, and that influence constrained the organization over time. In our study, the forestry firms and government made deals to "pay off" powerful constituents. When social conditions outside the field changed, however, these relationships provided opportunity structures not only to firms and government agencies but also to environmentalists and First Nations. As insiders mobilized their relationships with forest workers and forest-dependent communities to protect the status quo, environmentalists used the influence of forest company customers to motivate negotiations over disputed practices.

Implications for Understanding Institutional Lifecycles

Third, our study contributes to a better understanding of the mechanisms involved in institutional change (Tolbert and Zucker, 1996; Greenwood, Suddaby, and Hinings, 2002), which remain undertheorized and underinvestigated (Mizruchi and Fein, 1999; Heugens and Lander, 2009). We show that the conditions that lead to field transitions depend on the interaction of boundaries and practices and the presence of actors able to engage in specific forms of boundary and practice work. Our findings have three implications for how we understand and study institutional lifecycles. First, our study suggests a connection between the cycles of institutional change and stability we observed and specific institutional literatures. The stability cycle we documented is characteristic of the literature on institutional isomorphism and diffusion, with its focus on strong boundaries and mechanisms of social control that lead to stability and similarity within organizational fields (DiMaggio and Powell, 1983; Tolbert and Zucker, 1983; Greenwood and Hinings, 1988; Van de Ven and Hargrave, 2004). The institutional conflict cycle maps significantly onto the social movement literature (McCarthy and Zald, 1977; Davis et al., 2005), with its focus on battles over practices and authority (Ingram and Rao, 2004; den Hond and de Bakker, 2007). The innovation cycle we found corresponds to research on institutional entrepreneurship (Garud, Jain, and Kumaraswamy, 2002; Maguire, Hardy, and Lawrence, 2004) or institutional design (Van de Ven and Hargrave, 2004), which focuses on the creation of new institutions by interested actors (DiMaggio, 1988), and their promotion to diverse constituencies (Maguire, Hardy, and Lawrence, 2004). These connections between cycles of institutional dynamics and related literatures suggest to us that existing research on institutions and organizations may

be restricted by its tendency to limit its focus to specific forms of agency and stages of the institutional lifecycle. Though each literature provides insight into the specific stage of the lifecycle on which it focuses, less well understood are the relationships among those stages, especially the mechanisms through which those stages begin and end.

Second, this research provides the study of institutional lifecycles with a more nuanced image of their evolution and identifies more specific sets of conditions likely to trigger shifts in cycles of change and stability. Previous research has described the evolution of institutions in terms of long periods of stability punctuated by relatively brief periods of change (Barley, 1986; Reay and Hinings, 2005), occasioned by exogenous shocks or heroic action (Colyvas and Powell, 2006; Levy and Scully, 2007). In contrast, our study suggests a punctuated equilibrium model, but one in which institutional conflict and innovation, as well as stability, can be the equilibria that are punctuated. Although a more macro level of analysis might have suggested that the field simply evolved in a classic pattern of unfreezing, changing, and refreezing (Lewin, 1951; Weick and Quinn, 1999), our more detailed analysis revealed the pattern to be a more complex one in which both change and stability were the norm at different times, and transitions between cycles depended on particular mechanisms that shifted more gradually. These transitions were associated with specific combinations of the status of boundaries and practices and the presence of actors with the capacity for specific boundary work and practice work. These conditions highlight the role of both endogenous and exogenous explanations for change, as fields co-evolve with their environments (Zietsma and McKnight, 2009), helped along by determined outsiders who breach boundaries and motivated insiders who respond to the practice demands that now reach them through compromised boundaries. Thus our findings contribute to analyses of the lifecycle of institutions and join the work of others who have explored the heterogeneous ways in which organizations and fields evolve (Van de Ven and Poole, 1995; Weick and Quinn, 1999).

Finally, our study suggests that the evolution of institutions may involve a range of alternative paths. Although the BC coastal forestry field evolved from stability to conflict to innovation and then restabilization, other outcomes are possible. If, for example, a stable field featured an internal actor who was both motivated to effect change and had direct access to practices, the field might move directly to institutional innovation, as did the multidisciplinary professional service firms studied by Greenwood, Suddaby, and Hinings (2002). Alternatively, firms that try to innovate may face institutional discipline and may fail to diffuse practices, as the experience of Napster has illustrated (Hensmans, 2003). Or a field with compromised boundaries and disputed practices, as in the conflict cycle we observed, could fragment if no actor has the capacity and motivation to engage in the boundary and practice work to innovate, or it could be overthrown if a new entrant is able to undertake innovative boundary and practice work, as happened in the photographic field (Munir, 2005). The details of these examples highlight

the need to attend to the status of boundaries, practices, and the capacity and motivation of actors to engage in boundary or practice work.

As with all studies, this one has limitations. It is based on a single case study, creating limits to generalizability. Institutional change in this study was initiated by outsiders who were able to compromise the organizational field boundary and expose field members to their interests. In contrast, powerful insiders instigated institutional change in other studies (Greenwood, Suddaby, and Hinings, 2002), which raises the question of whether boundary and practice work would differ depending on the subject positions of challengers and incumbents. Further, ours is a case of "successful" institutional change, and though we studied the work of both successful and unsuccessful actors, different forms of boundary work on their part may have led to a different result. Although the relationships and process model we have proposed should have significant generalizability, this remains to be verified in further studies. The interplay of boundary work and practice work thus represents a promising new direction for research in institutional theory.

For those interested in ensuring the healthy adaptation of organizations to their environments, the interplay of boundary work and practice work should be of utmost concern. While strong boundaries provide stability for firms and fields, they can also prevent adaptation and mask socially destructive deviance. Fields and firms that expose their practices to societal influences are likely to experience regular incremental change that maintains their legitimacy, rather than threatens it, and ensures that insiders' practices are in step with societal norms. In contrast, when fields have tightly closed boundaries, change is more likely to take a punctuated equilibrium path (Tushman and Romanelli, 1985), with revolutionary and disruptive changes following periods of stability. Firms and fields that remain open may be more likely to remain stable over the long term as they adapt to external pressures on an ongoing basis.

At the same time, there is a place for closed boundaries. A significant feature of the experimental projects that created new practice and boundary sets was that they involved negotiations among groups that were publicly at war. To design practices that would withstand enemy critique, it was necessary to understand their positions and make conciliatory moves. Public consultation processes, however, were doomed to fail because they were not protected from institutional discipline. Neither forest companies nor environmental groups could afford to make conciliatory statements publicly: each would be held accountable by their peers for statements that deviated from status guo positions. Because these positions were framed in polarized terms to play well in the media, there was little room for compromise. Secrecy, through protection from institutional discipline, enabled the open discussion that was necessary for projective agency.

In closing, we have focused in this study on the nature of embedded agency and its connection to change in organizational fields. Our study suggests that institutional work is

central to the transformation of organizational fields. Boundaries and practices together constitute the structure of organizational fields and are held in place by sets of mechanisms that are created by interested actors, require maintenance to endure over time, and are potentially vulnerable to disruption. Whether the institutional arrangements of a field endure or are transformed depends on the status of boundaries and practices and the existence of actors able to leverage those circumstances. Institutional disruption work done to compromise boundaries and dispute practices has the effect of disembedding some previously embedded actors and exposing the field to new actors who have never been embedded in the field. Institutional work to create new experimental boundaries both protects embedded and disembedded actors from institutional discipline and creates a new context with new norms focused on cross-boundary solution seeking. These findings suggest that embedded agency is not paradoxical but simply dependent on combinations of complex institutional structures and heterogeneous forms of agency.

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