Within the general context of formulating a national new communities policy, resource towns have been identified as having a special relevance for Canada. In the past, a major part of the Canadian new town experience has been the development of resource communities. And while existing resource sites are sufficient to accommodate a significant portion of the estimated increase in Canadian natural resource production through to the year 2000, the opening up of new resource sites will require the establishment of new resource towns. It is crucial, then, that planners understand both the historical development and the special problems of resource communities since only with this background can planning take place in a comprehensive and progressive fashion.

I. PATTERNS OF CHANGE IN THE EVOLUTION OF CANADA'S RESOURCE TOWNS

Government involvement in the development of resource communities has, until very recently, been rare. One reason for this was the harmony of private commercial interests and the interest of Canadian government with respect to resource use. Limitations evident in the domestic market for raw materials made their large-scale utilization dependent on the development of foreign markets. Canadian governments lacked both the capital and technologies required for the purpose. Moreover, in a free enterprise economy, initiative and expertise required for resource development were not expected to come


2Ministry of State for Urban Affairs, "New Resource Communities," mimeo, (no date).

3T.L. Burton, Natural Resource Policy in Canada (Toronto: McClelland and Stewart Ltd., 1972), pp. 31-34.
from the state. Consequently, initiation and operation of resource development and the communities which accompanied them were left to private firms and individuals. Canadians were active in the early stages of such exploration and development work, but, with a few notable exceptions, the final development of projects relied on foreign capital, techniques and marketing. Thus, it was foreign private enterprise which became the principal agent entrusted with the development of the new communities needed to service the workers who were extracting the state owned resources of the Canadian north.

As the small independent prospector and timber "cruiser" gave way to the large, capital-intensive corporation, the investment in northern resource extraction became enormous, permanent and long term. As a consequence, the resource developer became desirous of attracting and maintaining a stable work force. Faced with competition within the industry and with other expanding sectors in recruiting a labour force, companies began to perceive the need to improve the quality of community life in order to attract and retain a stable work force along with its dependents.

Furthermore, technological changes had been occurring in the mining, forestry and power industries which had profound implication not only for the productivity of the industry, but also for settlement patterns in the north and for the foundations of individual resource communities. Resource development during World War II and shortly


5 For further explanation see: Kenneth J. Rae, The Political Economy of Northern Development, Science Council of Canada Background Study No. 36 (April, 1976), p. 231.
thereafter was largely a "filling-in" process, based on known and accessible resources. After 1950, with new technological methods and keener world demand reflected in higher prices, this emphasis was shifted to developing previously unexploited resources on the northern frontier. Thus many previous uninhabited areas on the frontier were developed. Technological changes in the resource industries led to shifts in personnel requirements. Skilled mechanics and operators, with value systems and needs considerably different from the resource worker of the past, had to be recruited for the resource communities. High wages alone proved inadequate to attract these skilled workers away from the southern urban areas and other resource towns. Clearly, there developed a need to provide a high quality of community life, and companies began to consider provision of better housing, recreation facilities, attractive town layouts, effective social services and other urban amenities as an integral part of the exploitation of natural resources on the Canadian frontier. Examples of "company towns" which were built at this time and whose town planning reflects a concern for quality of life are Kitimat, British Columbia (1952) and Elliot Lake, Ontario (1954).

The Canadian political, economic and social climate throughout the late 1960s and early 1970s also had a significant impact on the development of new resource communities. This period witnessed a questioning and shifting of value structures. Growth and sheer economic development were no longer accepted without question as social goals. The environmental protection movement emphasized the social costs omitted from traditional commercial and even governmental calculations of costs and benefits arising from resource development. With the responsibility for correcting such errors inevitably assigned to government, the harmony of public and private interests which made the "company towns" feasible became less automatic than was once the case. Not only did the national

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6 Robinson, New Industrial Towns, pp. 2-3.
socio-economic and political climate encourage more public intervention in new resource town development, but, more specifically, a change in attitude occurred among both industry and workers which set the stage for a transition from company control to mixed private and public involvement.

The industrial entrepreneur recognized that town planning, development and administration was beyond his domain and, in any case, disliked the diversion of his capital and effort from industry to municipal affairs. Moreover, industrialists became sensitive to the fact that being sole landlord, employer and town council resulted in poor labour and resident relations. At the same time, workers and residents sought control of municipal affairs through elected councils. They also wanted a housing market governed by free enterprise in order to obtain prices, designs and quality of construction which were comparable to those in the south. The effective delivery of social services which were up to or close to the level of southern standards became an issue of mounting concern.

One example of the way in which residents of resource towns lobbied to minimize company control can be seen in The Mackenzie Story, prepared in 1975 for the Mackenzie Citizens' Committee by the B.C. Trade Union Research Bureau. In this instance Mackenzie unions cooperated to hire consultants who prepared a report which exposed the extent to which the major company in Mackenzie had exploited both the B.C. government and the local community in the development of Mackenzie. The report concluded with a summary of issues requiring immediate attention at either the provincial or local levels of government. These issues were in the form of demands for provincial legislation which would curtail the power of the major company in new resource town development and would "establish policies that provide for the active protection of citizens from the grip of resource companies." 

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8 Robinson, New Industrial Towns, pp. 2-3.

The involvement of governments in resource town development which has resulted from these pressures has taken a variety of forms. Manitouwadge, Ontario; Lanigan, Saskatchewan; Pine Point, District of Mackenzie; and Uranium City, Saskatchewan are examples of communities which were planned and developed jointly by provincial governments and industry, each assuming designated responsibilities. Leaf Rapids and Pinawa, Manitoba and Grand Cache, Alberta are communities which have been planned and developed by a crown agency with the company acting merely as tax payer.

The involvement of government in resource town development has understandably resulted in a marked change in design and delivery of services in these communities. Government involvement provided unprecedented opportunities to use innovative designs adapted to the northern climate and life styles and, as well, provided more efficient social services sensitive to the particular needs of residents living in isolated northern settlements. This will be discussed in more detail with reference to Leaf Rapids, Manitoba and Fermost, Quebec in a subsequent section of this article.

II. CHARACTERISTICS SHAPING THE PLANNING OF RESOURCE TOWNS

Existing in relative isolation from other communities, contending with inhospitable climates, and living under the insecurity inevitable in communities whose survival rests on a single industrial base, resource towns have attracted distinctive populations. These characteristics place demands on the planners to design both physical environments and social services which respond to the particular needs inherent in the location, population and economic bases of the communities.

Demographic Characteristics

The visitor to a typical resource community is inevitably struck by its imbalanced population structure, relative to that perceived in other communities. The most marked features of the population are generally the large number of males relative to the number of females; the abundance of young children, especially pre-schoolers; and an absence of older people. Young married workers with growing families and
young single males comprise the bulk of the population of these communities. 10

In a recent study of 20 mining communities, figures on population are provided which support these observations. In 1971, Thompson, Manitoba had 127.9 males per 100 females; it had 38.1% of its population in the 0-14 age group and only 0.4% of its population over 65. Grand Cache, Alberta, had 115.7 males per 100 females; 40.1% of its population was in the 0-14 age groups and only 0.6% of its population was over 65. Faro, N.W.T., had 127.9 males per 100 females; 33.3% of its population was in the 0-14 age group and 0.6% of its population was over 65.11 These figures can be compared with the 1971 national averages of 100.3 males per 100 females; 29.6% in the 0-14 age group and 9.0% over 65.12 Such an imbalanced population structure has obvious implications for social services and the physical design of the community. The large number of young children places exceptional demands on day care facilities, tot-lots and educational facilities in the junior grades. Medical services must be equipped to respond to maternity needs and pediatric care which exceed those in other communities of similar size. On the other hand, there is not as great a need for geriatric care as would be typical elsewhere. Housing design must reflect the needs of young and growing families, with areas for children's play both inside and outside the dwelling unit. Recreation and entertainment facilities must provide for activities of young parents and young single males, perhaps with discotheques, cabarets and wilderness recreation activities, while responding also to the developmental needs of young children with such activities as pee-wee teams, puppet shows and other children's programs. The pedestrian component in transpotation planning must provide for the many young children walking to and from school

10 Riffel, Quality of Life in Resource Towns, p. 9
12 1971 Census Report.
and the safe passage of mothers walking with baby carriages. Consequently, separation of vehicular and pedestrian movement is strongly advised. These provide only a few examples of the implications of the population structure on the planning of the community.

**Geographic Characteristics**

As the primary function of resource town is, by definition, to exploit natural resources, these communities are often located in remote areas. Some resource towns such as Sparwood, B.C. are located in close proximity to other communities and enjoy a climate similar to that of other southern Canadian urban centres. However, the vast majority of new resource towns, such as Leaf Rapids, Manitoba and Grand Cache, Alberta, are located hundreds of miles from the closest settlements and are faced with long and severe winters. Planners are thus confronted with the challenge of creating environments which will serve a variety of needs, such as minimizing the feeling of isolation likely to occur in communities in which there are no alternative towns or villages from which to seek higher order services. Innovative planning designs are demanded which will minimize the severity of the long, harsh winters.

**Economic Characteristics**

The fact that most resource towns depend on the viability of a single industry creates considerable insecurity and anxiety. In the case of mining communities, for example, the depletion of the ore body or a sudden fluctuation in world mineral prices or demand can mean instant death to the community and the complete loss of investments made by government, industry and residents.

**Social Characteristics**

The demographic, geographic and economic characteristics of resource towns combine to create a social environment which make these communities distinct. Although it is impossible to generalize about the social characteristics of all resource communities, some characteristics are very prevalent and must be recognized by the planners of such settlements.

High turnover of the labour force is known to be one of the greatest obstacles to the expansion of the northern mining industry.
Annual turnover rates as high as 200% to 300% have been observed in resource towns.\textsuperscript{13} With such a feeling of "transiency" pervading the community, residents have less incentive to get involved in community affairs, to improve their properties, and to assist in creating a "sense of community."

The isolation of most resource communities also has implications for their social environments. In a study conducted by Parson, the most severe deprivation experiences in connection with northern living was identified as "a sense of confinement, a perceived inability to get away or go someplace."\textsuperscript{14} Isolation in resource towns has many implications for quality of life in those communities, such as not being able to buy many of the items from which one may derive pleasure. It implies constantly seeing the same faces; paying very high prices for both goods and services; a lack of variety in the people one meets, the places to which one can go and the things one can do; a necessity to check and control one's behaviour because everywhere one will be seen by known people with whom one must continue to live in relative harmony. These characteristics are familiar to people who have lived in any small town. However, the isolation of new resource towns which makes journeys to other towns or larger centres very difficult—greatly intensified this confinement, monotony and lack of choice.

Several studies point to a particular problem faced by women; a phenomena described as "housewife psychosis", "cabin fever" and "crowding."\textsuperscript{15} A lack of employment for women,\textsuperscript{16} coupled with long

\textsuperscript{13}F.H. Bradbury, "From Company Town to Instant Town in B.C., Canada" (paper presented at IGU Regional Conference, Palmerston North, N.Z., 1974), p. 1.

\textsuperscript{14}G.F. Parson, Arctic Suburb: A Look at the North's Newcomers (Ottawa: Northern Science Research Group, Department of Indian Affairs and Northern Development, February, 1970), p. 19.


\textsuperscript{16}Riffel, Quality of Life in Resource Towns, p. 2.
winters, many young children and a lack of leisure activities often creates severe depression. Resource towns also have a higher than usual incidence of suicides, alcoholism and drug abuse.  

These characteristics described above intensify the need to create environments designed to mitigate some of the social and psychological problems faced by the residents. The instability related to high turnover may be partially mitigated by more selective recruitment procedures. The difficulties related to isolation may be minimized by employment schedules and bonuses which assist residents to "get out" regularly. Effective delivery of television, radio and newspaper services to these communities also promises to minimize the feeling of being "cut-off" from the south. "Housewife psychosis" could be approached through effective day care facilities; programs for women designed to direct them to a greater awareness of their personal potential; and through organized excursion outside their community ranging from shopping trips to attendance at conferences. Comprehensive preventative and curative programs for alcoholism and other problems related to coping with one's environment are essential to improve the quality of life which new resource communities offer.

III. THE PLANNERS' RESPONSE TO RESOURCE COMMUNITY DEMANDS

As indicated, the earliest resource settlements merely responded to the temporary need to house a predominantly male labour force involved in resource extraction. These were not permanent settlements but consisted chiefly of a cookhouse, bunkhouse and commissariat. These temporary "sleep camps" gave way to "company towns." They were generally unplanned and responded to the workers' most basic needs: shelter for their families, supplies, and education for children. The company at this time generally acted as landlord, employer, shopkeeper and town council.

17 J.B. Nickels and J.P. Kehoe, Northern Communities: Mental Health and Social Adaptation, Occasional Paper No. 4 (Winnipeg: University of Manitoba, Centre for Settlement Studies, 1972).
Photograph #1: This typical street in Mackenzie, B.C. exemplifies a lack of sensitivity in its relationship to the site.

As investments in these communities became greater and more long-term, parent companies recognized the crucial need to attract and maintain a stable and reliable work force and more skilled personnel, for the nature of the communities began to change from unplanned, haphazard developments to "model" planned communities. These communities were planned by consultants retained by the company who normally were trained and had practiced in southern centres and who often applied southern planning concepts to northern settings. Perhaps the most extensively documented example of the planned company town is Kitimat, B.C., planned by Clarence Stein, a well-known American architect-planner. Kitimat, like many other resource communities planned in the 1950s made extensive use of Garden City and Radburn principles such as green belts;
an extensive system of continuous interior open spaces; separation of vehicular and pedestrian movement; spread-out residential neighbourhoods composed of culs-de-sacs and winding crescents with a heavy stress on single family housing and land use segregation.\textsuperscript{18}

Within the last two decades, concurrent with increased government intervention in resource town planning and development, there has been a change in emphasis in the planning of these communities. Planning critics have recognized the limitations inherent in transferring southern planning concepts to the north. This failure was perhaps first recognized as early as 1962 by Ira Robinson:

\begin{quote}
With few exceptions the plans do not reflect the special social, geographic, economic or governmental circumstances under which they are built; for example, their unbalanced social structure; their dependence upon a single industrial enterprise; their harsh local climate and the rugged terrain of the areas in which they are located. The plans have differed little from those being carried out in more developed areas in southern Canada. In short, there have been no original, or specially adapted solutions equal to the individual problems of site and situation that these northern towns face.\textsuperscript{19}
\end{quote}

These issues have since been discussed extensively in planning literature. Porteous criticized the extensive use of Garden City and Radburn principles which were developed between 1895-1935 and have become commonplace in southern suburbs.\textsuperscript{20} Siemens sees a need for specially adapted solutions to meet the planning needs of these communities but stresses the necessity of consulting residents in designing these solutions. He cites the example of the strong opposition of Lynn Lake residents to high density housing proposals to indicate that residents of these communities do have their own concepts of preferred environments which may differ markedly from those proposed by southern planners.\textsuperscript{21} Shaw laments the

\begin{flushright}
\textsuperscript{19} Robinson, New Industrial Towns on Canada's Resource Frontier, p.2
\end{flushright}
fact that no attention has been paid to developing special housing designs for the north. He illustrates the problems associated with constructing housing in the north which was designed for the south.22

Any response to this kind of criticism in actual community development has been slow to develop, but is nevertheless evident in at least two existing communities: Leaf Rapids, Manitoba, and Fermont, Quebec. Fermont's design is a direct response to the harsh climate of northern Quebec and is distinguished from other communities by several innovative planning concepts. It features a continuous windscreen building which serves multiple uses, embracing residential, commercial, recreational, educational and institutional facilities. A compact urban

Photograph #2: Town-housing in Leaf Rapids, Manitoba exemplifies harmony with the natural environment.

land use pattern markedly contrasts it with the sprawling suburban development typical of the south. The provision of climate-controlled pedestrian access to community facilities responds to the harsh climate of its location. A comprehensive recreational complex attempts to combat the restlessness, boredom and loneliness reported in new resource communities.

Leaf Rapids, Manitoba, also features an innovative community plan in harmony with the natural environment. Its focal point is an award
winning town centre, housing under one roof all facilities normally found in a city centre, such as the school, library, health centre, retail stores, hotel, and government offices. A stress on multiple family housing units makes the community compact, preserving more of the natural environment. Maximum preservation of the natural vegetation integrates the community with its setting. A health centre with comprehensive health-care programs helps to attract physicians while providing medical services similar to those of the south.

The emphasis in resource community planning appears to be changing from the previous tendency to transfer southern suburban planning concepts to the north which often resulted in spread out residential neighbourhoods and segregated land use. The creation of distinct "northern community" designs emphasizes the preservation of the natural environment; harmonizing the community with that environment; a stress on the creation of compact communities to minimize transportation and service costs and to leave as much of the natural environment untouched as possible; and a recognition of the prime importance of effective delivery of social services. The demands of long harsh winters, poor building conditions, and socio-psychological problems inherent in these communities have instigated the creation of original architectural designs, innovations in social service delivery and creative land use concepts which combine to create in resource towns urban environments which are not only distinctly northern, but also distinctly Canadian.

In spite of the progress which is apparent in new resource town development, there are numerous dilemmas yet to be resolved. The planner's task is largely one of conflict resolution and trade-offs; i.e., deciding which amenities are most important in creating a high quality of life in both the short and long term, for whom the amenities are designed, and how the greatest number of people can be satisfied. Some of the questions the planner faces in planning for new resource communities include:

a) to what extent should government revenue and expertise be invested in the planning and development of resource communities?
b) what life must a given ore body have in order to warrant the building of a permanent community and provision of costly services for the work force extracting that ore?

c) should the workers active in the extraction industry all be housed and serviced in a centre serving a variety of resource sites in the region, which can produce extensive services but which would necessitate lengthy commuting to the various sites surrounding the regional centre?

d) should planners of new resource communities strive to create original and unique town plans or do residents in fact prefer communities resembling the familiar communities of the south?

e) to what extent are residents who migrate to resource communities seeking an opportunity to 'pioneer', i.e. to create their own environments and organize their own services, and to what extent do residents want a ready-made environment, with all the amenities familiar to southern areas?

IV. CONCLUSION

The resource town constitutes an important element in the Canadian urban system. In its evolution from primitive dormitory camp (controlled by a parent company) to a settlement jointly developed by both public and private sectors, it is a Canadian form of new town. In this sense it is a "planned community"--from the selection of site to the details of articulation of open and built space. Furthermore, it may be viewed as a symbol of the Canadian future--the pioneer spirit of the opening up of the North, of planning and building a new society which is to be embodied within the urban-spatial envelope dictated by man and representing his aspirations and dreams. Perhaps this is the true meaning of the resource town as new town. Surely it acts as a Canadian urban icon and will continue to conjure up creative images of new worlds waiting to be settled.