Communities on the edge: An economic geography of resource-dependent communi...

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COMMUNITIES ON THE EDGE: AN ECONOMIC GEOGRAPHY OF RESOURCE-DEPENDENT COMMUNITIES IN CANADA

Our impressions of Canadian resource-dependent communities are often still influenced by the classic works of Innis, Robinson, Lucas, Siemens, and others. Although this research has proven to be valuable, it has also established several generalizations regarding these settings, including the perceptions that community labour forces and economic structures are relatively homogenous, that nonresource sectors play an insignificant role in the communities, and that these communities are found primarily in isolated northern regions. These generalizations are now beginning to be questioned, given the rapid economic and social changes taking place in these communities and the recent theoretical and empirical contributions of geographers and other social scientists. This paper summarizes this classic research, then challenges these generalizations by discussing recent applications of the concepts of economic restructuring and labourmarket segmentation theory to the context of resourcedependent communities. To further illustrate these characteristics, the paper then presents an empirical analysis of 220 Canadian resource-dependent communities across six resource sectors, focusing specifically on their labour-market characteristics and the relationship between resource dependence and spatial isolation.

Nos impressions des communautés mono-industrielles canadiennes spécialisées dans la production des ressour-

ces sont souvent encore influencées, entre autres, par les études classiques de Innis, Robinson, Lucas, et Siemens. Bien que cette recherche ait prouvé sa valeur, elle a aussi servi à établir plusieurs généralisations concernant ces milieux, incluant les notions que la main d'oeuvre et les structures économiques de ces communautés sont relativement homogènes, que les secteurs non-reliés à l'exploration des ressources n'y jouent qu'un rôle peu significatif, et que ces communautés se retrouvent surtout dans les régions isolées du nord. Ces généralisations sont maintenant soumises à une remise en question, compte tenu des changements économiques et sociaux rapides dont ces communautés font l'objet et des récentes contributions théoriques et empiriques de géographes et d'autres chercheurs en sciences sociales. Cet article résume cette recherche classique et conteste ces généralisations en commentant les récentes applications du concept de restructuration économique et de la théorie de la segmentation du marché d'emploi associés au contexte des communautés dépendentes de l'extraction de ressources. Afin d'illustrer ces caractéristiques, l'article présente une analyse empirique portant sur 220 communautés canadiennes et sur six secteurs de ressources, et se concentre plus spécifiquement sur les caractéristiques de leur marché de la main-d'oeuvre et sur les liens existant entre la condition de dépendance à une ressource et l'isolation spatiale.

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996) 17-35

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A significant body of literature exists that uses the resource-dependent community as a context for analysis. Seminal work by Innis (1930, 1933), Robinson (1962), Lucas (1971), and Siemens (1976) set the stage for more specific inquiries that have followed. These include research on economic restructuring (Bradbury 1985; Barnes, Hayter, and Grass 1990; Barnes and Hayter 1992), sociological and household consequences of rapid economic changes (Sharpe 1991; Bowles 1992), the application of the concept of sustainable development (Sadler 1990; Haigh and Gill 1991; Pierce 1992), and 'bottom-up' development (Ross and Usher 1986).

Despite the better understanding of life in resource communities that this more recent research has provided, our impressions of these settings, framed by the seminal literature, have bred generalizations and stereotypes. The resource-dependent community is often portrayed as a generic entity, with the dominance played by one employer or sector acting to homogenize economic life within these communities. Only recently have we seen strands of research that have begun to question these generalizations for particular sectors in specific settings (Bradbury 1985; Barnes, Hayter, and Grass 1990; Hayter and Barnes 1990, 1992; Barnes and Hayter 1992; Clemenson 1992; Ehrensaft and Beeman 1992; Picot and Heath 1992). Therefore, the first objective of this paper is to bring together some of the key findings in this research in order to challenge several of the accepted generalizations surrounding resource-dependent communities. The most important of these generalizations is that the labour force and economic structure of most resource-dependent communities are similar. Additional generalizations include suggestions that most Canadian resource communities are isolated, far from other industrial activity, and that employment in resource-dependent communities is male-dominated. An evaluation of these generalizations will be achieved by presenting a comprehensive description of these features of resource-dependent places using a set of Canadian communities as the object of study.

The second objective of this paper is to show that beneath this apparent homogeneity is a community distinctiveness shaped by the particular resource sector that dominates economic life, by the degree of spatial isolation of the community, and by the gender differences and degree of labour-force stability in these settings.

The following section of this paper briefly revisits some of the classic work on resource-dependent communities, commenting specifically on the generalizations noted above. It then proceeds to qualify these generalizations by introducing recent literature on resource-dependent topics. Although this work often focuses on specific resource sectors in specific regions, it forces us to re-examine some of our long-held beliefs regarding resource communities. Also, recent applications of the concepts of economic restructuring and labour-market segmentation theory within the context of the resource-dependent community may allow us to discuss these settings in some broader coherent frameworks rather than as anomalies of economic geography. Finally, using aggregate data from 1986 and 1971, the paper presents a more comprehensive description of economic life within resource-dependent communities. For convenience, this empirical inquiry begins with a broadly based description of resourcedependent communities in Canada and becomes progressively more specific, through an examination of the labour-market characteristics of these communities and the relationship between resource dependence and spatial isolation.

Resource Dependence in Canadian Communities: Seminal Contributions

Despite often existing on the edge of economic viability, Canadian communities dependent upon a single resource sector are important in many ways. Historically, they have served as nodes for the extraction of staple exports (Innis 1930, 1956) and they are an important part of a culturally distinctive Canadian landscape, captured by many noted Canadian artists and poets (Simpson-Housley and Norcliffe 1992). Demographically, 17 percent of the Canadian population still live in communities that contain fewer than 20 000 inhabitants, even if some of these communities may not be dependent upon resources (Ehrensaft and Beeman 1992). Although employment in resource sectors has declined consistently throughout the 20th century, these sectors still contribute close to 10 percent of the Canadian Gross National Product and, even more significantly, approximately 40 percent of the value of Canadian exports (Canada, Employment and Immigration Advisory Council 1987).

A discussion of economic life in resource-dependent communities invariably begins with a review of the seminal literature, researched and written between 1930 and 1976. This includes Innis's many books and articles (e.g., *The Fur Trade in Canada* (1930), *Problems of Staple Production in Canada* (1933)), Robinson's New Industrial Towns on Canada's Resource Frontier (1962), Lucas's Minetown, Milltown, Railtown: Life in Canadian Communities of Single Industry (1971), and a set of research reports written in the early 1970s by several authors at the University of Manitoba's Center for Settlement Studies, but perhaps best represented by Siemens (1970, 1976)).

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)

INNIS AND RESOURCE DEPENDENCE

As an economic historian and economic geographer, Innis has been credited with providing insights on the geography of Canada that transcend any one discipline. A recent tribute to Innis in The Canadian Geographer pointed out his contributions to our understanding of the geography of communications (Parker 1993), the historical geography of Canada (Harris 1993), local modelling (Barnes 1993), and industrial geography (Gertler 1993). It was Innis's contention that Canada has developed through the exploitation and export of a succession of staples products, including not only the primary resources but also primary manufacturing activities that are strongly linked to these resources (e.g., lumber processing, pulp and paper processing, and fish processing (Watkins 1963)). For the purposes of this paper, we will point out only those aspects of his staple theory that relate to the characteristics of resource-dependent communities.

Innis, and others who have interpreted his work, had a considerable amount to say about the ability of resourcedependent regions to diversify their economic bases. For example, he introduced the concept of 'rigidities' or 'fixities', defined as ' ... a set of enduring imperfections in the workings of markets [that] prevents the resourcebased economy from adjusting to changing international economic signals, with chronic disequilibrium and resource dependency being the result' (Gertler 1993, 361). In reference to Innis's work, Hayter and Barnes add: 'Once a region specializes in producing staples, it then finds it very difficult to reconfigure production into other types of sectors. The result is extreme susceptibility to already volatile resource prices, making the staples economy especially prone to crisis' (Hayter and Barnes 1990, 158).

This comment reinforces the perception that peripheral resource communities are both locked into a narrow set of industrial activities and also prone to booms and busts not experienced in more diversified settings. One of Innis's contributions is his understanding of the interdependence between peripheral and metropolitan economies. He suggested not only that resource-dependent regions such as the Maritimes and the Western provinces would remain peripheral to both central Canada and the rest of the world, but that the maintenance of economic efficiency and stability in the Canadian 'metropoles' necessitated continued instability and dependency in the outlying areas (Melody 1981). Hayter and Barnes (1992) use the example of the development of Vancouver in relation to the rest of resource-rich British Columbia to illustrate this point.

Although Innis is credited with developing a model of

economic development that is particular to the circumstances facing Canada as a whole, he was clearly aware of the importance of local context in this development process, as expressed in the role of transportation, institutions, and the physical geography of place (Innis 1933). Despite the fact that Innis makes reference neither to the contextual distinctions at the level of the community or sector of resource dependence, nor to the labour-market distinctions in resource communities, Barnes (1993) believes that one of Innis's enduring contributions to geography is his effort to promote the importance of 'local modelling' (i.e., looser models that are more restricted in their application across time and space than universal models). This quest to give greater accountability to context in the form of 'local modelling' may relate in some ways to localities research that has found its way into current economic and industrial geography (Thrift 1983; Massey 1984; Warf 1988).

ROBINSON AND RESOURCE DEPENDENCE

Robinson (1962) was one of the first geographers to undertake a comprehensive assessment of resourcedependent communities in Canada. As the title of his book suggests, he was most interested in the implications of planning new communities in isolated areas of the country.

The bulk of Canada's population (around 90%) is concentrated in a narrow band of arable land hugging the Canadian–United States border. The exploitable resources, however, whether underground, on the surface, or in the water, are mainly located north of this populated belt. The lack of settlement and consequent shortage of labor at or near the site of the natural resource to be exploited have made it necessary to create wholly new townsites in isolated areas' (Robinson 1962, 1).

Although the first chapter of Robinson's book provides the reader with an introduction to the significance of these communities in Canada, most of the remaining chapters are devoted to specific urban-planning themes (e.g., townsite administration, relations with neighbouring areas) applied to four case studies (i.e., Kitimat, BC; Elliott Lake, ON; Drayton Valley, AB; and Schefferville, QC). Robinson repeatedly emphasizes the ways in which isolation affects the economic, social, and planning activities within the communities. At a more micro level than Innis, he points out how isolation creates a 'boom or bust growth pattern' and how dependence upon a single industry makes these communities unable to avoid being company towns (Robinson 1962, 118). Not only are these communities isolated from the industrial and population

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)

ecumene to the south, but ' ... they make no contribution towards the development of, nor do they receive any flows of activity from, their surrounding environs' (Robinson 1962, 118).

SIEMENS AND RESOURCE DEPENDENCE

Siemens (1976), in his summary of literature on 'singleenterprise' communities, was also concerned with planning to improve the quality of life in these towns. He pointed out that too often we generalize among these communities.

The danger one faces in attempting to summarize material of this nature is the temptation to extrapolate from the conditions in one community the conditions in all other single-industry communities in Canada. Although it is true that many problem areas may permit a measure of generalization, substantial differences in kind and degree of problems do persist among communities (Siemens 1976, 279).

Despite this admonishment, Siemens occasionally falls into this trap himself. Although his own map (Siemens 1976, 278) generally shows a surprisingly uniform distribution of single-enterprise communities throughout Canada with the notable exception of Southern Ontario, Siemens invariably refers to all of these communities as 'northern'. As with most of the classical literature on single-industry towns, Siemens makes little reference to the gender distinctions in the labour force of these communities. The degree to which a male-dominated labour force is implicitly expected is illustrated by the following comment by Siemens, in an attempt to explain why firms prefer to hire married employees: 'The economic rationale for providing a living environment that is acceptable to a prospective employee, and particularly to the wife and children of the employee, requires no further argument' (Siemens 1976, 285, italics added).

LUCAS AND RESOURCE DEPENDENCE

Lucas (1971) has unquestionably provided us with the most comprehensive description of social life and work patterns in Canadian single-industry communities. It is impossible to undertake a comprehensive review of *Minetown, Milltown, Railtown* in the space available here, but several points related to the economy of these dependent communities can be extracted. First, despite his recognition that fishing communities are very different from the mining, milling, and rail towns that represent the principal focus of his book, these groups of communities are often discussed as if they belong to the same group. Even in those instances where a second company of the

same industry, or a different resource industry, emerges within the community, the professional and institutional aspects of community life will remain much the same (Lucas 1971, 397).

Secondly, he suggests that the size and relative isolation of single-industry communities dictate that they will remain specialized. Lucas refers to this inverse relationship between size and economic specialization as follows: '... a very large community of single industry is a negation of terms ... ' (Lucas 1971, 400). This statement is supposed to be valid regardless of the degree of dominance that the single industry has over the remaining economic activities within the community. With respect to isolation, Lucas provides little hope for the capability of single-industry communities to diversify, largely because of this geographic isolation.

The peculiar location and isolation of these communities almost guarantees that they remain communities of single industry. The economic and technical factors that were instrumental in locating and developing communities of single industry are the same factors which rule out additional industry, diversification of the economic base, and expansion of population (Lucas 1971, 394).

He concedes that we must be cautious in defining isolation, in that it is a relative concept only partly established by linear distance. Instead, isolation ' ... seems to refer to the potential relationships of the individuals with other communities outside their own' (Lucas 1971, 395). In this respect, the relative degree of isolation perceived by families in single-industry communities may differ little from that of their counterparts in suburbs of major metropolises.

Finally, whenever the topic of gender in the workplace is raised by Lucas, he reiterates the stereotype that women have virtually no role in the single industry, regardless of the type of resource sector that dominates the community: 'With the notable exception of textile mills, most industries in such communities exclude females from all work except office routine' (Lucas 1971, 355). The only wagebased positions women hold in these communities are the few clerical and service jobs. Neither Lucas nor the others referred to above view gender within a broader problematic or theoretical framework. Even when gender is addressed as a serious topic, it is discussed merely on a statistical or anecdotal basis.

A careful reading of these classic descriptions of life in Canadian resource-dependent communities reveals that the authors clearly recognized the economic and social diversity that existed within resource-dependent settings and often provided accurate descriptions of the condi-

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The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)
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tions these communities faced in the first 60 years of the 20th century. Unfortunately, the stereotypes that have emerged from these and other works of the period are either applied too loosely to these settings, or have failed to keep pace with the subsequent changes that have taken place in resource communities. These stereotypes may be summarized as follows: the labour-force and economic structure of resource-dependent communities are relatively alike; the contributions by nonresource industrial sectors are insignificant; most Canadian resource communities are northern and isolated, far from other industrial activity; and employment in resource-dependent communities is male-dominated.

RECENT CONTRIBUTIONS TO CANADIAN RESOURCE DEPENDENCE

Recently, some analysts have begun to question whether resource-dependent communities really do fit these stereotypes, and perhaps more importantly, how these characteristics can be tied to more fundamental theory. There is no doubt that most resource communities are highly dependent on the vagaries of a single industry and are exposed to a greater extent to external actions than are larger, more economically diversified communities (Ross and Usher 1986). It is, however, too simplistic to end discussion of resource communities in these generic terms. The economic structure of communities in peripheral regions is more complex than this. Recent work by Ehrensaft and Beeman (1992), for example, refers to nonmetropolitan census divisions in Canada as 'microspecialized and macro-diversified'. They are microspecialized in the sense that individual communities within a region are often highly specialized in one sector. However, the regions themselves are macrodiversified, with dependencies on a broad range of resources and manufacturing sectors (e.g., agriculture, forestry, mining, fishing, government, and manufacturing) represented across the network of communities within the same region. Consequently, it is not so much that resource activities are more likely to be found in isolated locations, but rather that only in isolated settings does the absence of other economic activities make the resource sectors more prominent.

Hodge and Qadeer (1983) refer to this feature indirectly in labelling sets of small communities in parts of Canada as 'a dispersed city'. Access to goods, services, and employment opportunities are bound not by the individual community but rather by the set of communities that fall within the regional labour market. Therefore, although any one isolated resource community taken individually may offer a greater range of goods and services than an equal-sized community in a more densely populated part of the country, residents in the latter region are effectively able to call upon the entire pool of goods, services, and even employment opportunities among the network of communities within reach. In effect, the regional labour market and the community labour market are often synonymous in isolated, resource-dependent settings, such as the mining region of northern Ontario or the fishing outports along coastal Newfoundland.

Perhaps one of the most significant changes in recent research on resource sectors and communities has been the increased emphasis placed on the role of economic restructuring. The value of this approach is perhaps best articulated by Wilde and Fagan (1988) as, ' ... a concern with deepseated processes and structures in society as a way of understanding the changing geography of enterprise and spatial division of labour' (Wilde and Fagan 1988, 136). Restructuring, with its emphasis on the interrelationships between capital, labour, and the state, has been articulated by a large number of geographers and need not be reviewed here (see Massey and Meegan 1978, 1985; Sayer 1985; Scott and Storper 1986; Storper and Scott 1990). Application of restructuring to the resource sectors in communities does, however, deserve brief mention.

In an extensive literature on restructuring within the iron and steel industry, Bradbury and his colleagues have been instrumental in showing how the cycles and crises that are a part of the restructuring process are integral to the ongoing labour-market and production adaptations that take place within resource-dependent communities (Bradbury and St. Martin 1983; Bradbury 1984, 1985). More recently, Barnes, Hayter, and Grass (1990) have pointed out the impacts of massive restructuring at the MacMillan Bloedel lumber mill at Chemainus, British Columbia, on local employment and community economic and social change. In this and other resourcesector examples, restructuring creates more intense and fundamental in situ changes within the local community because the principal input, the natural resource, is fixed in space, and because firms commonly invest substantial fixed capital into the machinery and facilities on the site. Since firms may be relatively more likely to make local labour-market changes rather than shifting to a different labour market, these settings become ideal laboratories for the examination of local labour-market adaptations to exogenous events and decisions (Randall and Ironside 1993).

Graham and St. Martin (1990) have taken the application of restructuring one step further than an examination

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)

of the interaction of social and economic processes at a particular setting. They suggest that in most discussions of restructuring, natural processes have been subordinated to social processes, and too often industrial geographers look to the relation between capital and labour to the exclusion of the dynamism of the resource base. Especially in the case of resource-dependent communities (they use the solid wood products industry to illustrate their points) the natural environment is integrated with the social world to effect changes in process technology (e.g., the use of smaller trees in a more open setting that allows the use of more efficient machinery) and location of production.

This discussion of restructuring clearly shows that globalization, economic crises, and changing firm strategies throughout the 1980s are differentiating the industrial and labour-force structures of resource communities as well as making them prone to more rapid changes. For example, Clemenson (1992) suggests that recessionary pressures over the past decade have led to a greater level of dual dependencies, as communities that were formerly single-industry are forced to diversify into other resource sectors. A host of public institutions and programs from the local to the national have been adopted over this period as resource communities, '... are examining alternatives to continued dependence on one resource and are seeking new ways to ensure their future' (Clemenson 1992, 165).

Ross and Usher (1986) go so far as to say that a fundamental rebalancing between formal and informal activities is taking place in some of the communities hardest hit by crises associated with overspecialization. Not only are communities diversifying their formal economic base (wage-based employment and production), but households within these settings are increasingly being forced to adopt informal mechanisms such as bartering, household production, and various forms of self-employment, to counterbalance the dependency associated with the dominant industry (Mackenzie and Rose 1983; Randall 1987; Sharpe 1988).

Resource dependency, as it has been discussed thus far in the paper, should not be confused with the broader term 'local dependency' (Cox and Mair 1988, 1991). Resource dependency has been defined merely on the basis of the proportion of the community labour force employed by the dominant resource sector and firm, thus representing only one empirical aspect of local dependence. Local dependence is defined as the dependence of local actors – firms, politicians, and people – on the reproduction of certain relations within a particular territory (Cox and Mair 1988, 312). Cox and Mair (1988) point to the example of single-industry communities as locales in which both traditional and modern forms of local dependence can be observed:

... interaction is commonly chanelled through some few interaction sites, or locales: the mine or plant, the union hall, the church, the bar, the neighborhood and the home. These locales are the major contexts in which knowledge and experience of the world is gathered, common awareness engendered, and common meanings imputed (Cox and Mair 1988, 312).

The pervasiveness of local dependence in these contexts is heightened because of the relative applicability of three aspects: a tendency for certain activities to be constrained to local-state territories (e.g., a mineral processing plant at the site of the ore to minimize transport costs), a tendency to immobility (e.g., little outmigration from fishing outports despite depleted fish stocks), and wider geographic instability (e.g., resource communities being buffeted by rapidly changing demand and supply conditions elsewhere in the world) (Cox and Mair 1988, 1991).

Industrial specialization and employment instability are intimately related. Vulnerability to external decisions or the 'degree of community exposure' referred to above carries with it a greater risk of community economic crisis. Even broadly based national or international recessions that affect all communities become focused more severely on resource-dependent communities, producing deeper recessions and slower recoveries than more populated places (Bradbury 1985), and making these regions more susceptible to rationalization and restructuring (Massey 1979).

This instability, however, may not be broadly reflective of that which takes place within all the communities. Picot and Heath (1992), for example, provide statistics for the Atlantic provinces indicating that employment in the resources sectors fluctuated less over the period from 1978 to 1989 than did employment in construction, manufacturing, or business services. They suggest that, even though labour-market conditions may be inferior in resource-based towns, the movement of labour and population out of these settings may be less likely than in the larger, more diversified cities. This unexpected relationship is attributed to a combination of economic factors (e.g., lower probability of resource-sector workers getting jobs elsewhere, potentially larger loss of equity built up in fixed assets such as houses), social factors (e.g., strength of social and family ties, an expectation that the 'bust' will eventually be followed by another 'boom'), and institu-

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)

tional factors (e.g., existence of unemployment insurance and other transfer payments that are more flexible for some of the resource sectors) (Picot and Heath 1992, 182). Despite the inevitable booms and busts facing these communities, the population and the labour market are extremely resilient to change, and households put into play a host of adaptive strategies to counter the crises.

Many of the changes described above have been accommodated recently within labour-segmentation theory (see Doeringer and Piore 1985). Within a firm practising typical Fordist production behaviour, a labour force might be expected to be segmented into primary (core) and secondary (marginal) components. Primary jobs are commonly filled by white males being paid high wages and experiencing greater job stability and opportunities for advancement. Females and visible minorities are relegated to the secondary labour market, where they are faced with low wages, few fringe benefits, poor working conditions, high labour turnover, and little opportunity for advancement (Hayter and Barnes 1992).

The prolonged recession and restructuring of the 1980s has forced firms to adopt more flexible behaviour and has changed the forms in which labour markets are segmented (Atkinson 1985, 1987; Peck 1992). Specifically, firms are employing flexibility in the ways they deploy labour (functional flexibility), in the characteristics of the labour force (numerical flexibility), and in the sources of the labour (financial flexibility). Since changes in both the gender composition and employment stability in local labour markets are connected to the broader forces of social and economic restructuring, we should not be too surprised, therefore, to find resource firms in peripheral settings employing strategies that are particular to their own specific geographic and social circumstances and changing these strategies as these circumstances change.

Norcliffe (1994), in a recent article on the various regional labour-market adjustments in Canada, pays particular attention to the circumstances of single-industry resource communities. In addition to other characteristics, he suggests that labour-market segmentation is particularly clear in these contexts, with a distinction between the employees of the dominant resource employer and the remainder of the community workforce. He also questions whether the types of segmentation suggested by Atkinson and others are as applicable in single-industry towns. For example, the regularized cyclical nature of resource production and the 'ephemerality of the communities' may make firms in single-industry towns more likely to employ numerical flexibility with respect to core jobs (Norcliffe 1994, 13).

In an examination of changes in the British Columbia

economy, Hayter and Barnes (1992) show that part-time and female employment has increased unevenly across the province throughout the 1980s, with the pace of change being affected by the location of the firm (peripheral British Columbia or Metropolitan Vancouver), by the industrial sector, and by the degree of technological change (e.g., antiquated coastal mills versus newer, more efficient interior mills). For example, manufacturing plants in the B.C. interior substituted female labour between 1981 and 1986 at a much faster pace than did either coastal or metropolitan plants but, conversely, metropolitan manufacturing plants increased their proportion of part-time labour at a rate at least double that in the other two regions over the same time period (Hayter and Barnes 1992).

Resource extraction is clearly associated with more isolated settings (Clemenson 1992; Picot and Heath 1992), and the prominence of resource-based industry in remote locations has been shown repeatedly (Coffey and McRae 1990; Ehrensaft and Beemen 1992). However, even isolation must be questioned as the defining feature of resource communities. Services, as an aggregate group, are still the most prominent source of employment in most remote urban places, as they are in more populated centres. In fact, in a study of the economic structure of Canadian urban places, Ehrensaft and Beeman (1992) suggest that share of the labour force in the primary sectors has declined in 'Northern hinterland' communities relative to low-value-added manufacturing employment. Employment in public service and administration also rivals that in the primary sectors for a large number of isolated communities. The following section of the paper examines several of these characteristics and stereotypes in a more comprehensive manner.

Empirical Assessment of Canadian Resource-Dependent Communities

METHODOLOGY

Criteria used for the functional classification of urban places ranges from simple proportions of community labour force in standard industrial sectors (Lucas 1971; Canada, Department of Regional and Economic Expansion 1979; Clemenson 1992) to more sophisticated measures of industrial specialization and diversification (see Marshall 1989). Regardless of the apparent objectiveness of the measure used, subjectivity creeps into many of these classifications. For example, specifying a minimum threshold of community population or labour-force size may make an analysis more manageable but may also ignore significant functional differences between larger

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)

metropolises and smaller rural towns and villages. The extent to which industrial sectors are disaggregated may also influence the level of diversification obtained using these measures.

Employment is only one potential indicator of the level of specialization and the potential standard of living within a community. Considering the rapid changes taking place within many of these communities, it may be that total income, level of exports, pace of technological change, or occupational structures are more appropriate indicators of specialization or diversification. More fundamentally, the value attached to industrial diversification is more subjective than it may appear. While specialization may contribute to periodic crises at a local level, the comparative advantages that initially prompted this specialization generates higher levels of income and taxes than if the community was more diversified (Norcliffe 1983).

What this subjectivity suggests is that an initial inquiry must be as broadly based as possible and recognize the limitations of the results that are a function of the definitional criteria used. For this particular paper, an initial list of potential communities was obtained from the public interest group, the Canadian Association of Single-Industry Towns (CASIT). In 1987, CASIT compiled a comprehensive list of 1028 Canadian communities that were identified as being *resource-based* by provincial and federal departments and governments. Using this as the first and broadest net to capture potential resourcedependent communities, unpublished 1986 and 1971 labour-force data on these communities were obtained from Statistics Canada.

This initial list of 1000-plus communities was culled in several steps. It was felt that although the smallest communities were perhaps more vulnerable to the vagaries of a dominant resource employer and resource industry, some minimum threshold of size must be established in order to reduce statistical disclosure problems. Therefore, all communities with a 1986 labour force of fewer than 500 employees were excluded from further analysis. From this subset, a community was included in the final resourcedependent group if either (1) employment in the resource sector with the greatest number of employees exceeded employment in any other two-digit standard industrial sector or (2) employment in a combination of all the resource sectors exceeded employment in the combination of health and education services.

The greater latitude incorporated into this second option for inclusion recognizes that although many resource-based communities may be highly dependent on a set of two or more linked resource sectors, total resource employment should be at least as important as the traditionally large core of public-service jobs. These steps, therefore, created a final working set of 220 Canadian urban places that are considered resource-dependent (see Appendix). Unfortunately, a number of former resource-dependent communities that have either disappeared altogether or have become much more diversified between 1971 and 1986, would be missed using this procedure. Although examination of these communities would be interesting, it was not the explicit purpose of this paper to describe these cases.

CANADIAN RESOURCE-DEPENDENT COMMUNITIES:

LOCATION AND DOMINANCE

Resource specialization was summarized in six broad sectors, as indicated in Figure 1 and Table 1. These included those places dependent on forestry, wood processing, pulp and paper processing, fish and food processing, mining, oil and gas, and primary metals processing. The major exclusions from this list are those communities primarily dependent upon agricultural production for their economic wellbeing. Although these places are clearly important 'resource-dependent' communities, they were not part of the original database and are discussed extensively elsewhere (see Diaz and Gingrich 1991; Hay 1991; Stabler et al. 1992).

Figure 1 shows that the resource communities in this study are represented in all regions and provinces, with a notable absence in the northern territories. Despite the importance of resources for many northern communities, resource-dependent northern places are often too small to be captured in this inventory, while government employment often predominates within the remaining larger northern communities. This is also the case in parts of the Prairies, where agricultural employment and related central place services may overwhelm other resource-based employment at the community level.

Throughout the rest of Canada, there are obvious differences in the sectoral specialization of resource communities. While fish and food processing dominate the economies of Atlantic resource communities, mining and oil and gas extraction are more prominent in northern Quebec and the Prairies. In the former case, metallic minerals processing (zinc, lead, gold, and iron ore) forms the basis of mining activities, while in the Prairies, mining for potash in Saskatchewan, oil and gas in Alberta, and coal in the British Columbia interior are all collectively part of the same group. Some regions, including coastal British Columbia and northern Ontario, show a more

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)



Resource-dependent communities in Canada, 1986

diverse set of resource industries. In British Columbia, for example, at least one community is dependent on each of the six resource sectors canvassed. This 'resource plurality' at the regional level will also be apparent within some communities and this suggests that a comparison of resource specialization must account for the scale at which the analysis is undertaken: community, region, or province. This also supports the argument made earlier that in some areas at least, there exists a regional level of industrial diversification and a more complex network of economic and social relations that is less apparent when communities are studied in independent isolation.

The degree of dependence, as reflected in the categories of employment in the leading resource sector, appears to be associated with the remoteness of the community and especially with the distance from the densely populated core of southern Ontario and Quebec. Many of the fish-processing communities in Newfoundland, mining communities in northern Quebec and northern Manitoba, and oil and gas communities in northern Alberta had at least 40 percent of the community labour force employed in the dominant resource sector. This rough correspondence between isolation and degree of dependence within the community will be pursued more formally later in the paper.

Table 1 reproduces the information described above in a form that allows us to see the differences between the sectors more clearly. The majority (50.9 percent) of resource communities are directly or indirectly dependent upon the harvesting or processing of lumber products. The remaining communities are dependent upon mining (25.5 percent), fish and food processing (19.1 percent), or primary metals processing (4.5 percent). Not all of these sectoral specializations are equally dependent. It appears, for example, that the mining and the fish- and foodprocessing groups are more likely to have a greater proportion of very dependent communities. While twothirds of all fish- and food-processing communities have

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The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)
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Table 1

Resource-dependent Communities in Canada, by Degree and Sector of Dependence, 1986

Resource Sector	Share of Labour Force in Dominant Resource Sector				
	< 10.0%	10.0-19.9%	20.0-39.9%	≥40%	TOTALS
Forestry	4	10	5	3	22
	(18.2)	(45.5)	(22.7)	(13.6)	(100.0)
	[28.6]	[11.1]	[6.0]	[9.4]	[10.0]
Mining, Oil and Gas	2	20	21	13	56
	(3.6)	(35.7)	(37.5)	(23.2)	(100.0)
	[14.3]	[23.3]	[23.8]	[40.6]	[25.5]
Fish and Food Processing	2	12	18	10	42
	(4.8)	(28.6)	(42.9)	(23.8)	(100.1)
	[14.3]	[14.4]	[20.2]	[31.3]	[19.1]
Wood Processing	3	20	14	1	38
	(7.9)	(52.6)	(36.8)	(2.6)	(99.9)
	[21.4]	[22.2]	[16.7]	[3.1]	[17.3]
Pulp and Paper Processing	3	21	23	5	52
	(5.8)	(40.4)	(44.2)	(9.6)	(100.0)
	[21.4]	[23.3]	[27.4]	[15.6]	[23.6]
Primary Metals Processing	0	5	5	0	10
	(0.0)	(50.0)	(50.0)	(0.0)	(100.0)
	[0.0]	[5.6]	[6.0]	[0.0]	[4.5]
TOTALS	14	90	84	32	220
	(6.4)	(40.9)	(38.2)	(14.5)	(100.0)
	[100.0]	[99.9]	[100.1]	[100.0]	[100.0]

NOTES:

(X%) = Row Percentages

[Y%]=Column Percentages

SOURCES: Canadian Association of Single Industry Towns (CASIT) and Statistics Canada custom files

at least 20 percent of their labour forces employed in this dominant sector, just over one-third (36.3 percent) of the forestry communities were similarly dependent.

LABOUR MARKETS OF RESOURCE-DEPENDENT COMMUNITIES The preceding description begins to suggest the heterogeneity that exists within resource-based communities. In this section, those distinctions will be extended and elaborated upon, particularly as they relate to the role of the nonresource sectors, as well as the gender relationships and the stability of employment that exist within resource communities.

The stereotypical defining feature of resource-dependent communities is the existence of an unbalanced labour and industry profile, wherein the resource sectors overwhelm employment in all other sectors. Despite the role of resource employment as the core of economic life within these communities, other sectors often make a substantial contribution to total employment. In addition, as was described above, it might be suspected that there exist tremendous differences in the relative roles played by these nonresource sectors across the groups of communities. Using the same sectoral disaggregation as above, Figure 2 illustrates these sectoral relationships.

First, it is clear that the median labour-market sizes differ substantially between the sectors, ranging from a low of 813 employees per community for the fish- and food-processing communities to a high of 2970 employees per community for primary-metals processing places. Part of the explanation for these significant differences in the sizes of labour markets rests with the economies of scale associated with the organization of production in each industry. For example, while fish and food processing is often carried out by small firms linked only loosely in space with other industrial sectors, the industrial linkages within primary-metals processing firms are more closely bundled in space within the community. Labourmarket size seems to be only marginally related to the significance of the resource sector in these communities. Only where there are extreme differences in average

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)



Employment and labour market sizes of Canadian resource-dependent communities, 1986 NOTE:

*this category defined as the specific resource sector dominant in each set of communities

labour-market size does there seem to be a relationship between this characteristic and the dominance of the resource sectors. For example, the role of the resource sectors in the smaller fish- and food-processing places is proportionately greater than the resource sectors in the much larger metal-processing communities.

The 'resource plurality' characteristic introduced above can also be seen in this figure. The differences in resources employment between the dominant resource sector and all other resource sectors, for example, are much smaller in the forestry and wood-processingdependent communities than in the fish-processing and mining places. Despite these distinctions, there are some remarkable parallels in the relative importance of these nonresource sectors, regardless of the resource that dominates the community. In almost all groups, employment in public administration, education and health, and consumer services is exaggerated, while the role of producer services and manufacturing is virtually nonexistent. Although this dichotomy exists regardless of the dominant resource sector, it is even more pronounced in the smaller fish-processing and forestry communities. It is not surprising to note the absence of producer services from these communities, given the agglomeration economies that are associated with these activities. Worth noting, however, is that the relative share of producer-services employment does vary significantly between groups of communities. In mining communities, for example, employment in the producer-service sectors is almost as high as that in manufacturing and the other resource sectors group.

As discussed earlier, two of the timeworn features of resource-sector employment are that males dominate the labour force and that employment is seasonally or cyclically unstable and sporadic. Table 2 examines these stereotypes further and once again distinguishes these labour-market characteristics between the sectors that dominate within the communities. In aggregate, it is true that women represent only 14.9 percent of the total labour force in the dominant resource sectors. However, across the resource sectors, fish- and food-processing communities employ a significantly higher proportion (41.1 percent) of women in this industry than any of the remaining resource community groups. At the other extreme, women are virtually absent from the labour forces of the mining and pulp-and-paper sectors.

While the degree to which a community is dependent upon the dominant resource employer does not seem to

The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)

Table 2

Labour-market Characteristics of the Dominant Sectors in Canadian Resource-dependent Communities, 1986

Resource Sector	Share of Labour Force in Dominant Resource Sector				
	< 10.0%	10.0-19.9%	20.0-39.9%	≥40%	TOTALS
Forestry					
No. of Communities	4	10	5	3	22
% Female	19.9	15.7	8.0	7.4	13.6
% Fulltime	21.3	24.7	17.2	64.3	27.7
Mining, Oil and Gas					
No. of Communities	2	20	21	13	56
% Female	5.4	9.7	5.2	8.2	7.5
% Fulltime	58.2	58.9	66.7	72.4	64.9
Fish and Food Processing					
No. of Communities	2	12	18	10	42
% Female	56.5	53.5	33.2	37.4	41.1
% Fulltime	13.7	23.1	35.2	16.1	26.2
Wood Processing					
No. of Communities	3	20	14	1	38
% Female	9.1	10.4	10.4	17.2	10.5
% Fulltime	56.6	58.1	65.3	32.3	59.9
Pulp and Paper Processing					
No. of Communities	3	21	23	5	52
% Female	7.6	3.9	7.7	11.4	6.4
% Fulltime	70.9	71.9	74.4	67.3	72.7
Primary Metals Processing					
No. of Communities	0	5	5	0	10
% Female	the second s	8.9	11.5		10.2
% Fulltime		78.2	79.3		78.8
All Resource Communities					
No. of Communities	14	90	84	32	220
% Female	18.1	15.1	13.1	18.2	14.9
% Fulltime	43.6	54.1	59.8	51.7	55.3

SOURCES: Canadian Association of Single Industry Towns (CASIT) and Statistics Canada custom files

have much of an impact upon the level of female participation in these sectors (i.e., 18.1 percent, 15.1 percent, 13.1 percent, and 18.2 percent for each of the four dependency groups), there is a moderate inverse relationship, with the least and most dependent communities relying upon women to a greater extent. This 'U-shaped' relationship is also not consistent across the different resource sectors. For example, despite the overall absence of females in the pulp-and-paper labour forces, women play a progressively more significant role as the level of industrial specialization increases in the communities. The opposite situation exists in the fish- and foodprocessing and forestry communities, where women are less well represented as the level of dependency increases. This also points to the importance of local context that was raised earlier in the discussion of labour-market segmentation theory. Not only do labour-market strategies differ by place, they also differ by the sector and the degree of dominance of a particular resource-based industry in a community. In the case of the fish-processing communities, for example, a higher level of female presence in the factories is partly a function of the traditional social relations in the community, where the men went out in the boats while the women were responsible for maintaining the household, the social fabric of the community, and processing the catch in the community plants (Nadel-Klein and Davis 1988; MacDonald and Connelly 1989).

Figure 3 begins to show us some of the labour-market changes that have taken place in these resource-dependent groups of communities. This figure (together with Figure 4, with respect to full-time and part-time employment) shows three different features: the differences between gender participation in the dominant resource

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GROUPS OF RESOURCE-DEPENDENT COMMUNITIES



Figure 3

Gender and employment change in Canadian resource-dependent communities, 1971 and 1986

NOTE:

*Values for male and female employment are based on the total employed labour force, i.e. including both full-time and part-time employment groups, as defined in Figure 4.

SOURCES: Canadian Association of Single Industry Towns (CASIT) and Statistics Canada custom files, 1986 and 1971.

sector and in all other sectors within the resource communities, the changes in labour-force participation in these sectors, by gender, between 1971 and 1986, and the distinctions in these characteristics disaggregated once again by the type of resource that dominates employment within these groups of communities. For every group of communities, for the dominant resource sectors, as well as for the 'all other sectors' groups, females assumed a greater proportion of the labour force in 1986 than in 1971.

Despite the enormous relative increases in the proportion of females in the dominant resource sectors, mirroring changes in female labour-force participation nationally, females were still conspicuously absent from these industries in 1986. Therefore, at least at a macro level of analysis, resource firms are not making wholesale gender changes in their labour forces as an element of their restructuring strategies. In fact, for several groups of communities (e.g., pulp and paper and primary-metals processing), there were only minimal increases in female participation in the dominant sector. As might be expected from the literature referred to earlier, females participated to a lesser degree in the resource sectors than in the remaining sectors in the resource communities. In at least the fish- and food-processing communities, however, the gender distinctions between sectors at this aggregate level are virtually invisible.

In addition to gender, the stability of employment (e.g., full-time or part-time) is an important feature of the regional labour market. Table 2 suggests that labour markets in resource-dependent communities are comprised of a significantly smaller proportion of employees in full-time positions, with an aggregate of only 55.3 percent for the 220 communities in this sample. Once again, the most interesting relationships are the intersectoral and 'interdependence' variations. While the forestry and fish- and food-processing communities maintain the smallest proportions of full-time employees

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Figure 4

Full-time-part-time employment mix and shifts in Canadian resource-dependent communities, 1971 and 1986

NOTES:

*Full-time employment is derived from Statistics Canada's definition of "full-time, full-year". In the 1986 Cencus this consisted of those persons who usually worked 30 hours or more per week and those who considered themselves to be fulltime, for a period of 49 to 52 weeks in 1985. The 1971 Census used 35 hours rather than 30 hours. Parttime employment consists of all other categories of employment, i.e. fewer then 49 work weeks in 1985 and/or 30 hours per week (35 hours in 1970).

SOURCES: Canadian Association of Single Industry Towns (CASIT) and Statistics Canada custom files, 1986 and 1971.

(27.7 percent and 26.3 percent, respectively), more than 70 percent of the labour force in the primary metals and pulp-and-paper communities are classified as full-time. Generally, the sectors with the highest proportions of parttime employment correspondingly have the highest proportions of women in the resource-sector labour force. Therefore, the fish- and food-processing and forestry communities are dominated by a part-time female labour force, while the primary metals and pulp-and-paper communities are dominated by a full-time male labour force. In aggregate, we might once again describe this as an 'inverted U-shaped' relationship between the proportion of full-time employees in a community and the degree of dependency of those communities (i.e., 43.6 percent, 54.1 percent, 59.8 percent, and 51.7 percent). As such, the lowest proportion of full-time employees are more likely to be found in the least and most dependent places. This nonlinear relationship should not come as a surprise,

given the correspondence between female participation in the labour force and level of dependency discussed above.

As with the increased female labour-force participation rate, Figure 4 shows that there has also been a general increase in the role played by part-time labour, regardless of the community type or sector. Once again, at an aggregate level, this mirrors labour-market changes taking place nationally. In some communities, such as the forestry and the fish- and food-processing places, these changes have been especially pronounced. The fact that part-time employment has increased in the 'all other sectors' groups at a similar pace as in the resource sectors suggests that, at least at this level of analysis, core employment in these communities does not appear to be experiencing the effects of increased flexibility any more than the marginal jobs in the community.

Despite this, evidence of varying levels of restructuring

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The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)
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Figure 5

Scattergraph: Degree of dependence and geographic isolation for Canadian resource-dependent communities, 1986

based on the particular circumstances of the communities does seem to be more apparent in 1986 than in 1971. For example, in 1971, the proportion of full-time employees in the six dominant sectors consistently exceeded the proportion of full-time employees in the 'all other sectors' groups. By 1986 this similarity no longer existed. While the ratio of 'core' full-time jobs to 'marginal' part-time jobs in the mining, wood, and pulp-and-paper processing sectors remained fairly high when compared to the same ratio in their respective 'all other sectors' groups, for the other groups of communities there was no longer a duality in the types of jobs across the community economies.

DEPENDENCE AND SPATIAL ISOLATION Perhaps more telling as a stereotype in resource communities than a male-oriented, unstable labour force is the suggestion that resource communities are usually found in isolated locations and that this isolation lends itself to higher levels of dependency on just a few firms or sectors. This direct relationship between the level of dependency and the degree of spatial isolation presumably occurs through two mechanisms. First, because of their remoteness, isolated resource communities find it difficult to attract or retain additional export-oriented firms. Second, the less remote resource communities have probably acquired a more diverse economy as a result of their greater accessibility to major product and labour markets. Figure 5 suggests that resource communities in Canada are, indeed, very isolated in aggregate, with the median community located almost 300 kilometres from the near-

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Table 3

Correlations between Degree of Dependence and Geographic Isolation for Canadian Resource-dependent Communities, 1986

Sector of Dependence	Correlation Coefficient (r)*			
Forestry	0.634**			
Mining, Oil and Gas	0.437**			
Fish and Food Processing	0.249* *			
Wood Processing	0.039			
Pulp and Paper Processing	- 0.016			
Primary Metals Processing	0.612**			
All Communities	0.257**			

NOTES:

* this r-value represents the Pearson's correlation coefficient between the share of the community labour force in the dominant resource sector (%) and the road distance to the nearest census metropolitan area (km.) for each group of communities in question (see Figure 3)

* * Significant at the 0.05 level

SOURCES: Canadian Association of Single Industry Towns (CASIT) and Statistics Canada custom files

est Census Metropolitan Area (CMA) in 1986. Although there appears to be a direct relationship between the degree of isolation and the degree of dependency, the overall relationship is weak at best. Sectorally, mining and fish- and food-processing communities appear to be much more dispersed along both axes. Although several of the primary metals-processing communities have exceptionally high levels of resource dependency, most of them appear to be clustered below the median line of spatial isolation.

This image of the sectoral differences in the isolationdependency relationship is supported by Pearson's correlation coefficients in Table 3. Here, all 220 communities show a moderately positive and statistically significant correlation of +0.257. In other words, there does seem to be an observable direct relationship between the degree of dominance of a resource sector and distance to the nearest Canadian metropolis. Once again, however, all resource sectors do not share similar tendencies. In fact, as the correlation coefficients for the specific groups of communities show (Table 3), only the fish- and foodprocessing group shows a relationship similar to the total set of communities.

Several groups of communities (e.g., forestry and primary metals) have very strong direct relationships between degree of spatial isolation and the degree of employment dependency. Others, such as the pulp-and-paper and wood-processing sets of communities, appear to have no linear relationship at all (i.e., correlation values of -0.016 and +0.039, respectively). At this aggregate level of analysis, it is difficult to explain these distinctions.

The way that the natural resource is distributed, or the complexity of the local industrial linkages required by firms in a particular industrial sector may have some bearing on the distinctions that emerge between sectors. As a first step in the value-added chain, it may not be surprising to see small, specialized forestry and mining towns existing ephemerally on the margins of Canada. As value is added, such as in the case of wood- or pulp-and-paper processing, the linkages might be expected to become more complex and local, regardless of the site of production. The more important point is that there are tremendous differences in the characteristics of these resource communities, and this relationship represents one more example of the magnitude of those differences.

Conclusions

This paper has shown that resource-dependent communities are an exceedingly diverse group, in terms of their degree of dependency, their relative isolation, the stability of employment, and the roles played by industrial sectors other than the dominant one. Some of the most interesting distinctions are those that exist when we look beneath the surface, at the labour-market and dependency characteristics distinguished by resource sector. Given the recent literature, deviations from the stereotypes described earlier in the paper should not come as a complete surprise. We can see that the anomalies being described in the literature are merely part of a wider heterogeneity. When we began this research, we did not expect to show that resource-dependent communities no longer exhibited the characteristics so aptly described by Innis, Lucas, Robinson, Siemens, and others. In fact, despite the empirical results above, we could say that this paper reinforces several of these characteristics, including the fact that many of the communities are relatively isolated and employ an exceedingly small proportion of females in the resource sectors. This paper has shown, however, that once one looks past the aggregate generalizations, a previously undiscovered and unappreciated richness and heterogeneity in economic structure may be found. Resource-dependent communities in Canada are clearly vastly different, as reflected in the role of women and parttime labour in the groups of communities, in the relationship between the dominant resource sector and other economic activities in the communities, and in their relative isolation.

Although it was not the expressed intent of this paper to explain the distinctions and changes that have been taking place within Canada's resource-dependent communities, the linkages between these empirical results and the

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The Canadian Geographer / Le Géographe canadien 40, no 1 (1996)
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emerging literature have become more apparent. For example, the processes of restructuring that have been aptly described by Bradbury, Hayter and Barnes, and others (cited earlier) at the level of the individual firm and community are also clear at this more aggregate level of analysis.

There have been fundamental shifts in the role of parttime and female labour in several of the dominant resource sectors. Perhaps more importantly, the fact that these same shifts have occurred in the nonresource sectors in a number of these communities makes us question not only how distinct these resource jobs really are but also the nature of the relationships between the resource sectors and other sectors in resource communities. Recent applications of labour-market segmentation theory may prove to be useful in understanding the relationship between community economic change and the broader global changes that are affecting the activities and decisions of specific resource firms. The repercussions of flexible accumulation on resource-dependent communities must therefore take into account not only the specific sector that dominates the community economy, but also the degree of resource dependency, the degree of spatial isolation, and the peculiar labour-market characteristics that are a part of these communities.

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Appendix

The 220 resource-dependent communities used in this analysis are listed below alphabetically, by province.

NEWFOUNDLAND Baie Verte **Bay Roberts** Bonavista Burgeo Burin Channel-Port aux Basques Fortune Grand Bank Grand Falls Harbour Breton Harbour Grace La Scie Labrador City Marvstown Port au Choix Ramea Spaniard's Bay Trepassey Wabush Windsor

PRINCE EDWARD ISLAND Montague Souris

NOVA SCOTIA Canso Glace Bay Hantsport Liverpool Louisbourg Lunenburg New Waterford North Sydney Parrsboro Port Hawkesbury Sydney Mines

NEW BRUNSWICK Balmoral Cap-Pelé Caraquet Chipman Dalhousie Lamèque Nackawic Neguac New Bandon Pennfield Petit Rocher Richibucto Saint George Saint-Isidore Saint-Jacques Saint-Léonard Saint-Quentin Shippagan Stanley

OUEBEC Asbestos Baie-Comeau Beaupré Bromptonville Cabano Causapscal Chandler Chapais Chibougamau Chute-aux-Outardes Clermont Contrecoeur Crabtree Dégelis Dolbeau Donnacona East Angus Fatima Ferme-Neuve Fermont Forestville Grand'Mère Grande-Rivière Havre-aux-Maisons Havre-Saint-Pierre **Kingsey Falls** La Sarre La Tuque Luceville Malartic Masson Matagami Mont-Rolland Murdochville New Richmond Newport Normandin Nouvelle Portneuf Port-Cartier Price Rouvn-Noranda Saint-Damase Saint-Félicien Saint-Fulgence Saint-Gilles Saint-Michel-des-Saints Saint-Omer Saint-Pamphile Sayabec Senneterre Sept-Îles Saint-François-Xavier-de-Brompton Témiscaming Thetford Mines Thurso Val-d'Or Windsor

ONTARIO Atikokan Blind River Cardinal Chapleau Chesterville Dryden Ear Falls Elliott Lake Espanola Fort Frances Geraldton Hearst Ignace Iroquois Falls Kapuskasing Kenora Kirkland Lake Leamington Longlac Manitouwadge Marathon Mattawa Nipigon **Onaping Falls** Red Lake **Red Rock** Sault Ste, Marie Schreiber Smooth Rock Falls Sturgeon Falls Sudbury **Terrace Bay** Thessalon Timmins West Lorne Wheatley White River MANITOBA Alexander Carberry Flin Flon Leaf Rapids Lvnn Lake Niverville Snow Lake Thompson SASKATCHEWAN Esterhazy Estevan Hudson Bay Kindersley Lanigan Oxbow ALBERTA

Bonnyville Drayton Valley **Flk Point** Fort McMurray Fox Creek Grande Cache Hinton Lloydminster Pincher Creek Rocky Mountain House Stettler Swan Hills Turner Valley Valleyview BRITISH COLUMBIA and TERRITORIES **Burns** Lake Campbell River Castlegar Chase Chetwynd Cumberland Duncan Elkford Fernie Fort St. James Fruitvale Gibsons Gold River Golden Hope Houston Kimberley Kitimat Ladysmith Lake Cowichan Lillooet Logan Lake Mackenzie Merritt Nakusp One Hundred Mile House **Pine Point** Port Alberni Port Alice Port Hardy Port McNeil Powell River Prince George Prince Rupert Princeton Quesnel Sparwood Squamish Tahsis Terrace Trail **Tumbler Ridge** Ucluelet Vanderhoof Williams Lake

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