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## Privileging the sub-sector: critical sub-sectors and sectoral relationships in forest policy-making

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### Abstract

Policy analysis has usually been organized around the concept of the policy sector, which has served as the fundamental unit for analyzing policy change. The emergence of well-defined and institutionalized issue subsectors, however, has called the utility of a purely sectoral analysis of policy dynamics into question. Utilizing evidence from a case study of forest policy development in British Columbia, Canada, in the 1990s, this article suggests that understanding policy change in complex sectors such as forestry requires a more nuanced conceptualization and analysis of sector–subsectoral relationships than exists in the present literature. The article develops the notion of critical subsectors, capable of blocking or enabling overall levels and directions of sectoral policy change, as an essential tool required to understand policy dynamics. © 2001 Elsevier Science B.V. All rights reserved.

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### 1. Introduction: sectors and sub-sectors in contemporary policy analysis

At first glance, it may seem intuitively obvious that public policy is divisible into a finite number

of more or less clearly defined ‘fields’ or ‘sectors’. After all, governments are conventionally organized around policy ‘areas’ like economic policy or foreign policy. If they do nothing else, these institutional arrangements impose a certain order and coherence which, however arbitrary, has to be respected by those seeking to understand or influence policy deliberations (Bickers and Stein 1994; Smith et al., 1993; DiMaggio, 1988). Nonetheless, contemporary developments in both public policy studies and policy making have

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tended to call these basic units of analysis into doubt as the time-honored divisions of responsibilities that governed the structure of cabinets and departments have given way to more complex arrangements in which overlapping responsibilities and blurred lines of authority are commonplace (Kernaghan, 1993; Freeman, 1997).

To date, the analytical issue of blurred boundaries and overlapping responsibilities between policy sectors has usually been handled by identifying broad policy sectors in the traditional manner as places where an empirically observable set of actors defines a general set of rules and norms for commonly accepted characterizations of policy-relevant issues or concerns (Knoke and Laumann, 1982; Brandes, 1999; Bressers et al., 1994; Wasserman, 1994). However, in order to deal with the enhanced institutional and organizational complexity of contemporary policy-making, this sector is immediately divided into a number of subsectoral or issue niches in which more specialized but clearly related policy making takes place (Hosseus and Pal, 1997). Hence a field or sector such as ‘forest policy’ is divisible into producer subsectors, geographical subsectors, and even subsectors organized around enduring issues. The structure and membership of subsectoral policy networks may substantially overlap with, or be quite distinct from, each other.

Subsectoral analysis is now an indispensable tool for modelling the complexity of modern policy-making (Daugbjerg, 1998). However, a focus on the subsector level raises difficult questions for existing models of policy outcomes and change which are almost invariably focussed on the sectoral level (Baumgartner and Jones, 1994; Howlett and Ramesh, 1998; Sabatier, 1993). Foremost among these are ‘at what level does change originate?’ and ‘what is the relationship between sectoral and sub-sectoral change processes?’ One approach to answering these questions has been simply to assert that sub-sectoral activities are ultimately determined by sectoral ones, as the activities of the whole determine its parts. However, it has also been suggested that the fundamental interrelationship between whole and part should be reversed, with sub-sectoral activities determining those of the sector, so that the ac-

tions of the parts aggregately determine those of the whole.

In this article we examine both propositions based on recent case study evidence of forest policy change in the province of British Columbia, Canada. Finding both propositions poorly supported by the available evidence, we develop an alternative model of the relationship existing between sectors and subsectors, and policy change. To anticipate our findings, the relationship found to exist between sectors and subsectors in the empirical case study is more complex than either of the two earlier positions allows. We argue that sectors are more than just the sum of their parts, not only because of the synergistic effects of subsectoral overlaps and spillovers, but also because subsectors grow out of sectors as part of the development of institutional complexity. As a result, subsectors are never completely autonomous of sectoral influences which set out basic rules and norms affecting their behavior. However, we argue that while the nature of sectoral and subsectoral linkages are important, in many cases the extent and kind of inter-subsectoral policy linkages are the determining factor affecting the rate and type of change present in the overall sector. We describe these linkages in the British Columbia case and show how certain ‘critical’ sub-sectors can exercise significant influence on sectoral dynamics; thereby holding the analytical key to unlock this policy puzzle and further the understanding of the dynamics of forest policy development.

### *1.1. Sectoral and sub-sectoral relations: the dialectics of the existing literature*

A short, sharp exchange setting out the two diametrically opposed views of the nature of sectoral and sub-sectoral relationships occurred in the pages of the journal *Public Administration* in 1995. On one side, Grant Jordan, William Maloney and Andrew McLaughlin (Jordan et al., 1994; Maloney et al., 1994) took issue with an earlier characterization by Martin Smith (1992) of the relationship between the British agricultural sector and its subsectors as that between a primary policy community that ‘sets the rules of the

game' and various secondary policy communities that '(act) under license from the primary community.' Against Smith's claim, Jordan, Maloney and McLaughlin pointed to the increasing fragmentation of the agricultural policy sector. They noted in particular the way in which the once legendary ability to set policy goals exercised by the National Farmers Union (NFU) had been undermined by the creation of 'policy niches' in which specialized producer interests predominated and by the intrusion of new interests such as food retailers and consumers into policy deliberations. Given these developments, they argued that subsectors now operated with increasing autonomy from sectors and independently determined the overall rate and content of policy change.

Michael Cavanagh, David Marsh and Smith (Cavanagh et al., 1995) responded by attempting to specify the mechanism by which sectoral control over sub-sector activities is retained. They argued that, while new interests had undoubtedly appeared in British agriculture, the response of the sectoral policy community had been to deny access to any groups that failed to play by the existing rules. On their view, agricultural policy had changed but as little as possible, accommodating only selected new subsectoral interests which were compatible or congruent with the existing policy regime, thus preserving the integrity and hegemony of the traditional sectoral policy community. On this basis, Cavanagh et al. argued that an emphasis on the subsectoral level would 'produce a distorted picture of the constraints that exist in the policy process' by failing to account for the structural power of sectoral policy networks over their subsectors. Analytically, they argued, an approach which emphasized the effects of changes in sub-sectoral relations and activities upon policy sectors would fail to explain why, overall, policy stability was retained in this sector.<sup>1</sup>

### *1.2. Sectoral and sub-sectoral relations: conceptual clarifications and hypotheses*

This debate raises several issues worthy of further discussion and, more important still, suggests

a way forward for research into this subject. First, it should be noted that subsequent empirical studies of actual sectoral and sub-sectoral relations in Europe found both sectors in which the prevalence of policy communities at the sectoral level dominated subsectoral dynamics, and others in which the complete disaggregation of sectors into independent subsectors precluded significant sector-level constraints on policy development. Thus, in his work on British and Norwegian approaches to health and safety issues on North Sea oil rigs, for example, Cavanagh (1998) argued that policies in the health and safety subsector were clearly 'shaped' by decisions about production and depletion taken at the sectoral level. These decisions affected network membership, giving an important role to oil companies in the British case, where rapid exploration and exploitation was the order of the day — and outcomes. In the Norwegian case, where macroeconomic pressure for rapid exploitation was not so severe, more inclusionary networks were created and safety issues found a more prominent place on the sectoral policy agenda.

Cavanagh concluded that his comparative case study refuted the claim that 'little or no sectoral activity is viable' because modern policy making is so disaggregated, 'privileging' the sub-sector in terms of explanatory priority. However, other commentators noted that while Cavanagh succeeded in identifying tight policy communities at the sectoral level, case studies of other sectors did not find the same relationship to exist between network structure and policy outcomes. These mixed findings led observers like Marsh (1998) to

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<sup>1</sup>In their rejoinder, Jordan and Maloney usefully narrowed the point of disagreement to Smith's original claim that 'the policy community concept is likely to be more prevalent at the sectoral level'. Jordan and Maloney hypothesized that the close and stable relationships between policy actors based on shared interests and values that characterize policy communities are more likely to develop in the policy niches that characterize the subsectoral level. The existence of communities at the subsectoral level, in their view, explained why agricultural policy has become more complex and competitive and less constrained by powerful producer interests than in the past. The empirical evidence for this proposition, however, is weak (see Jordan and Maloney, 1995).

reject the view that the nature of sectoral and subsectoral relations can be determined a priori, and to conclude that ‘it is an empirical question whether there are networks at both levels and, if so, what are the relationships between the networks at the two levels’.

On the basis of the results of a case study of sectoral–subsectoral relations in the British Columbia (BC) forest sector, we argue that there are in fact a great variety of ways in which sectors may unpack into subsectors, and a great range of possible patterns of inter-subsectoral and intra-sectoral dynamics. We suggest that a spectrum of sectoral–subsectoral relations actually exists, with previous work having uncovered only the two ends of the spectrum. At one end, the sector dominates the subsector, while at the other the sector dissolves into multiple loosely linked sub-sectors.

Our findings suggest that much more consideration needs to be given to the possibilities in between. We suggest that many sectors will involve considerable overlap and interaction among subsectors and between sectors and subsectors. We document a case where stable policy outcomes at the sectoral level are maintained not by the existence of a tight sectoral community but because of the role played by specific or ‘critical’ sub-sectors which structure relations between subsectors in fairly predictable ways, limiting options and constraining sectoral activities.

## **2. The British Columbia forest policy case: sectoral and subsectoral dynamics<sup>2</sup>**

The British Columbia forest sector in the 1990s provides a good test case for evaluating the impact of sectoral and subsectoral forces and configurations on policy outcomes. A sector-level analysis carried out in the early 1990s would certainly have raised expectations that substantial policy change deviating from historical sectoral goals and objectives would occur across the sector

in the immediate short term. Most importantly, during the two decades leading up to 1991, a series of developments had combined to create a powerful environmental challenge to the entrenched government–industry sectoral policy subsystem which had dominated policy-making for several decades (Howlett and Rayner, 1995a,b, 1997). However, despite this portent of change, the overall policy sector remained stable throughout this period.

### *2.1. Sectoral dynamics in British Columbia forest policy*

While differing on many specific issues, a network composed of the forest industry, forest unions, and the Ministry of Forests (MOF) had long existed in British Columbia. The network coalesced around a common interest in pursuing and defending the ‘liquidation–conversion project’ found at the heart of post-World War II forest policies (Wilson, 1987, 1998). On the liquidation–conversion model, the province’s mature and over-mature forests were to be cut according to an orderly but accelerated schedule, converting them as quickly as possible to managed stands properly balanced between young and mature age classes. Maximizing a continuous and dependable throughput of fiber in this way was intended to sustain the health of the industry while simultaneously promoting the provincial government’s revenue, employment and regional development objectives. As a result, forest policy actors were organized in a classic clientelist network in which the health of the industry became a policy goal in its own right (Atkinson and Coleman, 1989).

During the 1980s, a combination of internal difficulties with the liquidation–conversion project itself, coupled with the maturation of the provincial environmental movement, brought new interests and ideas into the larger forest policy community and dramatically increased the size of the attentive public (Kamieniecki, 2000; Rajala, 1998; Tollefson, 1998). Throughout the decade, the environmental movement had exploited the difficulties encountered by the liquidation–conversion project as forest operations moved out of

<sup>2</sup>The material in this section is drawn from Cashore et al. (2001).

easily accessible high value stands and into more difficult terrain. Highlighting regeneration failures, waste, habitat destruction and other examples of poor management, environmentalists worked to undermine the legitimacy of the MOF and its license holders, whose long-term tenures in public forests could theoretically be cancelled for inadequate performance. As Lertzman et al. (1996) have argued, traditional actors blundered into a 'legitimation trap' largely of their own making. They were, that is, found wanting even when measured against the very goals of sustainable fiber management that they had set for themselves.

The growing prominence of environmental groups helped transform the policy agenda in the provincial forest policy sector. Drawing on ideas percolating out of the Brundtland Commission, the American Pacific Northwest old growth controversies, and various other external sources, the environmental coalition played a lead role in introducing British Columbians to the arguments surrounding concepts such as sustainability, biodiversity, and ecosystem management (Cashore, 1999). The effect was to create or revitalize various issue-oriented subsectors, notably those organized around land-use and forest practices issues. Meanwhile, First Nations peoples' assertion of their claims to traditional territories in the province added another set of important new ideas, forcing actors throughout the policy community to grapple with the implications of throwing out fundamental assumptions about land ownership that had underpinned the entire edifice of provincial resource policy (Notzke, 1994; Tennant, 1990).

While environmentalists sought to capitalize on heightened doubts about traditional MOF-company management, other critics of the status quo began to advocate alternative management systems which they linked to changes in the structure of regulatory incentives. Some argued for consensus-seeking decision-making processes and regulation by negotiation. Others, impressed by developments south of the border, contended that forest management decisions should be more tightly constrained by American-style legislation (Hoberg, 1993). Still, others focussed on the

tenure system itself, proposing a shift away from large, integrated companies with extensive though dispersed tenures serving a few major processing facilities towards decentralized, community forest management models with local processing (Burda et al., 1997). Again, the effect was to disaggregate policy-making, introducing new arguments into existing specialized subsectors, such as timber supply and tenure, and creating new subsectors, such as employment.

Thus, by 1990 the environmental movement had consolidated ties to domestic allies outside the traditional policy networks, including community forest advocates, First Nations peoples, and experts based in biology and related disciplines. More important, given the forest industry's dependence on export markets, local environmentalists' expanding links to a worldwide network of environmental organizations represented a more ominous sign for companies. It was clear that events in the years ahead would be shaped by an increasingly internationalized set of forces including potential boycotts and marketing campaigns aimed at reducing the use of BC old growth timber (Bernstein and Cashore, 2000).

Finally, as British Columbia headed into the 1990s, forest products markets began to shift in directions conducive to policy change. Downward pressures on timber supply in the US Pacific Northwest escalated prices for BC products, creating a major period of boom for the industry. Given past evidence supporting the hypothesis that the industry's political effectiveness declines during periods of prosperity, there was thus some reason to believe that the industry was vulnerable to demands for more environmentally-sensitive practices. In addition, the problems of the 1980s had left the industry in considerable disarray concerning its political stance, with some powerful company actors coming to believe that major concessions would have to be made to assuage the growing assortment of critics. In general, public opinion shifted in a pro-environment direction in the late 1980s, creating an opening for new initiatives. Environmentalists' success in galvanizing international support was especially important. These efforts created a powerful new dynamic, convincing an increasing number of indus-

try leaders that continued hardline resistance would put access to key markets at risk (Cashore and Vertinsky, 2000).

Certainly, as a provincial election approached in 1991, no political party intent on capturing power could have ignored the arguments for reform that had accumulated during the previous decade. In the years prior to its 1991 election victory, the social democratic New Democratic Party (NDP) had performed a delicate balancing act, trying to hold two components of their support base who agreed on little else than that all was not right in the woods — the environmentally conscious urban middle class component and an increasingly anxious rural forest labor component. Not surprisingly, its platform heading into the campaign contained a giant shopping list of forest policy reform proposals, not all of which were, on closer inspection, obviously compatible with each other. These included pledges to double parkland, end land use conflict, settle land claims, increase forest employment, introduce legislation to regulate forest practices, encourage value-added manufacturing, and establish a royal commission review of the tenure system and other aspects of policy. The NDPs convincing victory at the polls, which included the destruction of the Social Credit Party that had governed the province for all but three of the previous 40 years and its replacement by a largely untested Liberal opposition, completed the picture with turnover of personnel not merely at the ministerial level but also in the Premier's office and the higher ranks of the public service (Wilson, 1997).

## 2.2. *Subsectoral dynamics in the BC forest sector*

However, while this kind of top-down sectoral-level analysis suggests the sector was ripe for change, with the critical policy levers in new, reforming, hands, a subsectoral perspective raises several important additional factors forcing the modification of this view. Forest policy making in the province had always been based on the need to regulate several different aspects of industrial activity and the different impacts of forest operations — on timber-dependent communities, on fishers, on recreationists, on 'the environment' —

each created a variety of specific issue areas. While the activities of the older industrial subsectors had all been influenced by their emergence in the period of the liquidation-conversion project, the result of subsequent developments was to increase the level of fragmentation of the sector.

Policy-making increasingly devolved into a variety of increasingly specialized subsectors dealing with specific aspects and implications of the forestry situation and, though the membership in the subsectors very often overlapped, the balance of interests in each subsector was often significantly different.

A different pattern of sub-sectoral politics and policy-making soon emerged. First, many of the leaders of forest companies and the major forest industry associations opposed or had serious reservations about much of the new government's agenda. In spite of their political vulnerability in good economic times, the companies' control over numerous factors affecting the overall economic health of the industry (and, given the significance of the industry to the provincial economy, thus their ability to influence the new government's re-election prospects) meant that their arguments would continue to receive a careful hearing in the provincial capital, Victoria. In addition, company leaders' positions on many policy questions were echoed by the Industrial Wood and Allied Workers of Canada (until the mid-1990s the International Woodworkers of America) (IWA), which has long been one of the NDPs strongest backers. While the IWAs central focus was on wage issues and tended to center on the employment subsector, the union's leadership made it clear that it expected to play a central role in shaping policy across the sector as a whole. In many subsectors, this meant that labor joined companies in trying to block or slow any changes threatening the old understanding that the health of the sector could be measured by the health of the industry (Wilson, 1998).

Second, the obvious strengths of the pro-change forces at the sectoral level were offset by some concealed weaknesses at the subsectoral level. For example, in the wake of the Brundtland report, it seemed to many that a vision of sustain-

able development could provide a unifying idea of sufficient intellectual rigor and emotional force to replace discredited notions that had long dominated the forest policy sector; like maximizing resource production over a limited time horizon. However, different groups had very different ideas about what ‘sustainability’ meant and how to operationalize it in specific issue areas. These ran the gamut from groups interested in experimenting with alternative, more environmentally-friendly approaches to logging, to groups much more insistent on the importance of pressing beyond protected areas issues to achieve a major reduction of extractive activity across the forest land base even if that meant shutting down what they regarded as a ‘sunset industry’. Moreover, as the sustainability idea splintered into competing subsectoral visions, no single idea was left that would serve to unify the fragmented assortment of advocates for change. An increasingly nervous government came to doubt that it would be possible to explain and win support for new initiatives from the broader public in the face of the industry’s and unions’ very focussed message that change meant loss of employment and government revenue. Although there was no shortage of interesting ideas for change in circulation, most were directed at a specific set of subsectoral problems and each addressed only a small portion of the problem set perceived to be afflicting the sector as a whole (Howlett and Rayner, 1995a).

At the beginning of the 1990s, then, some significant change-inhibitors were in play at the subsectoral level alongside the very obvious sectoral-level change promoters. And, most significantly, these change dynamics varied across key issue subsectors. While the pro-change forces had by 1991 gone a considerable way towards undermining the legitimacy of traditional sectoral actors, the technical nature of many facets of the policy domain meant that policy making authority — particularly authority over policy formulation and implementation — remained in the hands of the same community of experts who, by and large, remained quite supportive of the status quo. While critical ‘outsiders’ had increased their capacity for effective oversight of many dimensions of forest policy, significant policy change would require

opening up complex policy development and implementation processes at the subsectoral level, most of which were still dominated by entrenched professional administrators and foresters with lengthy careers in government and industry.

Due to these factors, any attempt to sort out just what combination of forces shaped policy outcomes in British Columbia forestry in the 1990s requires careful subsector-by-subsector analysis of policy dynamics, along with full consideration of the way developments in one subsector affected those in the rest. In developing such an analysis, we turn now to a brief synopsis of developments in the seven major interlocking issue areas which comprise the sector: land use, forest practices, timber supply, tenure, employment, pricing, and First Nations.

#### *2.2.1. Land use*

The land use subsector produced the clearest evidence of change. This subsector produced a significant response to the environmental coalitions’ protected areas’ agenda, especially once the government had embraced a 12% target for protected areas and devoted considerable resources, both material and symbolic, to ensuring that the target was reached (Sanjayan and Soule, 1997). In this subsector, however, the outer limits of the sectoral environmental coalition’s influence as well as the continued strengths of the development coalition are brought into sharp relief. There was very limited progress on the ambitious attempt to drive protected area selection by using criteria of ecosystem representation drawn from conservation biology. A ‘Special Management Zone’ designation used for highly contested areas that could not be included in the park system became a mechanism for keeping up cut levels rather than experimenting with alternative silviculture or adaptive management. By adopting the Special Management Zone category the government did move some distance towards endorsing arguments for multiple zone categories advanced by those who contend that the land use regulation components of biodiversity conservation policy must involve not merely protected area designation but a broader concern for what happens over the rest of the landscape. In practice, however,

parallel arguments for priority use zoning which stressed the possibility of raising cut levels by focussing timber management activities in areas of high natural productivity became more prominent (Rayner, 1998).

#### 2.2.2. *Forest practices*

Important shifts towards better environmental protection also took place in the forest practices subsector. Substantial changes occurred in goals and objectives, formalization of instruments, and changes to instrument settings, notably in the creation of a Forest Practices Code with a statutory basis and substantial penalties for non-compliance. (Stanbury and Vertinsky, 1998). Here, though, the magnitude of change was limited by the government's decision to cap the timber supply impacts of the Forest Practices Code at 6%. This cap, which spawned various subsidiary 'numbers games,' is a very appropriate indicator of the limited degree of sectorally induced change in this subsector. There has also been a continuous incremental retreat which occurred from the environmentalists' original conception of the Code as embodying scientifically-validated prescriptive standards to an industry-promoted conception of the Code as a planning tool mandating various performance standards (Hoberg, in press).

#### 2.2.3. *First Nations*

In Canada the Aboriginal policy sector has seen very significant judiciary-forced changes in provincial and federal policies in the last 30 years. These changes have spilled over to affect forest tenure and other aspects of provincial forest policy, and have resulted in the creation of an aboriginal subsector within provincial forest policy (Sanders, 1990; Hoberg and Morawaski, 1997). The changes involved new goals and objectives related to the achievement of aboriginal title (Tennant, 1996; Cassidy, 1992). As well, the NDP government introduced extremely important new instruments, investing substantial government resources (and a large allocation of its political capital) in a process aimed at concluding 'modern treaties' with First Nations, and pioneering the 'Interim Measures Agreement' as a device for protecting First Nations' interests while negotia-

tions proceed (McKee, 1997). While the full implications of recent court decisions supporting the continued existence of unextinguished aboriginal title in the province remain uncertain, it seems likely that outcomes here will continue to include both the transfer of some lands to Native control and the adoption of co-management provisions for larger areas (Tennant, 1999; Lee and Symington, 1997). Both responses will obviously have major impacts on tenure and other dimensions of forest policy, while altering the lineup of policy actors active in the sector. In this case the subsector exhibited very independent dynamics from those present in the sector as a whole, emphasizing the ability of sectors and subsectors to change at different rates and tempos.

#### 2.2.4. *Timber supply*

Analysis of developments within the timber supply subsector reveal a pattern of some limited change to policy settings, but no change in the basic instrument of timber supply: yield regulation. The province's Chief Forester is responsible for setting an Allowable Annual Cut (AAC) for each licensee and revising the AAC every 5 years based on projections of future forest growth and depletion, a procedure that dates back more than 50 years (Dellert, 1998). Yield regulation is the main instrument of the liquidation-conversion project, allowing, in theory, an accelerated cut of over-mature timber over several decades before a planned 'falldown' to a biologically and commercially sustainable balance of growth and depletion (Marchak et al., 1999). In this subsector, while the mix of problem definitions and goals guiding policy became even more complex and contradictory, no undisputed new goals emerged. Most notably, despite concerted pressures for fundamental change from environmentalists, alternative conceptions of sustainability failed to break through in this subsector. The traditional goal of 'sustainable fiber production' under a variety of more or less onerous environmental constraints remains in place. In fact, a Timber Supply Review that was launched in response to widely expressed concerns over excessive rates of cut — excessive even on the dominant definition of sustainability — failed to result in significant province-wide



AAC reductions (British Columbia Ministry of Forests undated).

#### 2.2.5. *Employment*

In the employment subsector, significant state-directed change was attempted in the forest labor market. Using a newly created Forest Renewal of British Columbia (FRBC) fund and a Jobs and Timber Accord negotiated with industry, the government substantially increased the state's role in subsidizing forest industry jobs (British Columbia, 1996). However, the lasting impact of these initiatives remains uncertain. FRBC's future is tenuous as the Liberal opposition widely expected to win the 2001 provincial election has vowed to dissolve it, while the life of the Jobs and Timber Accord appears to be over. As is discussed below, developments in the employment subsector are very revealing of sectoral and sub-sectoral regime dynamics as initiatives in this sector appear to have been blocked by developments in others such as cuts and tenure, which undermined the effectiveness of sectoral-level policy initiatives.

#### 2.2.6. *Tenure*

The tenure subsector also witnessed very modest change in this period. The subsector provides a classic example of an 'arrested' policy cycle in which numerous proposals for change are suggested but none ever adopted, let alone implemented (Haley, 1985; Drushka, 1993; M'Gonigle and Parfitt, 1994; Hammond, 1989). Goals and instruments have remained largely the same for over a century, while policy objectives and settings in the subsector have changed only twice, the last time in the 1940s when large-scale forest management zones were created (British Columbia, 1976, 1991; Wilson, 1987, 1998). With these exceptions, all other tenure policy decisions have tended to be negative ones — reinforcing the status quo. Proposals for change have appeared on the larger policy agenda and options have even been formulated — for example a very early first-term study was commissioned to deal with whether and how to compensate existing tenure holders if tenures were revised — but, at the decision-making stage of the cycle, policy makers consistently chose to maintain the subsectoral status quo (Wilson, 1998).

#### 2.2.7. *Pricing*

Similarly, in the pricing subsector, decisions were made in the 1990s to change settings in order to maintain equilibrium among the underlying objectives championed by industry, labor and governmental interests. The closed nature of the subsector and the inability of the environmental coalition to formulate a cohesive alternative to existing stumpage systems, meant that new ideas such as environmental accounting procedures or using market-driven instruments were rejected at the decision-making stage of the policy cycle. Spillovers did occur from other sectors, especially from the forest practices subsector where increased operational costs had a downward effect on stumpage rate settings. But such spillovers did not alter subsector membership or the long-standing goals, objectives and instruments found in the subsector.<sup>3</sup>

### 3. Discussion: the critical subsector model

In terms of the Cavanagh–Jordan debate, the British Columbia forest policy case at first appears to present a paradox. That is, the early 1990s saw a sectoral policy community on the defensive, under pressure from a number of different directions at once. On Cavanagh's model

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<sup>3</sup>If changes had occurred in the tenure subsector altering existing contractual harvesting arrangements, we might very well have witnessed changes to timber pricing. However the durability of the tenure subsector meant that its influence on the timber pricing subsector was to maintain longstanding pricing policy. Likewise the durability of the timber supply subsector and the sustained yield commodity production approach that came with it eliminated the ability of pricing to address broader forest sustainability issues. The effects of timber supply and tenure durability on the timber pricing subsector is illustrated by the case of the US–Canada softwood lumber trade dispute. External pressure from BC's largest market was joined to pressure from domestic environmental groups to alter subsectoral objectives. In spite of the increased salience of pricing issues as a result of these pressures, the durability of the timber supply and tenure subsectoral goals meant that pricing policies did not change (see Scarfe, 1997; British Columbia, 1994; Cashore, 1997; Bernstein and Cashore, in press).

we should expect significant sectoral policy change. Similarly, in Jordan's model, the presence of interlinked but distinctly disaggregated subsectors, some of which have experienced substantial change, would also lead to the expectation of substantial overall sectoral change. Yet such overall sectoral change did not occur. Rather, while some individual subsectors did undergo substantial change, others did not. More significantly, the overall direction of policy in the sector was dominated by resistance to change.

Explaining the complex pattern of stability and change found in the BC forest sector underlines the need for a different and more nuanced model of sectoral–subsectoral relations and dynamics than has been put forward to date. Specifically, it highlights the need to consider carefully the way outcomes in some, but not all, subsectors 'spillover' to influence other subsectoral outcomes and, in so doing, affect the dynamics of the entire policy sector.

The study of the 1990–2000 BC forestry case provides evidence of a variety of spillover effects influencing the overall nature of sectoral policy change (Dery, 1999; Moravcsik, 1993). These range from 'passive' spillovers, as in the impossibility of altering timber pricing policy goals unless the existing tenure system is first radically overhauled, to more 'active' spillover effects. Active spillovers occurred in the timber supply subsector when those responsible for important timber supply decisions not only resisted demands for change from the forest practices and land use subsectors, but actually turned the tables on their critics, exerting a constraining influence on the extent and type of change taking place in those and other subsectors. Events in different subsectors then, can both block or facilitate outcomes in others.

This suggests that there is another option to simply trying to assess whether sectoral networks will tend to constrain outcomes in the subsectors or vice versa. That is, while some policy areas may see key decisions taken at the sectoral level, in others there may be sufficient linkages between specific subsectors that decisions taken in one or a few can constrain or facilitate outcomes in the other subsectors and affect the overall nature of

the entire sector. We refer to key subsectors that can drive sectoral and subsectoral outcomes as '*critical subsectors*'. In this view, the overall direction in policy outcomes is strategic, not because of a comprehensive overview exercised at the sectoral level, but rather because of the exercise of restraining or enabling power by a dominant interest in a critical subsector whose influence then spills-over to other non-critical subsectors via various kinds of intra-sectoral linkages.

In this model multiple changes can occur in non-critical subsectors without changing fundamental sectoral or subsectoral dynamics. Such changes will tend to be incremental in nature as policy development in non-critical subsectors will be constrained to those which do not conflict with the policy directions set in the critical subsector(s). In the BC case, the move of the overarching government–industry policy nexus from overall sectoral direction to the occupancy of a blocking position in critical subsectors such as tenure, cuts and pricing marks the latest stage in what Wilson has identified as the process of 'containment': the attempt by the interests organized around the liquidation–conversion project to continue to extract the maximum economic benefit for themselves by doggedly delaying policies that would offer more environmental protection and a broader range of non-timber commodity values, leading to a situation of reduced fiber provisions for industrial purposes (Wilson, 1998).

More radical policy change in the sector can occur only through either of two key processes. First, there can be cases where radical change occurs in the critical subsector itself. We hypothesize that such policy change is initiated by changes in network membership and by the adoption of new policy goals, with the result that new policy possibilities open up in previously constrained non-critical subsectors. Second, there can also be instances of the creation of new critical subsectors, which would also result in a complete reconfiguration of a sector. We hypothesize that this kind of change would come about as the result of changes in background conditions that increase the salience of previously minor issue areas. In the BC case, it is conceivable that the aboriginal subsector could assume this role in future.

Our analysis of the BC forest policy sector supports three claims about the interrelationship of sectors and sub-sectors in affecting policy change in this sector and in many others. The first claim is that forest policy debates have increasingly clustered around a small number of key issues, nodal points which attract distinct and recognizable policy networks and constitute observable policy subsectors. As the case study shows, membership in the different subsectoral networks overlap but remain distinct, especially in terms of the relative importance of the non-governmental actors, such as the forest industry, unions, environmentalists, and First Nations. Over the years distinctive subsectoral policy goals have emerged, together with distinctive policy instruments whose choice often reflects the balance of forces within subsectors and whose settings are periodically adjusted in response to changes inside and outside it. Thus analysis of events and activities in a sector must, methodologically speaking, include a substantive analysis of subsectoral dynamics.

Second, although the forest sector is disaggregated, there is a sectoral configuration which significantly impacts policy outcomes. That is, BC forest policy is not so disaggregated as to fail to constitute a forest policy sector at all. Subsectors are linked together as elements in a state-regulated production process designed to exploit a resource base for profit, employment and economic development purposes. The very long time period, now more than 50 years, in which the goal of liquidating the province's 'overmature' natural forests and replacing them with faster-growing managed ones has driven other elements of forest policy, has created an overall policy framework and set of policy-relevant institutions which continue to hold the sector together. Hence, again, methodologically-speaking, while the analysis of developments in the sector requires a subsectoral orientation, this must be accompanied by an analysis of events and developments existing and occurring at the sectoral level.

The third claim, is that the concept of a 'critical subsector' helps to explain how overall sectoral policy stability can result in a case such as forestry,

even when the sector and many sub-sectors are in turmoil. In this model, stability results because of the key structural roles played by specialized, or nodal, critical subsectors which occupy a central location allowing them to constrain policy development in other subsectors and hence constrain the overall direction of sectoral developments. Critical subsectors play an important role in organizing both sectoral and subsectoral activities and discourse. In the case study of British Columbia forest policy put forward, this role was played by the tenure and timber supply subsectors which most directly impact the industrial health and profitability of the industry and hence can exercise a stabilizing or 'blocking' effect on the entire sector, even when other subsectors such as land management and forest practices may be undergoing rapid change. While sectoral actors retain the ability to inject new ideas and values (such as ecological sustainability) into subsectors, just what goals and objectives may be added to specific sub-sectors is affected by the specific configuration and linkages existing between subsectors and the presence or absence of critical subsectors.

Combined, these claims suggest that the nature of sectoral and sub-sectoral linkages and effects is more complex than suggested by earlier theorists. Our analysis points towards development of a new model which overcomes the current, unsupportable, conceptual deadlock between the 'top-down' sectoral perspective and the 'bottom-up' subsectoral one. It suggests that the relationship is neither one-way deterministic, nor even a simple reciprocal or dialectical one, but is rather a nuanced, structural one in which *some* subsectors influence sectors and sub-sectors more than others. It suggests that the appropriate analytical strategy is not to privilege *all* subsectors, as Jordan et al. suggested, but only some.

This analysis in turn suggests several fruitful routes for future research on the subject. First, more information is required about what differentiates a critical sub-sector from a non-critical one. While it may be fairly simple, empirically, to establish the relationship between subsectors, the question of what defines a critical subsector is crucial to establishing which subsectors may emerge as critical during periods of policy

change.<sup>4</sup> Second, it would be illuminating to establish not only how a critical subsector emerges during periods of instability, but how such status is retained during periods of policy stability. Does a stable sectoral network represent a successful takeover bid by a (critical) subsectoral one? Third, the conditions under which sectors can continue to affect subsectors require greater examination. The British Columbia forestry case showed that the annual allowable cut (AAC) and tenure subsectoral were critical and exercised a constraining influence on other subsectors and, hence, on the sector as a whole. However, even if it would be costly, it is not entirely beyond the scope of key sectoral actors, especially governments, to alter the nature of these, or any other subsector through legislation or regulation (Egeberg, 1999). The reasons why network restructuring is undertaken or not and whether the decision depends on legal or macro-institutional features of political systems, such as the presence of British Parliamentary democratic institutions and practices or of a federal systems of government in the BC case, deserve analysis (Daguerre, 2000). Fourth, this analysis also suggests that there may be useful analogies which can be drawn from other works which have dealt with multi-level systems and their operation. As is the case with works which deal with relations between states and international organizations and actors (Evans et al., 1993; Keohane and Milner, 1996; Milner, 1997; Coleman and Perl, 1999), or those which deal with relations within states between levels of government (Grande, 1996; Hooghe, 1996; Scharpf, 1994), policy outcomes in the BC forest sector are

explained not simply by focussing on the relations existing between different levels, but also by examining the capacity of different sub-systemic actors to influence others (Putnam, 1988; Scharpf, 1997; Tsebelis, 1990). Investigating these effects on a sectoral–subsectoral level promises to add a great deal to the understanding of the fundamental nature of these significant policy relationships.

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<sup>4</sup>That the nature of criticality varies even within sectors is borne out by an examination of the situation in the US Pacific Northwest where the definition and evolution of subsectors is quite similar to BC, but the nature of their institutionalization is quite different, leading to quite different 'critical' subsectors. In the PNW federal government statutory regimes institutionalized biodiversity and species habitat requirements that made the sector unable to alter the rules of the game of the endangered species subsector, which made for quite different outcomes than in BC. Unlike BC, which lacks such legislation, significant change in the PNW occurred in the AAC, forest practices and land use subsectors due to the influence exercised in the species subsector (see Cashore, 1999).

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