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When Do Challengers Succeed? Nongovernmental Actors, Administrative Agencies, and Legal Change: Shifting Rules for Oregon's Private Forests

Ruth Langridge

Regulatory regimes are notoriously resistant to change, so when less powerful actors manage to reshape long-established rules and gain increased access to a natural resource the interesting question is why? This article investigates relations between different claimant groups and the state in the reshaping of the regulations governing Oregon's private forestlands, how this process was mediated by broader political opportunities and constraints, and the conditions that supported a shift in the legal regime that benefited less advantaged interests. The intent is to deepen our understanding of the circumstances under which well-established rules of governance are altered. Analysis points to each of the following variables as significant for successful reform: (1) active challengers and their success in reframing issues to support their goals, (2) new political opportunities facilitating wider participation in the rulemaking process, and (3) concurrence between local and national aspirations supporting reform. While each condition is noteworthy, it is insufficient on its own. Rather, my study comparing two contested administrative rules suggests that a clear alignment of all three variables provides the strongest impetus for legislative and administrative rule changes at the state level benefiting less advantaged interests.

I. INTRODUCTION

Regulatory regimes are notoriously resistant to change (Pierson 2000), so when less powerful actors manage to reshape long-established rules and gain increased access to a natural resource, the interesting question is why? The following study investigates relations between different claimant groups and the state in the shaping of rules to govern private forestlands, how this process was mediated by broader political opportunities and constraints, and the conditions that facilitated a shift that benefited newer

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^{1. &}quot;Access" is defined broadly as the ability of an individual, group, or community to actually benefit from a resource, and this definition includes a wider range of relations than those derived from property rights alone (Ribot and Peluso 2003).

and less advantaged environmental interests. The intent is to deepen our understanding of the circumstances that facilitate legal change.²

Scholars point to the important role of nongovernmental actors in shaping the law. These include powerful corporations (Lehne 2001; Nounes 2002) as well as groups with more limited resources (Berry 1999; Smith 2000). Governmental actors are also implicated in the process, and the state provides institutionalized pathways for the continual negotiation and renegotiation of goals, laws, and policies (Evans 1995). In the past few decades, scholars have described legal change, whether legislative, administrative, or judicial, as multifaceted, involving the potential effect of more contextual and mutually constitutive relationships between nongovernmental actors and the institutional regimes under which they operate (McCann 1994; Giugni 1998; Meyer 2003; Steinman 2005). Moreover, it is not only the presence of specific interests and institutional configurations that facilitate whether challengers to a long-established legal order can successfully reframe issues and alter rules, but also their interplay within a broader historical and cultural context. Utilizing an in-depth case study of the regulation of private forests in Oregon during a period of upheaval, my article contributes to this discussion. It sheds light on the framing, design, and implementation of new legislative and administrative rules and the conditions likely to produce changes benefiting less established interests.

My work draws on theoretical approaches in organization theory, legal studies, and the social movement literature that address the influence of political opportunities, participation, coalitions, framing, and ideology on effecting political change at the national level. Utilizing a case study method, I provide a more nuanced picture of the iterative interaction of these forces over time at the state and local level. Affirming work by other scholars, my research points to each of the following variables as significant for successful reform: (1) active challengers and their success in reframing issues to support their goals, (2) new political opportunities facilitating wider participation in the rulemaking process, and (3) concurrence between local and national aspirations supporting reform. My analysis suggests that each condition is insufficient on its own. Rather, it is a clear alignment of all three that provides the strongest impetus for legislative and administrative rule changes at the state level benefiting less advantaged interests. The comparative examination of the processes and relations that led to significant shifts benefiting challengers in one out of two contested administrative rules pursuant to the Oregon Forest Practices Act (FPA or the Act) adds weight to the analysis and provides guidance for additional investigations.

My article tackles several gaps in contemporary work. While there is extensive research on the *role* of different nongovernmental groups and individuals in the crafting of legislation at the federal level, the results from these studies are inconclusive regarding the *degree of influence* exerted by these groups (Baumgartner and Leech 1998). In addition, there is limited empirical work examining the extent of influence these groups

^{2.} The policy literature defines "policy change" in a variety of ways. For example, it can involve a change in attitude, principle, or point of view; in public knowledge; or in the framing of an issue. When laws are altered, through legislation and administrative rules or court interpretations, policy change can occur. Alternatively, the term "legal change" is used in this article to refer to changes that occurred in the actual legislation and administrative rules governing private forests.

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have on the administrative rulemaking process (Furlong 1997; Kerwin 2003; West 2004; Kamieniecki 2006; Daley 2007).³ This is in spite of the importance of administrative rules in translating legislation into specific courses of action and in detailing how to implement specific legal mandates (Lehne 2001). Moreover, past studies primarily focused at the *federal* level, with only a limited number of researchers using *states* as a laboratory to study the influences on and benefits of particular regulatory mandates.⁴ Yet, states are the arenas where most environmental rules are actually implemented and, in the case of private forestlands, where many of the rules overseeing forest practices are established. These disparities provide a persuasive rationale to utilize a specific case setting to address the uncertainty in results and provide missing context and a more nuanced description of the interactive nature of the processes that are likely to generate legal change.⁵

The Case Study

The legal bedrock of US policy for private forestlands goes back to the country's roots in English common law, where a foremost responsibility of government was to protect each citizen's inalienable right to acquire and possess private property. This was always balanced by the state's authority to protect the health, safety, and welfare of its citizens. When the government reserves land for the purpose of sustaining its forests, goals can be set consistent with the public welfare, even if that is not always easy to define. When government regulates private lands, determining the balance between private rights and the responsibility to protect public goods and the public welfare becomes more difficult.

Early common law in the United States favored economic expansion, industrial development, and individual property rights, and, for much of the twentieth century, there was almost no regulation of public or private forestlands. The few laws governing Oregon's forests were well aligned with these broader forces in exclusively favoring the powerful timber industry. By 1970, as a complex web of social and political movements stimulated new visions for America's forests, conflicts over access and use increased (Dunlap 1991; Durbin 1990b; Lipschutz and Mayer 2003). At first, these conflicts played out in escalating disputes over forest management on federal lands, as statutes

^{3.} A common thread in this research is the attempt to identify influence, but studies are fragmented and researchers have had difficulty clearly defining what variables to examine in measuring influence (Baumgartner and Leech 1998). See, however, work by Susan Webb Yackee (2006) that discusses how the structure of the notice and comment period may facilitate the formal participation and influence of interest groups during the bureaucracy's implementation of policy.

^{4.} See, however, work by Teske (1991); Wald, Button, and Rienzo (1996); Lewis and McGhee (2001).

^{5.} Although quantitative research can result in generalizable results, it tends to ignore context. Case studies provide opportunities for more in-depth and multifaceted analyses; they can illustrate the theoretical framework and yield additional propositions for further testing. This research utilized a qualitative case study approach to examine in-depth the characteristics of and relationships between people and organizations, and the conditions under which challengers succeed in fomenting legal change. Data came from written sources as well as interviews with over twenty-five individuals representing key actors, including industrial and nonindustrial forest owners, the environmental community, the Oregon Department of Forestry, the governor's office, the state legislature, and the scientists involved as consultants in forest policy formation.

placed increasing restrictions on timber harvest practices to protect water and wildlife (Yaffee 1994; Flick 1994; Salazar 1985; Kline, Benford, and Swenson 2000).⁶

Eventually, private forestlands—traditionally under state jurisdiction—came under closer scrutiny. This attention was fueled by research that indicated that the protection of ecosystem interactions required forest management on a broader scale (Kline, Benford, and Swenson 2000). Beginning in the 1970s, the FPA and its administrative rules that governed Oregon's private forestlands were gradually reconfigured to restrict some common logging methods and to provide more environmental benefits. A detailed analysis of the political patterns and social dynamics that shaped the Act and its rules during this period of transition serves as a vehicle for describing and analyzing the process of legal change.

Oregon is an ideal arena for this study. Forests cover approximately 45 percent of the state (Rice and Souder 1998) and are a significant contributor to the state's economic base (Robbins 1985). Prior to the 1980s, industrial forest owners in the state-dominated government decisions that related to private forestlands, and they were the majority on the Oregon Board of Forestry (BOF or the Board). In 1971, the initial FPA was revised, and a major change occurred on January 1, 1984, when the state moved to a citizen-dominated Board. Subsequently, the Oregon Department of Forestry (ODF), the administrative agency implementing the FPA, adopted more stringent rules that restricted logging in riparian areas and increased the overall protection of water and wildlife. But the agency failed to enact comprehensive rules for logging on steep slopes and unstable soils. My study analyzes these transitions and specifically addresses why challengers succeeded in achieving significant overall reform, while, at the same time, industry was successful in blocking more extensive limits on logging in landslide prone areas.

Research Roadmap

Part II of this article situates my research in the literature and discusses current explanations of why legal rules change. Part III elaborates on the historical legacies of forest management, including the processes that produced the 1971 FPA and eventual changes in the composition of the FPA's policy-making body, the BOF. These changes established new political opportunities for subsequent interactions among economic interest groups, social-movement organizations, grassroots groups, individuals, and the ODF to shape highly contested agency rules for two important areas of forest management: logging in riparian areas and logging on steep slopes and unstable soils. These processes are described and contrasted in Part IV. Part V discusses the findings.

^{6.} Important statutes included the 1972 National Forest Management Act, the 1973 Endangered Species Act (ESA), and the 1972 Clean Water Act (CWA). Under defined conditions, ESA and CWA also regulated forest practices on private lands.

^{7.} The BOF, created in 1911, oversees all matters of forest policy within the jurisdiction of the state. Additionally, the Board appoints the state forester, adopts rules regulating forest practices and other forestry programs, and provides general supervision of the state forester's duties in managing the Oregon Department of Forestry.

THEORETICAL INSIGHTS: NONGOVERNMENTAL ACTORS, ADMINISTRATIVE AGENCIES, AND LEGAL CHANGE

Entitlements to the use of and control over natural resources are highly contested, yet actual changes to legal regimes are difficult (Pierson 2000) and are generally not accomplished without altering how issues are framed and decided and who gets to decide (Schon and Rein 1994).

Scholars point to nongovernmental actors as influential in the transformation of both statutory laws and administrative rules. They can operate as individual challengers (Coglianese 2005) and through participation in grassroots groups (Hahn and Kamieniecki 1987; Golden 1998; Daley 2007), social movement organizations (McCann 1994; McAdam, McCarthy, and Zald 1996; Wald, Button, and Rienzo 1996; Tarrow 1998; Giugni 2004), and economic interest groups (Hall and Wayman 1990; Hansen 1991; Austen-Smith and Wright 1994; Ainsworth 1997; Baumgartner and Leech 1998; Goldstein 1999; Yackee and Yackee 2006; Kamieniecki 2006; Kerwin 2003; Burstein and Linton 2002; Jewell and Bero 2006; Dur and De Bievre 2007).8

Challengers also operate within a historical and institutional context that can influence their success (Giugni 2004). They interact with government agencies and other government institutions that are also "embedded in a concrete set of social ties that bind the state to society and provide institutionalized channels for the continual negotiation and renegotiation of goals and policies" (Evans 1995, 12). Statutory and administrative rule changes can emerge from these mutually constitutive relationships between nongovernmental actors and the institutional regimes under which they operate (McCann 1994; Giugni 1998; Meyer 2003; Steinman 2005), as these relations affect whether challengers are able to overcome established powerful interests and alter rules. My article illuminates these processes and relations. It highlights the importance of diverse participation in rulemaking, the ability of challengers to reframe issues to support their goals, and the cohesion between national and local aspirations. But most importantly, the case study illustrates that an alignment of these factors—a coming together—was the key to facilitating legal change.

The Role of Public Participation

Public participation by a diverse group of nongovernmental actors in the political process is not only a vital ingredient in a well-functioning democracy (Kamieniecki 2006), it is a significant factor in explaining why some reform legislation and administrative rules are created and adopted. Public participation can serve as a mechanism for providing information and expressing individual preferences that a legislator or

^{8.} Burstein and Linton (2002) point out that scholars distinguish between interest groups and social movement organizations in a variety of ways. This article refers to organizations promoting the goals of industry and smaller businesses as "economic interest groups," nationally recognized nonprofits promoting public interest goals as "social movement organizations," and local nonprofits promoting reform in the public interest as "grass-roots organizations." All of these come under the heading of nongovernmental actors.

agency can use as a basis for making decisions (Coglianese 1997, 2005), and, when citizens mobilize, outcomes are more likely to support a more equitable distribution of resource benefits (Mascarenhas and Scarce 2004; Daley 2007).

The Role of Nongovernmental Interest Groups

While participation by unorganized individuals is influential in catalyzing reforms, established interest groups can also shape legislation and administrative rules (Quirck 1981; Hansen 1991; Goldstein 1999; McKay and Yackee 2007). Early researchers debated interest-group influence on the crafting of statutes and administrative rules (Schattschneider 1935; Dahl 1961), and, while current research acknowledges their role in fashioning rules, scholars are divided as to their *degree* of impact.

Several researchers, for example, point to the continuing dominance of economic groups representing big business in the crafting of environmental policy (Clawson, Neustadt, and Weller 1998; Libby 1998; Glazer and Rothenberg 2001) and in limiting efforts to conserve natural resources (Dryzek 1997; Press and Mazmanian 2003). These groups generally spend large amounts of money to influence public opinion through the funding of policy and scientific research that supports their interests and through the manipulation of the media (Libby 1998; Kamieniecki 2006). Other scholars, however, suggest that the influence of economic interest groups is countered by the dramatic growth of more diverse interests, including, for example, environmental groups (Baumgartner and Leech 1998; Berry 1999).

With respect to administrative rulemaking, empirical studies on whether public comment procedures favor business interests also produced mixed results, with some researchers contending that elites and industry groups still dominate the rulemaking process (Kerwin 2003; Coglianese 1997, 2005; Yackee and Yackee 2006; McKay and Yackee 2007), while others suggest that less privileged constituents may have a meaningful influence on the crafting of rules (Cropper et al. 1992; Golden 1998; Nixon, Howard, and Dewitt 2002). Social movement organizations, for example, generally have fewer material resources. Yet, where an institutional environment facilitates opportunities for them to press their claims, they can affect legislative, administrative, and judicial outcomes (McAdam, McCarthy, and Zald 1996; Tarrow 1998; Giugni 1999, 2004).

Legal theorists also examine ways that the law is shaped through its interactions with citizen groups (McCann 1994; Steinman 2005), and they point to the constitutive power of law that enables challengers to effect changes in the legal regime (Paris 2001; Frymer 2003). Researchers primarily focus on case studies involving litigation and the courts, but their analysis is relevant to the shaping of statutory and administrative rulemaking as well. Brown-Nagin (2005), for example, discusses how social movements may profitably use particular language to inspire political mobilization, and Paris (2001) illustrates how various political activities both preceded and undergirded legal

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mobilization, which, in turn, shaped the terms of public debate and framed subsequent policy processes and outcomes.

Issue Definition and Framing

Both social-movement and organization scholars also emphasize the importance of issue definition and agenda setting in explaining the ability of a group to affect policy (Goffman 1974; Snow and Benford 1988). Framing, described as the selection and highlighting of particular elements in constructing an argument about the causes and effects of a problem, can influence the shaping of laws by calling attention to certain aspects of reality while obscuring other points (Entman 1993; Libby 1998; Kamieniecki 2006). Moreover, "how an issue is defined . . . will have important bearing on the nature and eventual outcome of a conflict" (Cobb and Elder 1983, 96). Kingdon (1995) posits that the greatest rule changes emerge when key political events, or the emergence of compelling problems, provide new windows of opportunity for challengers.

The Role of the State

The structures and processes through which the state and its apparatus govern also provide opportunities and constraints to both challengers and supporters of the status quo (Ainsworth 1997; Ribot 2003; Young 1982). Administrative agencies act as "agents" of the law, and they are an important source of the variation and substance of implementation outputs (Wood 1988). They serve as a pivot-point through which statutory law is funnelled, and, each year, agency officials produce more binding rules on society than Congress does (Coglianese 2005).

Public-choice scholars point out that while agencies are guided by statutory law, they are rarely neutral. They are characterized as self-interested and highly political with biases, goals, and constituencies, and they often act to maximize their budget and maintain organization structure (Niskanen 1971). Moreover, an agency that lacks diverse views can be dominated by ideology, and a narrow system of values can limit the scope of decisions and practices (Francis 1990; Fortmann 1990; Davis 1994). Conversely, an agency where multiple interests are represented is less apt to respond to one powerful constituent. Yet, Espeland (2000) describes how, even when citizen participation is increased, the terms of participation can often be controlled by a bureaucratic rationality that relies on technical expertise.

Today, scholars agree that an interactive dialogue between agency officials and nongovernmental interests occurs during all rulemaking processes. Agencies evaluate the comments they receive from different parties, and, while they sometimes change rules in ways that are consistent with some of these comments (West 2004), research is inconclusive as to when and why this occurs. To understand why challengers sometimes succeed, it is important to view in detail how powerful and less advantaged citizens, individually and in groups, participate, negotiate, and renegotiate *over time* with administrative agencies and other organs of the state in attempting to generate change.

Diffusion of Innovation and Reform

My case study also bears out work by social-movement scholars that illustrates how the diffusion of innovations by challengers can affect reform movements at different levels of governance (Tarrow 1998). In Oregon, the wealth and staying power of industrial landowners allowed their concerns to initially shape forest management. Challenges to industry's authority began in the 1970s as national values shifted toward greater environmental protection. This view diffused down to the state level affecting local attitudes. The federal statutes to protect water, wildlife, and forests that ensued were a major influence on the reform of forest rules at the state level. Additionally, reform efforts in the 1980s for private forests became embedded in the lively national campaign to restrict logging in old-growth public forests to protect the spotted owl. Both the growth of the environmental movement and the public concern engendered by that debate provided additional context and impetus for growing state and local opposition to industry's dominance. This set the stage for changes at the state level in the actors who shaped rules, the strategies utilized, and, eventually, some of the actual rules. My article spells out in greater detail the processes and relations involved in this transformation.

III. PRIVATE FORESTLANDS: EARLY REGULATION

A commercial and utilitarian ethic dominated the country's vision for its natural resources at the end of the nineteenth century, affecting how management practices for private forests were framed and established. Industry was the central influence on what little restrictions existed. Moreover, there were almost no challengers or any countermobilization efforts pushing reform. As such, what few regulations existed favored industry's economic goals. This paved the way for industry's decimation of southern and eastern forests and led to their subsequent move to the Pacific Northwest (Robbins 1985).

Despite the country's laissez-faire mentality at this time, the public was concerned about the destruction of forestlands. Industry was also anxious about heavily logged regions, but primarily because these areas were more susceptible to fire, which could annihilate even more land and result in a scarcity of resource capital. In the Pacific Northwest, where supply was still plentiful, an additional and strong motivation was the desire to take forestland out of production to keep prices high. The result was an industry that was briefly allied with emerging forces pushing for greater federal regulation, and this unusual alignment spurred the creation of the federal forest reserves in 1891. This withdrawal of forestland from industry use served not only to protect some lands from overharvesting but also to keep timber prices high by temporarily reducing supply (Cox 1974).

While the state of Oregon had similar concerns about timber prices and the depletion of its forests due to speculation, fire, tax pressure, and excess mill capacity, emerging national pressure for more sustainable management was a key motivation for the local timber industry to become proactively involved in the crafting of new state regulations. Industry's goal was to assure that any new rules would be favorable to its

interests (Baldwin 1982). Moreover, there was little opposition to industry's timber practices at this time, and industry representatives were appointed to a majority on the BOF (Oregon Department of Forestry 1984).

Industry, lumberman, and livestock groups joined forces to support the 1941 enactment of the first state forest practices act to assure state, as opposed to federal, control over management practices for private forestlands. The result was incentive based, rather than regulatory based, technical programs that strongly favored industry's goal for minimum regulation (Cronemiller 1936; Pacific Northwest Loggers Association 1937; Salazar 1985; Ellefson, Cheng, and Moulton 1995). While the new Oregon Forest Conservation Act now required reforestation, there was little consideration of the success or failure of a planting, limiting the act's effectiveness (Cleary, Greaves, and Harmann 1978; Hennessey 1987). Despite being described as "written and fostered by Oregon loggers and lumbermen themselves in an attempt to control the irresponsible minority of their fellows" (Baldwin 1982, 663), it nevertheless contained limited oversight of forest management. No notification requirements or permit systems were created, and there was liability for the cost of corrective action only if a violation was discovered. As a result of minimal challenges to industry's supremacy and a culture that supported unbridled development, only modest improvements in forestry practices ensued (Hennessey 1987; Ellefson, Cheng, and Moulton 1995).

The end of World War II was followed by a period of unprecedented population growth, economic expansion, and urban/suburban spread. Demand for wood was high, and from 1950 to 1970 the large industries went through vast expansion programs becoming large corporations with greatly increased resources (Wilson 1965; Baldwin 1982). Beginning in the 1970s, these corporations, including Weyerhaeuser, Georgia Pacific, and Willamette Industries, engaged individual lobbyists in Oregon and also formed a powerful lobbying coalition—the Oregon Forest Industries Council (OFIC). OFIC's goal was to represent private industry in lobbying for a favorable legal and regulatory climate to protect the ability of their members "to manage their land profitably and efficiently" (Oregon Forest Industries Council 2008).

Gonzalez (2001) argues that, with respect to environmental policy, economic elites are the key shapers of both content and implementation, and their wealth and staying power enable them to manipulate government rules for national forests and other natural resources. In Oregon, despite the growing power of challengers and a gradual decline in industry's supremacy, OFIC remained a major influence on the crafting of both statutory and administrative rules for private forestlands. The same executive director headed the organization for over twenty-five years. This enabled the industry, through its powerful lobbying arm, OFIC, to be a persistent, dominant, and often successful player. This was particularly the case prior to the 1980s when there was little opposition to their authority, and challengers were focused on reforming policy for public forestlands (Yaffee 1994).

The advantages of industry's wealth and longevity were always pronounced when compared to the meager resources of small, private nonindustrial forestland owners and contract loggers. Moreover, the nonindustry organizations—the Oregon Small Woodlands Association and the Association of Oregon Loggers—dealt with multiple concerns that included benefits and education services as well as lobbying for preferable timber harvest rules. The diffuse interests of their members, along with their limited resources, reduced their ability to lobby with a unified and strong voice, and they often lost out when corporate industry's goals diverged from their needs. But during this period, all the timber interests coalesced around the goal of a minimum regulatory regime and sustained timber harvest (Hennessey 1987).

Congressional attention to environmental issues was minimal during the first two-thirds of the twentieth century (Baumgartner and Mahoney 2002). But beginning in the 1970s, an emerging national environmental movement began to advocate for greater protection of public goods such as water and wildlife. This fresh vision for the country's natural resources was reflected in new federal laws that afforded greater protection to water, wildlife, and forests. The goals and mandates articulated at the national level diffused down to the state and local level and affected Oregon's approach to forest management. The 1965 Federal Water Pollution Control Act, for example, required states to evaluate sources of water pollution, and proposed amendments to the act were forecasting even more stringent mandates in the future, including the regulation of nonpoint pollution sources that would affect forest operations (Hairston-Strang, Adams, and Ice 2008). Oregon anticipated that it would soon be required to update its practices for private forestlands to comply with federal standards (Brown 1978).

This prompted a reformulation of the FPA, which was approved by the legislature in 1971. With its focus on specific outcomes, its hefty resources, and few challengers, industry was well positioned to influence this legislation, and it dominated the revision process (Hairston-Strang, Adams, and Ice 2008). In an effort to ward off even stricter rules, it negotiated a soft mandate that practices should be consistent with the sound management of soil, air, water, fish, and wildlife. Other rules to address silviculture practices, water pollution, and wildlife habitat were only advisory, and new environmental mandates, such as reforestation, were minimal. The new Act's broad goal remained the continuous growing and harvesting of forest tree species as the leading use on privately owned land (Hennessey 1987; Hairston-Strang, Adams, and Ice 2008).

Changes to the Composition of the Oregon Board of Forestry

With industry representatives dominating the BOF since its inception in 1941, altering the Board's composition was essential if there were to be changes in forest practice rules. In 1941, all industry members were involved with timber harvest practices, and the governor served as chair. It took eighteen more years for the first environmental representative to be added in 1959. As public pressure built to reduce industry's influence, the legislature added two new members in 1975—one from labor and one wildlife expert—making a total of thirteen members with eight representing industry/grange. But, until 1983, industry/grange interests remained a majority. ¹⁰

By the mid-1980s, the environmental movement was in full swing, countering the goal of the Reagan administration to speed up harvest of timber stands in the Pacific Northwest (Kelly 1986; Durbin and Koberstein 1990b). Membership in local organizations, such as the Oregon Natural Resources Council (ONRC), 1000 Friends of

^{10.} Oregon Department of Forestry. Board of Forestry Member History 1911–1988, Timeline of each Board of Forestry member and replacements. On file with author.

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Oregon, and the Oregon Environmental Council, increased. These groups formed coalitions with national and regional organizations, including the Audubon Society, the Pacific Coast Federation of Fishermen's Associations, and the National Wildlife Federation, who extended their local presence. Smaller grassroots organizations also emerged, including the Coast Range Association and the Umpqua Watersheds Council. But, with the exception of the Audubon Society and ONRC, few organizations had the longevity or resources of OFIC, industry's interest group (Durbin 1990). Moreover, for over a decade the environmental community remained focused on the protection of forest resources on public lands where, given their limited resources, they felt they could be most effective. ¹¹

The accelerated harvest in the 1980s resulted in increased visibility of clearcuts, prompting further public concern. This was intensified as the national debate over the spotted owl and logging on public forests accelerated in the late 1980s, and membership in the local chapter of the Audubon Society and the ONRC increased significantly. Smith (2000) points to the effect that challengers can have through countermobilization. They can reframe issues and spark media coverage that raises public awareness and involvement in the political process. In turn, this can generate support for reform measures. This occurred in the struggle to alter the Board's composition. Reinvigorated local groups began a more sustained media campaign, reframing the issue as an inability of the current Board to genuinely represent the public interest in more environmentally sound forest practices, and they pushed for a forestry board with fewer members from the industry (Oregon Department of Forestry 1987).

Several external events reinforced their efforts. The new environmentally oriented Land Conservation and Development Commission (LCDC) was mandated to review forest rules for compliance with its land-use goals, and its report was critical of the FPA (Oregon Department of Forestry 1987). Moreover, local counties were threatening to adopt more restrictive forest practice regulations within their own jurisdictions, a situation described as akin to having thirty-six little forest practices acts. A final event that boosted the reform effort was a legal opinion issued by the state attorney general stating that the appointment procedure for the Board was unconstitutional because it required that some members be chosen from the lists of nominees provided by select private interests—predominantly the timber industry (Sadler 1987).

Ostensibly, in an effort to repair the constitutional appointments problem, but also increasingly influenced by a more engaged public that supported reducing industry's dominance on the Board, the skillful use of the media by environmental groups, and the LCDC report, the legislature established a new mediation process. It was far more inclusive, with industry, environmental groups, state agencies, and legislators participating. The outcome of this process was the 1987 passage of major amendments to the FPA through House Bill 3396 that created a dramatic shift in the Board's composition. The bill established a seven-member citizen board to be appointed by the governor and approved by the legislature, with no more than three members permitted to have a

^{11.} Paul Ketcham, Conservation Director, Audubon Society of Portland, personal communication. with author, May 19, 1997. Transcript on file with author.

^{12.} Ibid.

^{13.} Ibid.

TABLE 1. Composition of the Board of Forestry

1960	1984	1997
Members 6—Forest Industry 1—Range 1—Environmental or Labor 1—Agricultural Industry 1—County Chair—Dean of the OSU School of Forestry Total =11	Members 3—Forest Industry 1—Agricultural 1—Assoc. of OR Counties 1—OR State Labor Council 1—OR Small Woodland Owners Association 1—OR Wildlife Federation or Izaak Walton League 1—Public Interest Advisory Members 1—Forest Service 1—BLM 1—OSU School of Forestry	Members Citizen Board with no more than 3 members permitted to have an economic interest in forestry Total—7
Interests Represented on the Bo 8 Industry 1 Environmental /Labor 1 County 1 OSU	Total—9 Voting- 3 Advisory Doard of Forestry 6 Industry 1 Environmental 1 Public Interest 1 County	All Citizen (no more than 3 permitted to have an economic interest in forestry)

financial stake in the industry. ¹⁴ In addition, it incorporated a requirement to adopt more stringent rules to protect water, soil, fish, and wildlife. While a compromise was added that exempted the forest practices program from the environmental oversight of state land-use planning (Oregon Department of Forestry 1987), it was nevertheless a big victory for challengers, solidifying the new citizen-dominated Board's authority over private forestlands. Today, although the selection process remains subject to lobbying, the requirement remains that no more than three members can have a major financial interest in the timber industry. Table 1 details the shift in membership on the BOF.

New Visions and New Laws

After the passage of the new FPA in 1971, individuals and organizations promoting reform began a more sustained critique of the Act's weaknesses, arguing that it did not sufficiently control an operation until after that operation was over and that there was too much discretion given to the timber operator and regional forester (Hennessey 1987). This period also saw an increased call for greater responsiveness to the public's

^{14.} The regional committees were also reduced to advisory committees to respond to rules proposed by the BOF and drafted by the state forestry agency.

views. New environmental laws, including the National Environmental Policy Act and The Clean Water Act, incorporated public-participation requirements, and this led to agencies hiring permanent staff to create and execute procedures for public involvement (Espeland 2000). This push for a more open and transparent rulemaking process diffused down to the state level where the BOF came under stronger pressure from the public to hold hearings and to widely distribute the agency's draft rules for comment. Citizens utilized these hearings to push the ODF to address public interests in soil, water, and wildlife. These challenges led to a drawn out and highly contentious rulemaking process (Schroeder 1971).

Scholars examining the rulemaking process have primarily employed content analysis to study the notice and comment procedures of federal agencies, examining multiple cases to tease out influential factors. While providing important information, this approach often misses the more multifaceted processes and relations that precede notice and comment and that provide a richer context for understanding final decisions. The conditions under which challengers succeed in reforming rules are informed, for example, by an analysis of how participants, procedures, and frames of understanding change over time, and how external influences, such as federal-state relations, are implicated. The next sections provide these details, illuminating how initial rules under the new 1971 FPA were established (as well as later rules for riparian areas and logging on unstable soils) and exposing the conditions that were most significant in facilitating reforms.

During public hearings on their early draft rules, the BOF received input from new and more diverse interests including industrial and livestock associations, agricultural and recreation groups, local government, journalists, and other resource agencies (Oregon Department of Forestry 1972a). Science and fisheries experts also attended and recommended strengthening the protection of water quality and fish habitat (Hairston-Strang, Adams, and Ice 2008). At the same time, the addition of the 1972 amendments to the Clean Water Act—requiring states to control a variety of nonpoint-source pollutants, including those from silvicultural practices—pushed the BOF to reassess whether its current practices satisfied the new requirements (Brown 1978).

In 1976, the industry-dominated BOF contracted with representatives from industry, state agencies, and the Department of Forest Engineering at Oregon State University (OSU)—all focused on timber production—to prepare an evaluation report. Davis (1994) discusses that when an agency lacks diverse input and views, a narrow system of values and ideology can dominate and limit the scope of decisions and practices. This was visible in the conclusions of the evaluation report. Although the recommendation was made for field foresters to receive increased training in hydrology and fisheries, the report's main conclusion was that no major modifications to the rules were actually needed (Brown 1978), thus preserving current industry-supported practices.

The wealth, power, and focused efforts of the timber industry dominated this decade, and challengers had few resources compared with industry. Even when national attitudes began to shift toward greater protection of nontimber values for forestlands, local challengers framed their prime objective as altering practices on public, rather than private forestlands. While the national campaign to limit logging on public forests resulted in greater media visibility and increasing membership in environmental

organizations, the focus on public forests continued to limit the human and financial resources available for reforming practices on private lands. ¹⁵ Nevertheless, challengers were cognizant of the early draft forest practices rules, and, while they contained a few environmental protection mandates, the environmental community "questioned whether they adequately protected fish and wildlife values" (Ice et al. 1989, 533), and they pointed to a lack of sufficient standards.

In 1987, the change to a more inclusive Board provided new opportunities for emerging groups of challenges to more significantly alter the agency's administrative rules governing riparian areas and logging on steep slopes and unstable soils. These rules were critical to the profitability of the forest industry and small private forestland owners as well as to environmental goals of sustainability, setting up another very contentious round of lobbying and negotiations. The events that followed occurred during an intensive critique and masterful national campaign by environmentalists to reduce logging on public forests, which influenced the debates over the rules for private forests. This process, along with a further analysis of the conditions that supported reform for private forestlands, follows.

IV. NONGOVERNMENTAL ACTORS, GOVERNMENT AGENCIES, AND THE CRAFTING OF ADMINISTRATIVE RULES

In many ways, agency rulemaking rivals legislation as a form of government output, and it continues to be of primary concern to organizations attempting to influence policy (Furlong and Kerwin 2005). Furlong (1997) argues that less advantaged groups, such as environmental nongovernmental organizations, rarely have the resources to mount an effective opposition to business lobbying. But by focusing primarily on the *formal* process of rulemaking, most studies provide limited background and historical context to inform when and why challengers actually do succeed in altering established agency rules. The challenge is to identify the most important elements of variation in rulemaking through an in-depth look at the process, including the characteristics and relationships of people and organizations that effected change.

The description of two highly contested forest management practices described in the next two sections does this. It teases out the significance of successful framing, the increase in opportunities to participate along with more diverse participation, and the diffusion of national goals and mandates down to the state level. An *alignment* of these conditions was central to the enactment of final riparian rules favoring challenger's goals of increased environmental protection. As a counterpoint, even though all but one of these conditions favorable to challengers existed during the struggle to alter logging practices on steep slopes and unstable soils, when industry succeeded in framing landslides as *primarily* a problem of public safety instead of environmental protection, it was able to push through rules that supported its interests.

The Rules for Riparian Areas

Rule changes for riparian areas were never about whether there should be protection of water, fish, and wildlife resources, but rather what the level of protection should be (Hennessey 1987; Lorensen, Andrus, and Runyon 1994). Research had gradually demonstrated that large increases in sediment, temperature, and dissolved nutrients occurred in clearcut riparian areas, whereas few effects were seen when stream buffers were present. The early 1972 rules addressed this by requiring that 75 percent of original shade be left along fish-bearing streams, along with a strip of understory vegetation to prevent sediment in nonfish-bearing streams (Hairston-Strang, Adams, and Ice 2008). Despite the suggestion of new guidelines by a team of scientists and foresters that stressed the role of intermittent streams in fish passage, the guidelines were not included in these rules (Oregon Department of Forestry 1972b).

After the 1973 amendments were added to the federal Clean Water Act, the ODF was required to meet water-quality goals through the development of specific plans to reduce nonpoint source pollution, and it was now obligated to incorporate public participation in the process (Ice et al. 1997). As the debates over agency rules dragged on, draft regulations were produced with several rounds of changes and additions (Hairston-Strang, Adams, and Ice 2008).

As the legislature and public became increasingly interested, the ODF held public hearings, which resulted in the submission of new rules in 1987 (Mertena 1987). Influenced by the national debate over logging on public forests, the new rules shifted the focus to adequate provision of habitat, and they required riparian buffers to be at least twenty-five feet wide along both sides of major fish-bearing streams, with some trees left when logging to provide shade and nutrients (Ice et al. 1989). Protection was ordered for state-listed threatened and endangered species, for wetlands, for sensitive bird nesting, for roosting and watering sites, and for scientifically significant biological sites (Kadera 1991). Although these rules addressed some of the challengers' environmental concerns, albeit with potentially significant costs to landowners (Olsen, Keough, and Lacourse 1987), critics argued that no protection was provided in the rules for the important smaller fish-bearing streams, intermittent creeks, and the wildlife-rich wetlands (Durbin 1990c).

More substantive changes took place in the 1990s. During the 1980s, Northwest lawmakers and key Reagan administration officials had pressured the US Forest Service to keep high volumes of timber flowing from the national forests to the region's mills (Durbin and Koberstein 1990a). 16 Starting in the 1990s, local citizens and activists publicized the visible scars on the landscape from logging (Durbin 1990a). Energized challengers pointed to a new series of articles in local newspapers on destructive forest practices, ¹⁷ and public attitudes about the value of the Northwest's natural resources underwent a dramatic shift, with increasing public support for protecting Oregon's

^{16.} The rate of cutting on federal forests climbed throughout the 1950s, 1960s, and 1970s. Durbin and Koberstein's (1990a) review of congressional hearings' testimony and their interviews with key government officials illuminated how political pressure from the Northwest congressional delegation forced federal forest agencies to cut more timber in the 1980s than the agencies deemed prudent and sustainable.

^{17.} The Portland Oregonian had a series of articles on the debates over the Northwest forests that ran for six days (Portland Oregonian 1990).

streams and fisheries. Smith (2000) points to the effect that challengers can have in increasing media coverage and raising public awareness and involvement in the political process, which can generate support for reform. This effect was illustrated by the increasing public attendance at Board meetings where, reacting to public concern, the new citizen-dominated Board conducted a widely attended forum to address forest practices issues (Durbin 1991c). A more diverse group of actors participated, including both new and reconfigured environmental groups. Taking their cues from the debates over logging on public forestlands and the listing of the spotted owl under the federal Endangered Species Act, the new participants framed the problem as insufficient regulation of forestry practices and inadequate environmental protection requirements. They identified key issues for stream protection in forest operations, including reducing the size of clearcuts, addressing landslides, reducing excessive sedimentation, and improving fish habitat (Durbin 1991b).

The Board requested that the agency prepare a study of the issues. But now *both* timber industry and environmental groups participated, drawing up plans to amend the Act and rules (Durbin 1991a). Some habitat protection measures were approved, but, characteristically, the Board requested yet another report on water quality and wetlands (Durbin 1991b; Barnard 1991).

Industry continued to lobby hard, and before the agency proceeded very far with its assessment, the Oregon Senate passed Senate Bill 1125 (Hortsch 1991; Hill 1991a), introduced at the request of the forest industry. The bill was amended in the Oregon House to restrict some industry practices, however, and the Senate then rejected the revised bill. In conference committee, extensive negotiations ensued, with state agencies and industry representatives participating directly in these negotiations, while environmental groups provided input through consultations with two senators (Hill 1991b).

Both sides continued to frame the debate in a way that would support their own objectives. Thus, the "emotionally charged, polarized" disputes included whether the Board should be "required" to adopt rules to minimize the adverse cumulative effects of timber harvest or whether the Board should be "permitted" to adopt these rules, and whether the Board should provide for the "restoration" of fish and wildlife habitat rather than the "maintenance" of fish and wildlife populations (Portland Oregonian 1991). Recognizing that the ODF was likely to restrict the less costly but more environmentally destructive timber harvest practice of clearcutting, industry representatives pushed to set bare minimum limits, while also lobbying to preclude the agency from enacting more stringent rules in the future.

A compromise was finally reached, and Senate Bill 1125 passed both houses. Industry did succeed in eliminating some of the language that required consideration of logging's cumulative effects. But the bill was considered a major victory for challengers, as it was the first time state law limited clearcutting on *private* lands. Moreover, the bill required the agency to develop at least three stream classifications (instead of one), with rules for each; to make new rules consistent with forest health and fish and wildlife protection; to increase water quality standards; and to assess forestry's role in the decline of coastal salmon runs (Hill 1991c).

In the subsequent rules debate, the agency, the regional boards and industry reframed the issue as an economic one, responding that the proposed buffers would be

too costly to landowners. A Board member pointed out that the FPA defined the best use of private forest land as the production of timber, and, because the Board's role was to see that the amount of timber lands were not reduced, no-cut buffer zones were not possible (Durbin 1992).

After considerable delay, including a threat by environmentalists to file a ballot initiative aimed at tightening regulation of timber operations on state and private lands, the agency again produced draft rules for riparian zones (Durbin 1993a). These received a significant amount of public criticism, focused on the width of the buffer zone where logging would be totally prohibited and the size of the area where limited logging would be permitted. Environmental groups, drawing on the negotiations over President Clinton's Northwest Forest Plan for public forests, argued for stronger rules, including the creation of a three-hundred-foot-wide no-cut buffer along both sides of major streams, and for the protection of small intermittent streams (Portland Oregonian 1992a, 1992b). 18 The National Marine Fisheries Service also pushed for the protection of small intermittent streams as necessary to protect the Coho salmon.¹⁹

Moreover, challengers reiterated their framing of the issue as a scientific and environmental problem, and Senate leaders urged the agency to develop solutions based on the best-available science. Twelve scientists presented a letter that argued for stream buffers to remain as close as possible to old-growth forest conditions. While a few scientists questioned the need for a minimum one-hundred-foot no-logging riparian zone and the necessity of preserving sufficient large conifers to assure shade and nutrients (Portland Oregonian 1992a, 1992b), when the revised draft rules were presented for public comment, a coalition of virtually all the state's major environmental and fisheries groups wrote the governor urging support of stronger rules (Durbin 1993a).

In 1993, the petition to list the Coho salmon under the federal Endangered Species Act added a new urgency to the agency's effort. It formed yet another committee to gather yet more data on how logging affected streams and fisheries and to complete an economic analysis. The goal was to once again revisit rules for buffer zones (Durbin 1993b). The new committee now had much broader representation—with industry, other state agencies, small landowners, and environmental groups all represented.

Lubell (2007) discusses how theories of cultural evolution posit social learning from others as a key mechanism of change. This occurs when members are cognizant of and respond to diverse opinions within a group. More inclusive participation, for example, can be significant in increasing the range of issues considered and the legal definition of what is permissible, often reframing a debate (Low and Gleeson 1998). Moreover, where different interests interact on a regular basis, the reframing of ideas and assumptions can occur through processes of persuasion, where other people in the group actually change the preferences of individuals. Cortner (1996) describes how repeated interactions between a diverse set of actors can also enable social learning and build trust and shared understanding that form the basis for innovative solutions to conflicts.

^{18.} They first argued that the board was not following the recommendations of its own scientific panel to require a one hundred foot no-harvest buffer of forest vegetation along all fish-bearing streams.

^{19.} National Marine Fisheries Service. 1997. White Paper on the Oregon Forest Practices Act. On file with author.

These developments were apparent during the six months that the new committee visited thirty-seven streams around the state. As a result of the committee's time spent together, challengers, who now had a voice in the process, were able to articulate their goals and objectives. Individuals with differing viewpoints became familiar with each other, enabling them to establish some common goals. The result was a set of recommendations with additional environmental goals that required the timber industry to leave sufficient shade to provide cool temperatures, enough remaining large trees to prevent erosion, and pools and riffles to accommodate the spawning needs of fish. In 1994, the ODF passed new rules that incorporated many of these recommendations. With respect to the buffer zone, the rules compromised at a no-logging zone of twenty-five feet, permitting only limited logging within one hundred feet of the remaining riparian zone (Durbin 1994a, 1994b).

Daley's (2007) contention that broader participation in rulemaking provides legitimacy for final rules was illustrated in the case of the set of rules that finally passed in 1994. Even though challengers continued to lobby for more stringent limits on logging in riparian zones, it was evident, as indicated in Tables 3 and 4, that between 1970 and 1995, the rules governing private forest practices shifted significantly toward reduced timber harvest in riparian zones and greater overall environmental protection. Even industry conceded that the new rules placed greater restrictions on their logging practices.

Rules for Landslides and Logging on High-Risk Sites

In February 1996, a major storm swept into Oregon bringing high winds, torrential rains, and above-average snowpack. This was followed by a series of very warm rains and, in the fall, another severe storm, making 1996 one of the wettest years on record. There were hundreds of landslides on Oregon's steep mountain slopes, resulting in significant property damage and several fatalities. Four people were killed when a landslide rolled into their house in a rural area northwest of Roseburg. The landslide originated on steep-sloped private forest industry land that was clearcut between 1987 and 1988, despite its classification by the ODF as a high-risk site for mass soil movement. A 1994 aerial photo taken by ODF showed the industrial clearcut with bare, rocky soils still exposed (Barnard 1996a). An agency forester acknowledged that the danger of landslides in logging units had been recognized in 1986, but claimed, "It's all private land. We don't have the authority to not allow such activities" (Barnard 1996b). The landslide-related deaths received much media attention and triggered a replay of an earlier dispute that occurred in the 1980s about the relationship between forest practices and the incidence of landslides.

Snow et al. (1986) describe how the framing of an issue helps to organize experience and how it can clarify and invigorate the interpretation of a problem's cause. Moreover, the seriousness of a problem can be amplified depending on that problem's definition, and the definition can also affect who benefits from a particular solution. Two issues were critical in attempting to answer whether and how to strengthen forest practice rules to reduce landslides, and how the issues were defined and framed was significant in determining solutions and beneficiaries. The first was whether scientists

could actually establish a causal relationship between logging and landslides. The second was whether increasing public safety was the sole objective in addressing the landslides or whether reducing damage to the environment should also be an objective. Research suggests that diagnostic framing—the identification of a problem and its causes—can constrain the possible solutions and the strategies advocated (Benford and Snow 2000), and the events in this case illustrate such an effect.

Historically, landslides were part of natural evolutionary processes on steep, wet terrain. However, the relationship of forestry management practices to the frequency, type, and duration of landslides had concerned scientists and policy makers since the 1950s (Pyles and Skaugset 1997). In the early 1970s, ODF indicated that landslides triggered by road construction were the biggest threat to water quality and fish habitat in Western Oregon (Brown 1978). But in framing the question of whether slope stability could be predicted for a specific site, scientists working with ODF indicated that the task was "very complex," and "soil maps were lacking for most of the private forestland in Oregon" (Brown 1978, 783).

The storms in the 1980s again raised questions about whether past and current forest practices were contributing to an increased frequency of landslides on steep slopes. Photographs of landslides and debris jams around the state aligned with an emerging consensus in segments of the scientific community that clearcutting and road construction were related to the frequency and flows of debris slides. Moreover, research demonstrated additional negative environmental impacts from these practices, including sediment in streams that contributed to the deterioration of fish habitat and downstream water quality and debris avalanches that often blocked stream channels, impeded fish migration, reshaped stream channels, and altered aquatic habitat (Sidle, Pearce, and O'Loughlin 1985).

In 1981, under prodding from staff in the newly created Pacific Northwest office of the National Wildlife Federation to strengthen the rules for logging on steep slopes and unstable soils, the BOF instead requested a study. 20 A Soils Task Force was formed with representatives from industry, the ODF and other state agencies, the regional boards, and researchers from the Department of Engineering at OSU, who at that time were the only scientists working with the agency. No environmental groups were included. As such, the report emphasized landslides as part of a natural geologic process and stated that little was known about how to minimize debris avalanches in harvested areas and that more research was needed regarding landslides and slope stability. No additional restrictions on logging in these areas were proposed (Spiesschaert et al. 1982). Importantly, by utilizing a frame that placed the individual site as the unit of analysis, the report also indicated that predicting the location of landslides was complex and more studies were needed. This resulted in the agency punting on the issue of improving timber harvest practices on landslide-prone sites due to insufficient information on the geological attributes of specific sites (Spiesschaert et al. 1982). In April 1983, the BOF adopted new rules that focused on requiring a written plan to be approved by the regional forester for any harvest operation in high-risk sites, on the technical

^{20.} Andy Stahl, Executive Director, Forest Service Employees for Environmental Ethics, personal communication with author, May 20, 1997.

improvement of roads, and on monitoring to assess if scientists could determine the circumstances that increased landslides on specific sites.²¹ But the rules did little to alter industry's timber harvest practices.

Few landslides occurred in Oregon after 1983 until the events triggered by the storms of 1996 killed five people. Newspapers gave prominent coverage to the tragic events (Bernton 1997a). At this time, clearcutting was also under renewed criticism by the environmental and scientific communities, who challenged the practice as potentially harmful to the forest ecosystem (Barnard 1991; Bernton 1997a). The two issues of environmental protection and public safety pushed forest practices, especially clearcutting on high-risk sites, back onto the political agenda.

The agency was confronted on several fronts. The families of individuals who had lost their lives sued (Bernton 1997a). The environmental community, the media, the general public, and the governor responded with a call for action. Federal legislators contacted the agency, expressing concerns that appropriate measures be taken with regard to public safety (Oregon Department of Forestry 1997b). A bill was also introduced in the state legislature to alter the FPA and give the state forester authority to deny permission to log on steep slopes if that would endanger people living downhill. But it also extended those powers beyond public safety, giving the state forester the ability to also block logging that might damage fish, wildlife, or public waters. But industry resisted efforts to alter practices, claiming that legislation was already under consideration to address these issues and anything else would duplicate these efforts (Associated Press 1997).

In response, the agency called an open meeting at the state fairgrounds to accommodate an anticipated crowd. The forum included testimony by a wide range of interests, including environmentalists, scientists from the Department of Engineering at OSU, industry, the agency, the state legislature, and the general public (Associated Press 1997). The agency referenced a National Marine Fisheries Service paper that identified logging practices on steep sloping as potentially related to the frequency and intensity of landslides (National Marine Fisheries Service 1997).

But industry continued to successfully frame and emphasize the issue as one of public safety. The BOF was unsure whether it even had the authority to regulate for public safety (Bernton 1997b), so they called for a voluntary deferral of logging on all potentially high-risk sites pending a legislative solution (Oregon Department of Forestry 1997c). However, the need for immediate regulation became apparent when a handful of loggers and landowners proposed harvests on at least seven high-risk sites and circulated a pamphlet urging landowners to "consider clearcutting before . . . you lose your right to log your own land" (Bernton 1997c). In response, the agency began geotechnical investigations on the new slides that caused the fatalities, along with a ground-based study to examine the relationship between storm impacts and forest practices (Oregon Department of Forestry 1997b). The governor also put together an interagency team that included a new, alternative group of scientists from OSU, to discuss how to reduce landslides and the risk to the public (Oregon Governor's Office 1997).

^{21.} Oregon Department of Forestry. Issue Paper: Landslide Risks to Public Safety and Property. 1997. On file with author.

There was significant disagreement at this point between the two groups of scientists regarding the appropriate unit of analysis and the framing of the problem. With respect to the unit of analysis, the new scientists, who received funding from the federal government to examine vast tracts of public forestlands, focused their research on these areas utilizing a large-scale empirical approach. Their results indicated that a clear relationship existed between timber harvest practices and landslides. In contrast, scientists from the Department of Engineering at OSU, who primarily studied harvest practices on individual private tracts, focused their research on whether a landslide would occur on a particular site. These scientists emphasized again that determining whether there was a relationship between timber harvest practices and landslides on an individual site remained too complex to answer at this time (Pyles and Swanson 1997). The ODF drew primarily on the results of the engineers, and given the uncertainty posed by these scientists as well as the agency's close working relationship with them in the past, the agency recommended only minimum rule changes (Oregon Department of Forestry 1997a). These emphasized road improvements that would involve the regulation of narrow tracts of forestlands, as opposed to more significant changes in logging practices on all steep slopes and unstable soils that would involve more regulation of industry's vast forestlands (Moreman 1997).

In framing why landslides were a problem, the debate was over whether public safety or environmental protection was the core issue. Research by Zaller (1992) posits that entrenched and powerful interests can influence public opinion by strategically defining a controversy and the efficacy of a particular action as a potential solution. This was visible in industry's framing of the landslides problem as how to minimize the risks from landslides to life and property. This framing avoided two issues that worried industry. First, if the emphasis was on public safety, the environmental impacts of landslides, such as increased debris deposits and sediment in streams related to clearcutting, would be less important. Second, if the issue was a public safety one, then regulations would need to focus on areas close to population centers and roads. For industry with its large tracts of forestlands, this meant excluding most of its holdings from the rules. Instead, landowners with small tracts that were generally located near roads and towns would be affected.

In the midst of all the activity relating to the 1996 landslides, industry worked behind the scenes to draft a new bill, Senate Bill 1211, favorable to its interests (Brinckman 1997). The state legislature held committee hearings and heard testimony from representatives of industry who strongly supported the bill, as well as scientists from OSU's Department of Engineering, state agencies, the governor's office, and Forest Service Employees for Environmental Ethics. While both the environmental community and the Oregon Small Woodlands Association were opposed to sections of the bill, the general view was that the bill would not make it through the 1997 legislative session due to pressure from housing and building interests. But, on the last day, Senate Bill 1121 passed when it was reworked to eliminate any measures that would affect the building of homes. It was a win for industry as the bill created an interim prohibition on logging only in high-risk sites where people were likely to be present or near highways, and it put off further regulation until yet another task force, the Task Force on Landslides and Public Safety, could study the issue (Brinckman 1997).

In the end, some conditions favorable for reform of logging practices were present, including active challengers with reasonable opportunities to provide input and both a national consensus and local public opinion that supported increased environmental protection of forest habitat. But industry successfully blocked rules that would have negatively impacted their logging practices by emphasizing three points. First, they worked with scientists who framed the individual site as the unit of study and who argued that demonstrating a causal relationship between logging and landslides was complex and required further studies. Second, they emphasized that landslides were a normal occurrence in Oregon. This was particularly visible in the bill's premise that even strict prohibitions of logging could not prevent most landslides. Third, their framing of the landslides issue as one of public safety, while leaving out concerns about the environmental impacts of logging, resulted in rules that focused on sites near roads and houses where industry would be minimally affected.

V. DISCUSSION

Since 1970, there has been an overall explosion of interest groups at the federal level. While large and more diverse public interest groups were established in the early 1970s, by 1980 there were still very few compared with the corporations, trade, and other business associations who make up over 80 percent of all organizations lobbying Washington (Schlozman and Tierney 1986). The pattern is similar at the state level. In Oregon, individual industry lobbyists and the OFIC became larger and more powerful over the years even as the number of environmental and other interests entering the scene increased and public participation became more inclusive. The pro-industry resources remain formidable today. Researchers note that while there are many forms of access to the political system, one factor is an organization's resources (Schlozman and Tierney 1986). The budgets and sources of funding for the different groups attempting to influence Oregon's forestry rules, as indicated in Table 2, indicate a wide discrepancy between industry and other groups.

TABLE 2. Nongovernmental Groups—Budget Resources, 1996–1997

	Budget Size	Budget Inclusions	Funding Sources
Oregon Forest Industries & Oregon Forest Research Council	\$2,800,000+	Lobbying expenses (administrative polling and scientific studies) Research on timber harvest	Industry
		issues	
Oregon Small Woodlands Association	\$143,000	Fundraising, education, other benefits	Members
Oregon Natural Resources Council	\$700,000	Fundraising	Individuals, foundations
Audubon	\$150,000	Fundraising, conservation, education	Individuals, foundations
Coast Range	\$120,000-170,000	Fundraising, education	Individuals, foundations

TABLE 3. Forest Practices Regulated

1944–1979	1980–1989	1990–1993	1994–1997
Added: • water pollution • chemical pollution • wildlife habitat • mechanical clearing • drainage systems • harvest operations • wetlands • water quality / mining • pesticide regulation • fill & removal • stream channel changes	Added: • road layout • enforcement & penalty procedures • public & operator appeal processes Revised: • harvesting • road construction • wildlife leave trees	Added: • sensitive bird nesting, roosting, & watering sites • protection of northern spotted owl, osprey, great blue heron • protection of T & E species • wildlife leave trees • clearcut size/spacing • significant wetlands • scenic hwy. corridors • ecological sites • scenic sites	Added: • new Stream classification rules Revised: • reforestation rules • civil penalties • clearcut requirements

TABLE 4. Environmental Outputs Protected

1944–1979	1980–1989	1990–1993	1994–1997
 forests water (pollution) & wetlands wildlife stream channels 	 forests water (pollution) & wetlands wildlife stream channels 	 forests water (pollution)& wetlands wildlife & T & E species stream channels sensitive species significant ecological & scientific sites scenic values 	 forests water (pollution) & wetlands wildlife & T & E species stream channels sensitive species ecological & scientific sites of significance scenic values fish bearing streams domestic use streams

Galanter (1975) argues, in reference to the litigation process, that the reasons the "haves" generally come out ahead are their significant resources and their longevity, enabling them to better accomplish their goals. This inequality was reflected for many years in the shaping of the rules governing private forests. The ODF worked closely with industry during the agency's formative years, solidifying a culture that focused on timber harvest and affecting its approach to overseeing forest practices for private lands.

Eventually local views aligned with a broader environmental movement that encompassed new conceptualizations of space and ownership and a redefinition of the use and management of natural resources (Lipschutz and Mayer 2003). The shift to a conservation ethic nationally envisioned forests as producing abundant wildlife and fish runs, pure drinking water and pristine rivers, scenic beauty and wilderness solitude, as well as wood. This conception diffused down to the regional level, influencing the spotted owl controversy on federal lands and eventually affecting rules for private forestlands. As local challengers took advantage of new opportunities within the state to participate in the rulemaking process, a change in regulatory direction benefiting environmental goals became more likely.

Theories of issue definition and framing are particularly valuable in understanding why challengers sometimes beat the odds and achieve reform. After 1970, when they began to actively participate in the dialogue over appropriate forest-management practices, challengers succeeded in framing the central forestry issue as greater environmental protection. In addition, challengers were effective in articulating the need for a more representative forestry board and for independent science-based assessments. These frames contributed to the challengers' success in reshaping the forestry board and subsequent rules for riparian areas. Alternatively, the ability of the forest industry to emphasize landslides as a normal process, to frame the landslide problem as primarily a public safety issue, and to define the unit of analysis as the individual site, enabled them to restrict the reach of any new regulations and limit their impact on industry logging.

There are no single-factor explanations for legal change. Rather, reform is the outcome of a confluence of factors—opportunities to participate in the rulemaking process that combine with the presence of challengers who successfully frame goals that are also aligned with broader shifts in values. As illustrated in this case study, it is the coming together of all these different currents that provide the strongest impetus for change.

Thus, where change was most pronounced in the shift to a citizen board of forestry and in the altered rules for riparian areas, all these conditions were present. Where industry successfully framed the problems and solutions to landslides as both too complex for general rules and as an issue of public safety as opposed to environmental protection, it was successful in avoiding significant reform of logging practices. This was the case even though challengers had reasonable opportunities to participate and their objectives fit well with broader aspirations for the country's forests.

As Tables 3 and 4 demonstrate, there is an overall pattern of increased protection for environmental public goods since 1971. Yet the question remains as to whether the new protections are substantive. This depends on whether the glass is perceived as half empty or half full. The 1994 riparian rules did establish a no-logging buffer zone still in effect today. However, the passage of Senate Bill 1121 offered solutions that postponed, yet again, the question of whether logging on unstable sites would be detrimental to

aquatic habitat and other environmental processes. Final rules, issued in 2002, continue to reflect industry's framing of the landslides problem as one of reducing risk to populations, structures and paved roads. Moreover, in 2003, the BOF adopted a rule that specified that the state forester was no longer required to review and approve timber sales on slide-prone slopes on private lands (Milstein 2003).²²

In conclusion, while Oregon's rules for private forest management did shift in the direction of increased protection for public goods during the 1980s and 1990s, many rules continued to reflect power relations and legacies that support industry goals. But, as this study proposes, less advantaged groups promoting the protection of public benefits and local reforms did succeed against some significant odds when a confluence of circumstances came together, specifically when their goals were aligned with broader national aspirations, when political opportunities provided a more open and deliberative process of policy making, and when they successfully framed both issues and solutions.

On a final note, the twenty-first century has given rise to stronger calls for a more democratic model of forestry, specifically seeking to reorder relations "in a manner that advances equity and promotes investment in both natural and community capital" (Baker and Kusel 2003). One normative implication of this study is that a rulemaking process that sustains movement toward a more representative model of governance would best support this goal.

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